K343 **HOY 13 1005**

DOW CORNING CORPORATION" MATERIAL SAFETY DATA SHEET

MATL NAME: DOW CORNING(R) 1200 PRIME COAT - RED EMERGENCY TELEPHONE NO. (517) 496-5900

SECTION I - GENERAL INFORMATION

HANUFACTURERS NAME: DOW CORNING CORPORATION ADDRESS: SOUTH SAGINAW ROAD, MIDLAND HI 48686

DECEMBERATE NAME ASSESSED TO THE SELECTION OF THE PROPERTY OF DECENSATION (490 FREE 22 MOTOR CONTROLS) : ELENHABLE CERTOLO

RCKA HAYARDECHASSIS OCER 2610 (DE DINCARDEDIS TONITABLE 10001)
E.F.A. FRIORITY FOLLUTANTS (40CFR 122.53): NONE

NFFA = NATIONAL FIRE PROTECTION ASSOCIATION - .704 HEALTH (NFFA): 2 FLAMMABILITY (NFFA): 3 REACTIVITY (NFFA): 0 DOW CORNING WARNING CODE: 58 CAS NO: MIXTURE

GENERIC DESCRIPTION: ORGANSILICATE IN SOLVENT

SECTION II - HAZARDOUS INGREDIENT

NAPHTHA permiente Organosiliate

PUDANCEN T

7. 5

% 85 TLV (UNITS): 300FFM, FEL500PFM

TLV (UNITS): 5 FFM:25 FFM

ONLY THOSE INGREDIENTS LISTED IN THIS SECTION HAVE BEEN DETERMINED TO BE HAZARDOUS! AS DEFINED IN 29 CFR 1910.1200. AN INGREDIENT MARKED WITH AN ASTERISK(*) IS ALSO LISTED IN 29 CFR 1910.1200(D) \$4 AS KNOWN OR SUSPECTED CARCINOGEN.

COMMENT: TLV FOR ORGANOSILICATE BASED ON LIBERATED 2-METHOXYETHANOL.

SECTION III - EFFECTS OF OVEREXPOSURE

EYES: MAY IRRITATE WITH SLIGHT PAIN, REDNESS, AND POSSIBLE HINOR CORNEAL .

SKIN: A SINGLE EXPOSURE FOR SEVERAL HOURS MAY CAUSE SLIGHT REDDENING. LONGER OR REFEATED CONTACTS MAY CAUSE MODERATE IRRITATION AND POSSIBLY A HILD BURN.

INHALATION: SHORT EXPOSURE MAY CAUSE SLIGHT ANESTHESIA AND FOSSIBLY SOME INJURY, DEFENDING ON CONCENTRATION AND LENGTH OF EXPOSURE. MAY ALSO IRRITATE NOSE AND THROAT SLIGHTLY.

DRAL: AMOUNTS TRANSFERRED TO THE MOUTH BY FINGERS, ETC., DURING NORMAL OFERATIONS SHOULD NOT CAUSE INJURY.

COMENT: 2-METHOXYETHANOL (METHYL CELLOSOLVE) MAY FORH UPON HYDROLYSIS. MAL REPRODUCTIVE STUDIES HAVE SHOWN 2-METHOXYETHANOL IS ABLE TO CAUSE AL BIRTH DEFECTS. FRODUCT, AS WITH ANY CHEMICAL, MAY ENHANCE ALLERGIC CONDITIONS ON CERTAIN EDFLE. WE DO NOT KNOW OF ANY MEDICAL CONDITIONS THAT HIGHT BE AGGRAVATED BY EXPOSURE TO THIS PRODUCT.

DOW CORNING CORPORATION MATERIAL SAFETY DATA SHEET

ATL NAME: DOW CORNING(R) 1200 FRIME COAT - RED

SECTION IV - EMERGENCY AND FIRST AID PROCEDURES

YES: FLUSH WITH WATER.

KIN: WIFE OFF AND FLUSH WITH WATER.

NHALATION: REHOVE TO FRESH AIR. OBTAIN IMMEDIATE MEDICAL ATTENTION.

RAL: OBTAIN IMMEDIATE MEDICAL ATTENTION.

OHMENT: NONE

THE BELLEVIE STATE

SECTION V - FIRE AND EXPLOSION DATA

LASH POINT (METHOD USED): CLOSED CUP 63-F/17-C

UTOIGNITION: NOT DETERMINED

LAMMABILITY LIMITS IN AIR : LOWER: N.D. UPPER: N.D.

WATER FOG X CO2 X DRY CHEMICAL X FOAH X OTHER TUISHING MEDIA: WATER

YAL FIRE FIGHTING PROCEDURES: SELF-CONTAINED BREATHING APPRARATUS AND DIECTIVE CLOTHING SHOULD BE WORN IN FIGHTING FIRES INVOLVING CHEMICALS

JNUSUAL FIRE AND EXPLOSION HAZARDS: NONE KNOWN TO DOW CORNING

COMMENTS: N.D. - NOT DETERMINED

SECTION VI - PHYSICAL DATA

COILING POINT (AT 760 HM HG): 210-F/99-C

PECIFIC GRAVITY (AT 77 DEG F/25 DEG C): 0.773

MELTING POINT: NOT APPLICABLE

/APOR PRESSURE (AT 77 DEG F/25 DEG C): 25 MM

/AFOR DENSITY (AIR = 1 AT 77 DEG F/25 DEG C): GREATER THAN 1 PERCENT VOLATILE BY VOLUME (%): ABOVE 70% EVAPORATION RATE (ETHER = 1): LESS THAN 1

SOLUBILITY IN WATER(2): LESS THAN 0.1%

DDOR, APPEARANCE, COLOR: SOLVENT ODOR, LIQUID, CLEAR

NOTE: THE ABOVE INFORMATION IS NOT INTENDED FOR USE IN PREPARING PRODUCT SPECIFICATIONS. CONTACT DOW CORNING BEFORE WRITING SPECIFICATIONS.

DOW CORNING CORFORATION MATERIAL SAFETY DATA SHEET

MATL NAME: DOW CORNING(R) 1200 PRIME COAT - RED

SECTION VII - REACTIVITY DATA

STABILITY: STABLE

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INCOMPATABILITY (MATERIAL TO AVOID): OXIDIZING MATERIAL CAN CAUSE A REACTION.

CONDITIONS TO AVOID: NOT APPLICABLE

HAZARDOUS DECOMPOSITION PRODUCTS: SILICON DIOXIDE, CARBON DIOXIDE, AND TRACES OF INCOMPLETELY BURNED CARBON PRODUCTS.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

CONDITIONS TO AVOID: NOT APPLICABLE.

COMMENTS: NONE

SECTION VIII - SPILL, LEAK AND DISPOSAL PROCEDURES

TES TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: USE ABSORBENT TERIAL TO COLLECT AND CONTAIN FOR SALVAGE OR DISPOSAL. REMOVE ALL SURCES OF IGNITION AND WEAR PROPER PROTECTION EQUIPMENT.

PROTECTIVE EQUIPMENT: EYES: USE CHEMICAL WORKER GOGGLES.

SKIN: REMOVE CONTAMINATED CLOTHING AND SHOES AT THE END OF THE WORK PERIOD AND CLEAN THOROUGHLY BEFORE REUSE.

INHALATION: USE RESPIRATORY PROTECTION UNLESS LOCAL EXHAUST VENTILATION IS ADEQUATE OR AIR SAMPLING DATA SHOW EXPOSURES ARE WITHIN TLV AND PEL GUIDELINES.

WASTE DISPOSAL METHOD: DOW CORNING SUGGESTS THAT ALL LOCAL, STATE AND FEDERAL REGULATIONS CONCERNING HEALTH AND POLLUTION BE REVIEWED TO DETERMINE APPROVED DISPOSAL PROCEDURES. CONTACT DOW CORNING IF THERE ARE ANY DISPOSAL QUESTIONS

D.O.T. (49CFR 171.8)/E.P.A. (40CFR 117) SPILL REPORTING INFORMATION
HAZARDOUS SUBSTANCE: NONE REPORTABLE QUANTITY: NOT APPLICABLE
CONCENTRATION OF HAZARDOUS SUBSTANCE: NOT APPLICABLE
REPORTABLE QUANTITY OF PRODUCT: NOT APPLICABLE

COMMENTS: NONE

DOW CORNING CORPORATION MATERIAL SAFETY DATA SHEET

MATE NAME: DOW CORNING(R) 1200 PRIME COAT - RED

SECTION IX - ROUTINE HANDLING PRECAUTIONS

PROTECTIVE EQUIPMENT:

EYES: USE PROPER PROTECTION -- SAFETY GLASSES, AS A MINIMUM.

SKIN *: WASHING AT HEALTIME AND END OF SHIFT IS ADEQUATE.

INHALATION: USE RESPIRATORY PROTECTION UNLESS LOCAL EXHAUST VENTILATION IS ADEQUATE OR AIR SAMPLING DATA SHOW EXPOSURES ARE WITHIN TLY AND PEL GUIDELINES.

VENTILATION:

LOCAL EXHAUST: RECOMMENDED

HECHANICAL (GENERAL): RECOMMENDED

SUITABLE RESPIRATOR: ORGANIC VAFOR TYPE.

THESE PRECAUTIONS ARE FOR ROOM TEMPERATURE HANDLING; USE AT ELEVATED TEMPERATURE REQUIRE ADDED PRECAUTIONS.

COOD FRACTICE REQUIRES THAT GROSS AMOUNT OF ANY CHEMICAL BE REMOVED THE SKIN AS SOON AS PRACTICAL, ESPECIALLY BEFORE EATING OR SMOKING.

SECTION X - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: PRODUCT IS FLAMMABLE. REASONABLE CARE AND CAUTION.

OTHER PRECAUTIONS: NONE KNOWN TO DOW CORNING. COMMENTS: NONE

THESE DATA ARE OFFERED IN GOOD FAITH AS TYPICAL VALUES AND NOT AS A PRODUCT SPECIFICATION. NO WARRANTY, EITHER EXPRESSED OR IMPLIED, IS HEREBY MADE. THE RECOMMENDED INDUSTRIAL HYGIENE AND SAFE HANDLING PROCEDURES ARE BELIEVED TO BE GENERALLY APPLICABLE. HOWEVER, EACH USER SHOULD REVIEW THESE RECOMMENDATIONS IN THE SPECIFIC CONTEXT OF THE INTENDED USE AND DETERMINE WHETHER THEY ARE APPROPRIATE.

PREPARED BY: JACK L. SHENEBERGER LAST REVISION DATE: SEPTEMBER 20, 1985 PREVIOUS REVISION DATE: HARCH 19, 1984

DATE: NOVEMBER 06, 1985

(R) INDICATES REGISTERED OR TRADEMARK OF THE DOW CORNING CORFORATION.

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Ashland Chemical Company
                                                                                            K527 Ashland 281
                                                                                                        Ashland,
                                        P. O. BOX 2218, COLUMBUS, OHIO 43216 + 48141 889-3333
MATERIAL SAFETY
                                         24-HOUR EMERGENCY TELEPHONE (606) 324-1133
                                                 1910.1200 (THE HAZARD COMMUNICATION STANDARD)
                                                                     FLANHASLE LIQUID (173.118)
METHYL ETHYL KETONE
                                                                                                             DEG F
DEG C)
MMHG
MHHG
DEG F
DEG C)
                                 FOR PRODUCT
BOILING POINT
                                 FOR PRODUCT
SPECIFIC VAPOR DENSITY
PERCENT VOLATILES
                              SECTION IV-FIRE AND EXPLOSION INFORMATION
       IGUISHING MEDIA: ALCOHOL FOAM OR CARBON DIOXIDE OR DRY CHEMICAL
HAZARDDUS DECOMPOSITION PRODUCTS: MAY FORM TOXIC MATERIALS:, CARSON DIOXIDE AND CARSON RONOXIDE, VARIOUS HYDROCARSONS, ETC.
   ECIAL FIRE & EXPLOSION MAZARDS: VAPORS ARE MEAVIER THAN AIR AND MAY TRAVEL ALONG
THE DROUND OR MAY SE MOVED BY VENTILATION AND IGNITED BY PILOT LIGHTS, OTHER
FLAMES, SPARKS, HEATERS, SMOKING, ELECTRIC MOTORS, STATIC DISCHARGE, OR OTHER
IGNITION SOURCES AT LOCATIONS DISTANT FROM MATERIAL HANDLING POINT.
         B OF ACUTE OVEREXPOSURE: FOR PRODUCT
                CAUSE SEVERE IRRITATION, REDNESS, TEARING, SLURRED VISION.
ONDED OR REPEATED CONTACT CAN CAUSE MODERATE IRRITATION, DEPATTING,
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Ashland Chemical Company DIVISION OF ASHLAND DIL NO. Ashland. P. O. BOX 2218, COLUMBUS, OHO 43216 + 1814) 889-3333 MATERIAL SAFETY DATA SHEET___ 24-HOUR EMERGENCY TELEPHONE (606) 324-1133 METHYL ETHYL KETONE PAGE: 2 IF ON BKIN, THOROUGHLY WASH EXPOSED AREA WITH BOAP AND WATER. REMOVE CONTAMINATED CLOTHING BEFORE RE-USE. VALLOWED: DO NOT INDUCE VOMITING, KEEP PERSON WARM, QUIET, AND GET MEDICAL ATTENTION. ASPIRATION OF MATERIAL INTO THE LUNGS DUE TO VOMITING CAN CAUSE CHEMICAL PNEUMONITIS WHICH CAN BE FATAL. BREATHED, IF AFFECTED, REMOVE INDIVIDUAL TO FRESH AIR. IF SREATHING IS DIFFIGULT, ADMINISTER OXYGEN. IF SREATHING HAS STOPPED DIVE ARTIFICIAL RESPIRATION. KEEP PERSON WARM, SUIET AND BET MEDICAL ATTENTION. PRIMARY ROUTE(E) OF ENTRY: BECTION VI-REACTIVITY DATA ERIZATION: CANNOT OCCUR FIBILITY: AVOID CONTACT WITH:, STRONG OXIDIZING AGENTS. SECTION VII-SPILL OR LEAK PROCEDURES SMALL SPILL: ABSORS LIQUID ON PAPER, VERNICULITE, FLOOR ASSORSENT, OR OTHER ASSORSENT MATERIAL AND TRANSFER TO HOOD. LARGE SPILL: ELIMINATE ALL IGNITION SOURCES (FLARES, FLAKES INCLUDING PILOT LIGHTS, ELECTRICAL SPARKS). PERSONS NOT WEARING PROTECTIVE EQUIPHENT SHOULD SE EXCLUDED FROM AREA OF SPILL UNTIL CLEAN-UP HAS BEEN COMPLETED. STOP SPILL AT SOURCE, DIKE AREA OF SPILL ITO PREVENT SPREADING, PUMP LIQUID TO SALVAGE TANK. REMAINING LIQUID HAY SE TAKEN UP ON SAND, CLAY, EARTH, FLOOR ASSORBENT, OR OTHER ASSORBENT MATERIAL AND SHOVELED INTO CONTAINERS. BHALL SPILL: ALLOW VOLATILE PORTION TO EVAPORATE IN HOOD. ALLOW SUFFICIENT TIME FOR VAPORS TO COMPLETELY CLEAR HOOD DUCT WORK. DISPOSE OF REMAINING MATERIAL IN ACCORDANCE WITH APPLICABLE REGULATIONS. LARGE SPILL: DESTROY BY LIGUID INCINERATION.
CONTAMINATED ASSORBENT HAY BE DEPOSITED IN A LANDFILL IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS. SECTION VIII-PROTECTIVE EQUIPMENT TO BE USED RESPIRATORY PROTECTION: IF TLY OF THE PRODUCT OR ANY COMPONENT IS EXCEEDED, A NIGHT/HAMA JOINTLY APPROVED AIR SUPPLIED RESPIRATOR IS ADVISED IN ASSENCE OF PROPER ENVIRONMENTAL CONTROL. OSMA REGULATIONS ALSO PERMIT OTHER NIGHT/HAMA RESPIRATORS UNDER SPECIFIED CONDITIONS. (SEE YOUR SAFETY EQUIPMENT SUPPLIER). ENGINEERING OR ADMINISTRATIVE CONTROLS SHOULD SE IMPLEMENTED TO REDUCE EXPOSURE. VENTILATION: PROVIDE BUFFICIENT MECHANICAL (GENERAL AND/OR LOCAL EXHAUST) VENTILATION TO MAINTAIN EXPOSURE BELOW TLY(S). WEAR RESISTANT GLOVES SUCH AS:, NATURAL RUBBER, NEOPREHE

EYE PROTECTION: CHEMICAL SPLASH GOGGLES IN COMPLIANCE WITH OSHA REGULATIONS ARE ADVISED, MOMEVER, OSHA REGULATIONS ALSO PERMIT OTHER TYPE SAFETY GLASSES. (CONSULT YOUR SAFETY EQUIPMENT SUPPLIER)

OTHER PROTECTIVE EQUIPMENT: TO PREVENT REPEATED OR PROLONGED SKIN CONTACT, WEAR IMPERVIOUS CLOTHING AND BOOTS.

SECTION IX-SPECIAL PRECAUTIONS OR OTHER CONNENTS

CONTAINERS OF THIS MATERIAL HAV BE HAZARDOUS WHEN EMPTIED SINCE EMPTIED CONTAINERS
RETAIN PRODUCT RESIDUES (VAPOR, LIGUID, AND/OR SOLID), ALL HAZARD PRECAUTIONS
GIVEN IN THE DATA SHEET HUST BE OBSERVED.

MINOR EMBRYOTOXIC/PETOTOXIC EFFECTS MAVE SEEN OBSERVED IN LABORATORY RATE EXPOSED TO MEK BY INHALATION AT LEVELS GREATER THAN 1000 PPM (5 TIMES THE OSMA-PEL/IWA) FOR MOST OF THE GESTATION PERIOD.

OVEREXPOSURE TO MATERIAL HAS APPARENTLY BEEN FOUND TO CAUSE THE FOLLOWING EFFECTS IN LABORATORY ANIMALS:, LIVER ASHORMALITIES, KIDNEY DAMAGE, LUNG DAMAGE, BRAIN DAMAGE

THE INFORMATION ACCUMULATED HEREIN IS BELIEVED TO BE ACCURATE BUT IS NOT WARRANTED TO BE WHETHER ORIGINATING WITH THE COMPANY OR NOT. RECIPIENTS ARE ADVISED TO CONFIRM IN ADVANCE OF NEED THAT THE INFORMATION IS CURRENT, APPLICABLE, AND BUITABLE TO THEIR CIRCUMSTANCES.

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	MATERIAL SAFE	ETY DA	ATA SHEE	T, 2520	3 J8J
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HEMICAL NAME ACETON			HEMICAL FAM	III Y Ketones	
YNONYMS. Dimethyl Ketor	ne, 2-Propanone; Dimethyl Ketal		ACLECULAR WE		
ORMULA CH3COCH3		^		20.00	
TRADE NAME AND SYNONYN		· · · · · · · · · · · · · · · · · · ·			
	I. PHYSIC	CAL DA	TA		1 04.7.04
BOILING POINT, 760 mm Hg	56.1 °C. (133.0 °F.)		FREEZING PO	- O.S.	-94.7 °C
SPECIFIC GRAVITY (H.O = 1)	0.7905 at 20/20 °C.	<u> </u>	VAPOR PRESS	SURE at 20 C	186 mm.
VAPOR DENSITY (air = 1)	2.0	1 i	SOLUBILITY IN WATER. % b	y wt at 20 °C.	Complete
PER CENT VOLATILES BY VOLUME	99.995		EVAPORATION (Butyl Acetate		14.48
APPEARANCE AND ODOR	Highly flammable liquid:	sharp, pene	etrating, and residu	al odor.	
•	II. HAZARDOUS	SINGR	EDIENTS	, , , , , , , , , , , , , , , , , , ,	
	MATERIAL			ev.	TLV (Units)
	Not applicable				
<u> </u>					(
)					
/	TIDE AND EVEL			ΠΔΤΔ	
1 - San	II. FIRE AND EXPL	AUTOIG		1,000 °F.	
FLASH POINT (test method)	4 °F., Tag open cup	TEMPER	RATURE		1 120
FLAMMABLE LIMITS IN AIR.	% by volume	LOWER	2.6	UPPER	12.8
EXTINGUISHING MEDIA	Use carbon dioxide or dry chem Use "alcohol"-type foam for lar	nical for sma rge fires.	II fires.		
SPECIAL FIRE FIGHTING PROCEDURES	Dilution of burning liquid with	water will e	ffect extinguishm	ent.	
UNUSUAL FIRE AND EXPLOSION HAZARDS	None	<u> </u>		-	
	EMERGENC	Y PHONE	NUMBERS		
)	Dr. C. U. Dernehl, 212/5 Dr. K. S. Lane, 212/551 C. P. Carpenter, Ph.D., 41	.4787: 914/	יוייציייו סכסניססטי		

• -	IV. HE	ALTH HAZARD DAT	ГА		<u>-</u>
THOLD LIMIT VALUE	1,000 ppm.				
S OF OVEREXPOSURE	Produces a sta	te of stupor.			_\
MERGENCY AND FIRST JD PROCEDURES	with water. M	sh air. Skin contact is only a sligh oderate hazard to the eye, but liqu ster for 15 minutes.			
The state of the s	V. F	REACTIVITY DATA		<u></u>	
STABILITY UNSTABLE STABLE	CONDITIONS TO AVOID	Low temperatures.			·
ICOMPATIBILITY naterials to avoid)	Catalysts such	as Ba(OH) ₂ , NaOH, and other alk	alies; sulfuric acid.		
AZARDOUS ECOMPOSITION PRODUCTS	None				
May Occur Will not Occur	CONDITIONS TO AVOID	Low temperatures when in the lift the temperature rises, reacti			cur.
	VI. SPILL	OR LEAK PROCEDU	JRES		
O BE TAKEN RIAL IS RELEASED OR	Eliminate all s	ources of ignition. Flush heavily v	with water.		(
ASTE DISPOSAL METHOD	Atomize into	an incinerator.	uni. Na santa	•	
	SPECIAL	PROTECTION INFO	RMATION	•	
ESPIRATORY PROTECTION (specify type)	Full face mask	with organic chemical canister or	supplied air.		
LOCAL EXHAUST	Preferable		SPECIAL		
ENTILATION MECHANICAL (general)	Acceptable		OTHER		
ROTECTIVE GLOVES	Rubber or vin	yl-coated gloves	EYE PROTECTION	Face shield	
THER PROTECTIVE DUIPMENT	e ser a	en e			
	VIII. SPI	ECIAL PRECAUTION	VS	·	
RECAUTIONARY LABELING	Do not leav Avoid profe	ACETONE flammable. Keep away from heat, we container open. Use with adequipaged or repeated contact with skill clearly established as safe for that FOR INDUSTRY USE ONLY	ate ventilation. in. Not for use as a	-	— (
THANDLING AND	Do not use cop	oper,			ري

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The state of the s	
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CILING POINT, 760 mm. Hg 116.	1 Isobutyl Ketone I. PHYSICA		EMICAL FAMILY		•
DRMULA CH ₃ COCH ₂ CH(CH ₃) ₂ RADE NAME AND SYNONYMS: Methy CILING POINT, 760 mm, Hg 116.	I. PHYSICA	МС	LECULAR WEIG	HT 100.16	•
CILING POINT, 760 mm. Hg 116.:	I. PHYSICA				
OILWG FORM: 100 mm 14				···	• .
OILWG FORM: 100 mm 14	The second secon	L DAT	Α	•	
	2 °C. (241.2 °F.)	F	REEZING POINT		-81 °C
	20 at 20/20 °C.	1	APOR PRESSUF	RE at 20 C.	15 mm.
APCR DENSITY (air = 1) 3.5		11	OLUBILITY		1.9
ERICENT VOLATILES 99.9	95	E (1	VAPORATION R Butyl Acetate #1)	ATE	1.64
Y VOLUME PREJANCE AND OCOR Colo	rless liquid; non-residua	l odor.	<u> </u>		
	IAZARDOUS	INGRE	DIENTS		
MAT	ERIAL			<u> </u>	TLV (Units
. Not ap	plicable				_ : .
				!	<u>. </u>
•				<u> </u>	
		-			
III. FIRE	AND EXPLO	SION F	AZARD D	ATA	
LASH FOINT 74 °F., Tag	1	AUTOIGNI TEMPERA	TION -	854 °F.	- 1
*est method) *LAMMABLE LIMITS IN AIR, % by volum		WER	1.4	UPPER	7.5
Use carbon	dioxide or dry chemical	I for small f fires.	ires.		
SPECIAL FIRE FIGHTING None					
JNUSUAL FIRE AND EXPLOSION HAZARDS None	•	•	<u></u>		

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HRESHOLD LIMIT VALUE	100 ppm.			
3 OF OVEREXPOSURE	Irritation of nose and throat. Headache, nausea, and vomiting.			
EMERGENCY AND FIRST AID PROCEDURES	Move to fresh a Flush skin and	ir and call a physician. If swall eye contact with water.	owed, induce vomiting	and call a physician.
1 1 2	V. R	EACTIVITY DATA	• •	
STABILITY STABLE	CONCITIONS TO AVOID			
NOOMPATIBILITY materials to avoid)				
HALAFOCUS DECOMPOSITION PRODUCTS	None		مستوجع جدم جينيه ۽ سن مستوجي	
May Occur Will not Occur	CONDITIONS TO AVCID		<u></u>	
	VI. SPILL C	OR LEAK PROCE	URES	
TO BE TAKEN TERIAL IS RELEASED OR TERIAL IS RELEASED OR THE DISPOSAL METHOD	Eliminate all so	ources of ignition. Flush heavil	y with water.	
· VII.	SPECIAL F	PROTECTION INF	ORMATION	
ESPIPATORY PROTECTION (specify type)		nister mask. Chemical cartridge		
LOCAL EXHAUST	Preferable		SPECIAL	
/ENTILATION MECHANICAL (general)	Acceptable		OTHER	
PROTECTIVE GLOVES	Rubber or viny	l-coated gloves	PROTECTION	Face shield
OTHER PROTECTIVE EQUIPMENT			a vital	
	VIII. SPI	ECIAL PRECAUTION	BUTYL KETONE	
FRECAUTIONARY LABELING	Keep adeq conta	LAMMABLE IING OF VAPOR MAY BE HAD I away from heat, sparks, and four the contilation. Avoid prolon act with eyes. In case of contal acter for at least 15 minutes.	RMFUL LIQUID MA	y CAUSE EYE IARTIATION. siner open. Use with ing of vapor, Avoid
OTHER HANDLING AND STORAGE CONDITIONS				

IV. HEALTH HAZARD DATA

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Rec'd 50

Ashland Chemical Company DIVISION OF ASHLAND DILL INC. K833 MATERIAL SAFETY P.O. BOX 2218. COLUMBUS, OHIO 43216 - 1514) 88 2333 474 n 84 **DATA SHEET** MARTIN MARIETTA CORP P O BOX 2930* NEW ORLEANS LA 70189 SECTION II-MAZARDOUS COMPONENTS XYLENE INITIAL BOILING POINT FOR PRODUCT FOR PRODUCT VAPOR DENSITY PERCENT VOLATILES OBIVE LIHIT (PRODUCT) EXTINGUISHING MEDIA: REGULAR FOAM OR CARBON DIOXIDE OR DRY CHEHICAL HAZARDOUS DECOMPOSITION PRODUCTS: HAY FORM TOXIC MATERIALS:, CARSON DIOXIDE AND CARSON HONOXIDE, VARIOUS HYDROCARSONS, ETC. SPECIAL FIREFIGHTING PROCEDURES: SELF-CONTAINED BREATHING APPARATUS WITH A FACEPIECE OPERATED IN PRESSURE DEMAND OR OTHER POSITIVE PRESSURE MODE. FIRE & EXPLOSION HAZARDS: VAPORS ARE HEAVIER THAN AIR AND HAY TRAVEL ALONG THE GROUND OR HAY BE HOVED BY VENTILATION AND IGNITED BY PILOT LIGHTS, OTHER FLAMES, SPARKS, HEATERS, SHOKING, ELECTRIC MOTORS, STATIC DISCHARGE, OR OTHER IGNITION SOURCES AT LOCATIONS DISTANT FROM MATERIAL HANDLING POINT.

HANDLING POINT.

HEYER BEELDING OR CUTTING TORCH ON OR NEAR OPIN (FYEN FRRYY) BECAUSE DING OR CUTTING TORCH ON OR NEAR DRUM (EVEN EMPTY) JUST RESIDUE) CAN IGNITE EXPLOSIVELY. S OF OVEREXPOSURE: FOR PRODUCT

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USE SEVERE IRRITATION, REDNESS, TEARING, BLURRED VISION. GED OR REPEATED CONTACT CAN CAUSE MODERATE IRRITATION, DEFATTING,

CONTINUED ON PAGE, E

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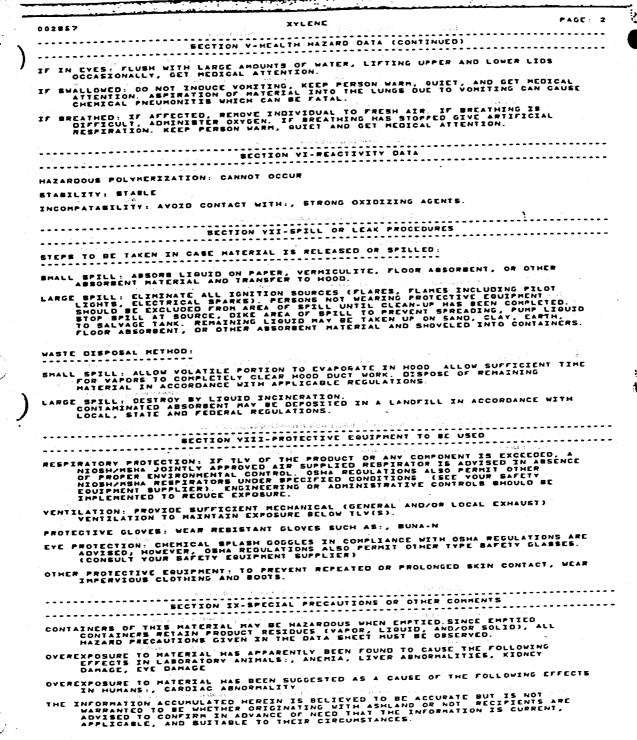
Ashland Chemical Company

DIVISION OF ASHLAND OIL INC.

MATERIAL SAFETY DATA SHEET

(1942년년 18년 **- 1**년

P.O. BOX 2219 COLUMBUS, OHIO 43218 - (814) 869-3333



PAGE: 1

MATERIAL SAFETY DATA SHEET ACCEPTED BY 0.S.H.A. AS ESSENTIALLY SIMILIAR TO 0.S.H.A. FORM 20
CHEMICAL CO, ENVIRONMENTAL COCCUPATIONAL SAFETY DEPT, BOX 2219, COLUMBUS, ON HOUR EMERGENCY TELEPHONE: 606-324-1133 (LOCATED AT ASHLAND, KENTUCKY)

SHLAND PRODUCT NAME: TOLUENE

MARTIN MARIETTA CORP P 0 80X 29304 NEW ORLEANS LA 70189 05 50 069 5653430-DATA SHEET NO: 0000565-002 LATEST REVISION DATE: 11/78-78326 2185000 PRODUCT: INVOICE: 506726

INVOICE DATE: 12/05/78 TO: MARTIN MARIETTA CORP HICHOUD ASSEMBLY FACILITY BLOG 103

ATTN: PURCHASING/SAFETY DEPT.

NEW ORLEANS LA 70129 ****** SECTION I-PRODUCT IDENTIFICATION ****

ENERAL OR GENERIC ID: AROMATIC HYDROCARBON

AZARD CLASSIFICATION: (03) FLAMMABLE LIQUID (173.115)

****** SECTION II-HAZARDOUS COMPONENTS ***

INGREDIENT

:NE

PERCENT

100.00%

CGIH RECOMMENDS A TLV OF 100 PPM (SKIN).

PROPERTY	REFINEMENT		MEASURE		HENT
NITIAL BOILING POINT	FOR PRODUCT		_	232.00 111.11 760.00	DEG F DEG C HMHG
APOR PRESSURE	FOR PRODUCT		a (38.00 68.00 20.00	MMHG DEG F DEG C
APOR DENSITY	AIR = 1			4.5	
PECIFIC GRAVITY			a (-871 60-00 15-55	DEG F
ERCENT VOLATILES	*** ** *** ** ** ** ** ** ** ** ** ** *			100.00	۲
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PAGE: 2

**** SECTION IY-FIRE AND EXPLOSION DATA ********

POINT (CLOSED CUP)

40.00 DEG F 4.44 DEG C)

WER EXPLOSIVE LIMIT (PRODUCT)

1.2 7

TINGUISHING MEDIA: REGULAR FOAM OR CARBON DIOXIDE OR DRY CHEMICAL

ZARDOUS DECOMPOSITION PRODUCTS: MAY FORM TOXIC MATERIALS:, CARBON DIOXIDE AND CARBON MONOXIDE, VARIOUS HYDROCARBONS, ETC.

ECIAL FIREFIGHTING PROCEDURES: SELF-CONTAINED BREATHING APPARATUS WITH A FULL FACEPIECE OPERATED IN PRESSURE-DEMAND OR OTHER POSITIVE PRESSURE HODE.

USUAL FIRE & EXPLOSION HAZARDS: VAPORS ARE HEAVIER THAN AIR AND MAY TRAVEL ALONG THE GROUND OR MAY BE MOVED BY VENTILATION AND IGNITED BY PILOT LIGHTS, OTHER FLAMES, SPARKS, HEATERS, SMOKING, ELECTRIC MOTORS, OR OTHER IGNITION SOURCES AT LOCATIONS DISTANT FROM MATERIAL HANDLING POINT. NEVER USE WELDING OR CUTTING TORCH ON OR NEAR DRUM (EVEN EMPTY) BECAUSE PRODUCT JEVEN JUST RESIDUE) CAN IGNITE EXPLOSIVELY.

******************* SECTION V-HEALTH HAZARD DATA **

RESHOLD LIMIT VALUE:

200 PPH

TS OF OVEREXPOSURE: FOR PRODUCT

CAN CAUSE SEVERE IRRITATION, REDNESS, TEARING, BLURRED VISION.
PROLONGED OR REPEATED CONTACT CAN CAUSE MODERATE IRRITATION, DEFATTING,

DERMATITIS.

EATHING - EXCESSIVE INHALATION OF VAPORS CAN CAUSE NASAL AND RESPIRATORY IRRITATION, DIZZINESS, WEAKNESS, FATIGUE, NAUSEA, HEADACHE, POSSIBLE UNCONSCIOUSNESS, AND EVEN ASPHYXIATION.

ALLOWING — CAN CAUSE GASTROINTESTINAL IRRITATION, NAUSEA, VOMITING, AND DIARRHEA. ASPIRATION OF MATERIAL INTO THE LUNGS CAN CAUSE CHEMICAL PNEUMONITIS WHICH CAN BE FATAL.

RST AID:

- ON SKIN: THOROUGHLY WASH EXPOSED AREA WITH SOAP AND WATER. REMOVE CONTAMINATED CLOTHING. LAUNDER CONTAMINATED CLOTHING BEFORE RE-USE.
- IN EYES: FLUSH WITH LARGE AMOUNTS OF WATER, LIFTING UPPER AND LOWER LIDS OCCASIONALLY, GET MEDICAL ATTENTION.
- SWALLOWED: DO NOT INDUCE VOMITING, KEEP PERSON WARM, QUIET, AND GET MEDICAL ATTENTION. ASPIRATION OF MATERIAL INTO THE LUNGS DUE TO VOMITING CAN CAUSE CHEMICAL PNEUMONITIS WHICH CAN BE FATAL.
- BREATHED: IF AFFECTED, REMOVE INDIVIDUAL TO FRESH AIR. IF BREATHING IS DIFFICULT, ADMINISTER OXYGEN. IF BREATHING HAS STOPPED GIVE ARTIFICIAL ESPIRATION. KEEP PERSON WARM, QUIET AND GET MEDICAL ATTENTION.

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PAGE:

TOLUENE

** SECTION VI-REACTIVITY DATA

DOUS POLYMERIZATION: CANNOT OCCUR

ITY: STABLE

NCUMPATABILITY: AVOID CONTACT WITH:, STRONG OXIDIZING AGENTS (E.G. NITRIC ACID, PERMANGANATES, ETC.)

******************* SECTION VII-SPILL OR LEAK PROCEDURES ***

TEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

MALL SPILL: ABSORB LIQUID ON PAPER, VERMICULITE, FLOOR ABSORBENT, OR OTHER ABSORBENT MATERIAL AND TRANSFER TO HOOD.

ARGE SPILE ELIMINATE ALL IGNITION SOURCES (FLARES, FLAMES INCLUDING PILOT LIGHTS, ELECTRICAL SPARKS). PERSONS NOT WEARING PROTECTIVE EQUIPMENT SHOULD BE EXCLUDED FROM AREA OF SPILL UNTIL CLEAN-UP HAS BEEN COMPLETED. STOP SPILL AT SOURCE, DIKE AREA OF SPILL TO PREVENT SPREADING, PUMP LIQUID TO SALVAGE TANK. REMAINING LIQUID MAY BE TAKEN UP ON SAND, CLAY, EARTH, FLOOR ABSORBENT, OR OTHER ABSORBENT MATERIAL AND SHOVELED INTO CONTAINERS.

ASTE DISPOSAL METHOD:

MALL SPILL: ALLOW VOLATILE PORTION TO EVAPORATE IN HOOD. ALLOW SUFFICIENT TIME FOR VAPORS TO COMPLETELY CLEAR HOOD DUCT WORK. DESTROY REMAINING ATERIAL BY BURNING IN AN IRON PAN.

ARG_ SPILL: DESTROY BY LIQUID INCINERATION. MATERIAL COLLECTED ON ABSORBENT MATERIAL MAY BE DEPOSITED IN A POSTED TOXIC SUBSTANCE LANDFILL IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS.

*************** SECTION VIII-PROTECTIVE EQUIPMENT TO BE USED *****

ESPIRATORY PROTECTION: IF TLY OF THE PRODUCT OR ANY COMPONENT IS EXCEEDED, A NIOSH/HESA JOINTLY APPROVED SELF-CONTAINED BREATHING APPARATUS WITH A FULL FACE PIECE OPERATED IN PRESSURE DEMAND OR OTHER POSITIVE PRESSURE MODE IS ADVISED; HOWEVER, OSHA REGULATIONS ALSO PERMIT OTHER NIOSH/MESA RESPIRATORS UNDER SPECIFIED CONDITIONS. (SEE YOUR SAFETY EQUIPMENT SUPPLIER).

ENTILATION: PROVIDE SUFFICIENT MECHANICAL (GENERAL) AND/OR LOCAL EXHAUST VENTILATION TO MAINTAIN EXPOSURE BELOW TLV(S).

ROTECTIVE GLOVES: WEAR RESISTANT GLOVES SUCH AS:, BUNA-N

TE PROTECTION: CHEMICAL SPLASH GOGGLES IN COMPLIANCE WITH OSHA REGULATIONS ARE ADVISED; HOWEVER, OSHA REGULATIONS ALSO PERMIT OTHER TYPE SAFETY GLASSES. (SEE YOUR SAFETY EQUIPMENT SUPPLIER).

PROTECTIVE EQUIPMENT: TO PREVENT REPEATED OR PROLONGED SKIN CONTACT, WEAT MPERVIOUS CLOTHING AND BOOTS.

CONTINUED ON PAGE: 4

SECTION IX-SPECIAL PRECAUTIONS OR OTHER COMMENTS **

NERS OF THIS MATERIAL MAY BE HAZARDOUS WHEN EMPTIED. SINCE EMPTIED ONTAINERS RETAIN PRODUCT RESIDUES (VAPOR, LIQUID, AND/OR SOLID), ALL HAZARD PRECAUTIONS GIVEN IN THIS DATA SHEET MUST BE OBSERVED.

IVEREXPOSURE TO MATERIAL HAS APPARENTLY BEEN FOUND TO CAUSE THE FOLLOWING EFFECTS IN LABORATORY ANIMALS:, LIVER ABNORMALITIES, KIDNEY DAMAGE, LUNG DAMAGE, SPLEEN DAMAGE

IVEREXPOSURE TO MATERIAL HAS BEEN SUGGESTED AS A CAUSE OF THE FOLLOWING EFFECTS IN HUMANS:, LIVER ABNORMALITIES

IE INFORMATION ACCUMULATED HEREIN IS BELIEVED TO BE ACCURATE BUT IS NOT WARRANTED TO BE WHETHER ORIGINATING WITH ASHLAND OR NOT. RECIPIENTS ARE ADVISED TO CONFIRM IN ADVANCE OF NEED THAT THE INFORMATION IS CURRENT, APPLICABLE, AND SUITABLE TO THEIR CIRCUMSTANCES.

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LAST PAGE-SEE ATTACHMENT PAGE ENCLOSED-LAST PAGE

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is less clear than this notice, it is due to the quality of the document being filmed

Mace V.S. MANIFERS

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SUCHEM PRODUCTS COMPANY ASSURT OF THE AND HAAS ACVANCED WATERIALS COMPANY COCK STREET COLA M-COSE SLAMO 2015 (215) 592-3000	- HAZARD RATING FIRE 4 - EXTREME 1 - NGCH 2 - NGCHART 1 - SLICHT 0 - RSICHFICHT SEE SECTION IV SCHOOL
MATERIAL SAFETY DATA SI	HEET
COOE	OCT HALLAD CLASS
NA .	
(I — APPROXIMATE COMPOSITIONAL INFORM	ATION) MIGHT S. TWATLY
Proprietary eisture containing unsaturated polyester in styrene mondeer.	REH OSHA ACEIN
Styrene manager (CAS 188-42-5)	25 188 58 p
(II - PHYSICAL PROPERTY INFORMATIO	ON)
Tan Trainy deadus liquid: Dersistent undlessant ador welling on Freezing Point adults persistent undlessant ador welling on Freezing Point adults at a last 239f init b. 2. (\$ 2.280 adults water percent volatile at Mechal Specific Gravity water	758,888 cos \$ 250
CIII - FIRE AND EXPLOSION MAZARD NECR FLASH FORM SICLABE TCC 498C/914F 1.1	
PEGIAL FIRE FIGHTING PROCEDURES Wear RSHA/NIOSH approved, pressure desand, self-contained brispray to cool fire-exposed containers.	eathing apparatus. Use mate
UNUSUAL FIRE AND EXPLUSION MAZARDS Heat can cause polymerization; sealed containers may rupture	explosively.
(IV - HEALTH HAZARD INFORMATION (SOCHEM PRODUCTS RECOMMENDED HORK PLACE EXPOSURE LANTS	
TWA! See Section I: STEL = 58 pps for styrene.	
INHALATION: High vapor concentration will irritate respirat The odor threshold for styrene is about 1 ppe in air. EYE CONTACT: Liquid can cause irritation and possible sligh SKIN CONTACT: Moderate irritation on prologged or repeated	t corneal injury.
INHALATION: Hove subject to fresh air. Bive oxygen if brea respiration if breathing has stopped.	thing is difficult, artific
EYE AND SKIN CONTACT: Flush eyes with plenty of water for a sedical attention; wash skin thoroughly with soap and water; reuse.	t least 15 minutes and get remove and wash clothing b

INSESTION: If swallowed dilute by giving 2 glasses of water to drink and call physicia

Control of the second of the s

enter destructions des despertations in the proposition of supplications and a second supplication of the contract of the cont

SOCIEM PRODUCTS COMPANY ASSUMES NO RESPONSIBILITY FOR PERSONAL PLURY OR PROPERTY DAMAGE TO VENCETS USERS OR THIND PARTIES.

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	(_V REAC	TIVITY WEORMATION .	
STABILITY	CONDITIONS TO AVOID		_
STABLE UNSTABLE	Elevated teamerat	urse ()158F) and tanks	Lagursas. See Section I.
ADOUS DECOMPOSITION	PACOUCTS		LAGUETTA SEE SECTION I.
Junder norest use	canditions.		and the same of
ALARCOUS POLTMERIZATIO	CONDITIONS TO AVOID	Oxidation/reduction catal	
T SCOUR WILL NOT	OIJEI VYI E INSDVID'	n catalysts (3F3, Alcia,	vacovi:
ACCEPATIBILITY MATERIALS TO	AVCION FACTIC and Al ch	larides, chlarine, capper	10000
MATER Y OTHER	2 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	d oridizing agents.	and copper allays,
And the second of the second o	(VI - SPILL OR LE	AK PROCEDURE INFORMATION	\
TEPS TO SE TAKEN N CASE W	ATERIAL IS RELEASED OR SPIL	:50	
			•
The same of the sa	uress. Evacuate the	spill area and wear MSHA	NIOSH approved respirator
in the same of	ncentration encounter	ed. Dike the spill with	inert material (sand.
ditailer's earth	ets.) and if aggree	riate transfer the liquid	and solld diking eateria.
arth, ratte container	a for recovery or dis	posal. Recove contacinal	ted clothing promptly and
an ailected skin ar	was with soap and wat	Fr. Wash clathing before	rause. Kaep apill out o
Il sawers and open b	odies of water.		2007 27111 021 0
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MASTE DISPOSAL METHODS &	or discard this is a	listed hazardous waste	RCRA (D-881). Reportable
untity last lbs. (CMA 3ec. 311). In ca	soliance with local sta	te and federal regulations
acinerate contaminat		, seen seen; bts	
	The state of the s	est di cara cara este este estado	
and the second second second	(VII - SPECIAL P	ROTECTION INFORMATION)	
FATILATION TYPE			
ralogian-arouf exhau	st ventilation at soi	nt of vapor or sist rele	*h * \$
ESPIANTORY PROTECTION			
required if sood	ventilation is saint	ained. Wear respirator	(XSHA/NIOSH-approved or
		d types of air contamina	
UTESTIVE GLOVES	E'E PROTECTIO		
eparvious titamen een	Solaspocooi	gougles (AHSI 137.1)	•
OFRER PROTECTIVE EQUIPM			
spervious apront evi	wash facility; seerge	ocy shower.	
		AND HANDLING INFORMATION	1
STORAGE TEMPERATURE	INDCOA		FAIGERATED CUTOCAR
usz 32C/98F win	r		and the second second second second
		l be limited to approved	
			ferring. Avoid storage for
long periods of time.		ers when pourting or trans	
ong periods of time.			
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	-• :		
		er sachaustas sida sacula (v. 1919). Igili (v. 1919).	
- 1 - 1 - 2 2 2 2 2 3 4 4 4 4 4 4 4 4 4 4 4 4 4 4		CICITY INFORMATION	
irii LDSB rati / 5888	mg/kgj skin irritatio	on rabbits slight (2.4/8	.8)
Inhalation LCSE rati	2388 pps/4-hour expo	sures eye irritation ras	bit: slight (18.3/11.8)
inhalation LCLo human	18,860 pps/38 sinu	ites exposure .	d dosested decidence
At high dosage levels	[(688 and 1888 ppm) [tyrene vapors gave evide	UCB OL TUCLATION INCIDENCA
of tuvors in laborate	ry test animals (rati	Landing a street with the said of	
	(X - MISCEL	LANEOUS INFORMATION	in the first of the second
if a temperature rise	or other indication	of polymerization is obs	erved, it is imporative th
the styrene eonomer 1	se cooled. It may be	necessary to spray the c	ontainer with water.
-Butyl catechol inhi	bitor should be added	i with thorough mixing.	
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THE SPORMATION CONTAINED HEREN IS BASED ON DATA CONSIDERED ACCURATE HOWEVER NO WARRANTY IS EXPRESSED OR SMPLED REGARDING

MATERIAL SAFETY DATA SHEET

UNOCALØ

UNOCAL CHEMICALS DIVISION PETROCHEMICALS GROUP

Product Name: 140 SOLVENT 66/3 Product Code No:11106

MANUFACTURER:

张启门第 国际

UNOCAL CHEMICALS DIVISION UNION OIL COMPANY OF CALIFORNIA 1345 N. HEACHAM SCHAUMBURG, ILLINOIS 60196

CONTACT FOR FURTHER INFORMATION: MSDS COORDINATOR (312) 490-2500

Transportation Emergencies:
Call CHEMTREC
(800) 424-9300 Cont. U.S.
(202) 483-7616 (Collect)
from Alaska & Hawaii
Health Emergencies:
CALL LOS ANGELES POISON
INFORMATION CENTER (24 hrs.)
(213) 664-2121

Industrial Chamicals

DISTRIBUTED BY

778 NEW ORLEANS, LA. 70181-0278 TELEPHONE 504 733-8600

PRODUCT IDENTIFICATION

PRODUCT NAME:

STADDARD SOLVENT

SYNONYMS:

AMSCO SOLV 1106

GENERIC NAME:

VOLATILE SOLVENT

CHEMICAL FAMILY: HYDROCARBON MIXTURE

DOT PROPER SHIPPING NAME:

PETROLEUM NAPHTHA

ID NUMBER:

UN1255

DOT HAZARD

LASSIFICATION: COMBUSTIBLE LIQUID

AS NUMBER:

64742-47-8

SECTION I - HAZARDOUS INGREDIENTS/EXPOSURE LIMITS CAS NO. TLV UNITS AGENCY TYPE

STADDARD SOLVENT

64742-47-8

NOT ESTABLISHED

SECTION II - EMERGENCY AND FIRST AID PROCEDURES ***EMERGENCY**

Have physician call LOS ANGELES POISON INFORMATION CENTER (24 hrs.) (213) 664-2121

EYE CONTACT:

IF IRRITATION OR REDNESS FROM EXPOSURE TO VAPORS DEVELOPS, MOVE VICTIM AHAY FROM EXPOSURE AND INTO FRESH AIR. IF IRRITATION OR REDNESS PERSISTS, SEEK MEDICAL ATTENTION, FOR DIRECT CONTACT, FLUSH THE AFFECTED EYE(S) MITH CLEAN MATER. SEEK MEDICAL ATTENTION.

SKIH CONTACT:

REMOVE CONTAMINATED CLOTHING. CLEANSE AFFECTED AREA(S) THOROUGHLY BY HASHING MITH HILD SOAP AND HATER. IF IRRITATION OR REDNESS DEVELOPS AND PERSISTS, SEEK MEDICAL ATTENTION.

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Product Name: STADDARD SOLVENT Product Code No: 11106

Page 2 of Issue Date: 7/2j/

SECTION II - EMERGENCY AND FIRST AID PROCEDURES ***EMERGENCY***

Have physician call Los Angeles Poison (
INFORMATION CENTER (24 hrs.) (213) 664-212-

INHALATION (BREATHING):

IF IRRITATION OF HOSE OR THROAT DEVELOPS, MOVE VICTIM AHAY FROM SOURCE OF EXPOSURE AND INTO FRESH AIR. IF IRRITATION PERSISTS, SEEK MEDICAL ATTENTION. IF VICTIM IS NOT BREATHING, ARTIFICIAL RESPIRATION SHOULD BE ADMINISTERED BY QUALIFIED PERSONNEL. IF BREATHING DIFFICULTIES DEVELOP, OXYGEN SHOULD BE ADMINISTERED BY QUALIFIED PERSONNEL. SEEK IMMEDIATE MEDICAL ATTENTION.

INGESTION (SHALLOHING):

ASPIRATION HAZARD: DO NOT INDUCE VOMITING OR GIVE ANYTHING BY MOUTH BECAUSE THIS MATERIAL CAN ENTER THE LUNGS AND CAUSE SEVERE LUNG DAMAGE. IF VICTIM IS DROHSY OR UNCONSCIOUS, PLACE ON THE LEFT SIDE HITH THE HEAD DOWN. IF POSSIBLE, DO NOT LEAVE VICTIM UNATTENDED. SEEK MEDICAL ATTENTION.

SECTION III - HEALTH HAZARDS/ROUTES OF ENTRY

EYE CONTACT:

- 17

THIS PRODUCT MAY CAUSE EYE IRRITATION. DIRECT CONTACT HITH THE LIQUID OR EXPOSURE TO ITS VAPORS OR HISTS MAY CAUSE BURNING. TEARING AND REDNESS.

. . .

SKIN CONTACT:

THIS PRODUCT MAY CAUSE SKIN IRRITATION. PROLONGED OR REPEATED EXPOSURE TO THIS MATERIAL MAY CAUSE REDNESS AND BURNING, DRYING A. CRACKING OF THE SKIN AND DERMATITIS. PERSONS HITH PRE-EXISTING SKIN DISORDERS MAY BE MORE SUSCEPTIBLE TO THE EFFECTS OF THIS MATERIAL.

INHALATION (BREATHING):

INHALATION OF EXCESSIVE CONCENTRATIONS OF VAPORS OR MISTS MAY CAUSE: IRRITATION OF THE NOSE AND THROAT. SIGNS OF NERVOUS SYSTEM DEPRESSION (E.G., DRONSHESS, DIZZINESS, LOSS OF COORDINATION, AND FATIGUE). PERSONS HITH IMPAIRED LUNG FUNCTION OR ASTHMA-LIKE CONDITIONS MAY EXPERIENCE ADDITIONAL BREATHING DIFFICULTIES DUE TO THE IRRITANT PROPERTIES OF THIS MATERIAL.

INGESTION (SHALLOHING):

INGESTION OF EXCESSIVE QUANTITIES MAY CAUSE: IRRITATION OF THE DIGESTIVE TRACT. SIGNS OF NERVOUS SYSTEM DEPRESSION (E.G., DROMSINESS, DIZZINESS, LOSS OF COORDINATION, AND FATIGUE). ASPIRATION HAZARD - THIS MATERIAL CAN ENTER LUNGS DURING SHALLOHING OR VOMITING AND CAUSE LUNG INFLAMMATION AND DAMAGE.

COMMENTS:

THIS SUBSTANCE HAS NOT BEEN IDENTIFIED AS A CARCINOGEN OR PROBABLE CARCINOGEN BY NTP, IARC OR OSHA.

SECTION IV - SPECIAL PROTECTION INFORMATION

VENTILATION:

IF CURRENT VENTILATION PRACTICES ARE NOT ADEQUATE FOR MINIMIZING EXPOSURES, ADDITIONAL VENTILATION OR EXHAUST SYSTEMS MAY BE REQUIRED. HHERE EXPLOSIVE MIXTURES MAY BE PRESENT, SYSTEMS SAFE FOR SUCH LOCATIONS SHOULD BE USED.

Product Name: STADDARD SOLVENT Product Code No: 11106

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SECTION IV - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION:

RESPIRATORY PROTECTION MAY BE NECESSARY TO MINIMIZE EXPOSURE TO VAPORS OR GASES.

DEPENDING ON THE NATURE AND CONCENTRATION OF THE AIRBORNE MATERIAL, USE A RESPIRATOR OR GAS MASK MITH APPROPRIATE CARTRIDGES AND CANNISTERS (NIOSH APPROVED, IF AVAILABLE) OR SUPPLIED AIR EQUIPMENT.

PROTECTIVE GLOVES:

THE USE OF GLOVES IMPERMEABLE TO THE SPECIFIC MATERIAL HANDLED IS ADVISED TO PREVENT SKIN CONTACT AND POSSIBLE IRRITATION.

EYE PROTECTION:

STEP STORES

APPROVED EYE PROTECTION TO SAFEGUARD AGAINST POTENTIAL EYE CONTACT, IRRITATION OR INJURY IS RECOMMENDED.

OTHER PROTECTIVE EQUIPMENT:

IT IS SUGGESTED THAT A SOURCE OF CLEAN HATER BE AVAILABLE IN HORK AREA FOR FLUSHING EYES AND SKIN. IMPERVIOUS CLOTHING SHOULD BE HORN AS NEEDED.

SECTION V - REACTIVITY DATA

STABILITY:

STABLE

INCOMPATIBILITY (MATERIALS TO AVOID):

THIS PRODUCT IS INCOMPATIBLE HITH STRONG ACIDS OR BASES, OXIDIZING AGENTS AND SELECTED AMINES.

HAZARDOUS DECOMPOSITION PRODUCTS:

THERMAL DECOMPOSITION IN THE PRESENCE OF AIR MAY YIELD CARBON MONOXIDE AND/OR CARBON DIOXIDE.

HAZARDOUS POLYMERIZATION:

HILL NOT OCCUR

SECTION VI - SPILL OR LEAK PROCEDURES

HIGHHAY OR RAILHAY SPILLS
Call CHEMTREC (800) 424-9300 Cont. U.S.
(Collect) (202) 483-7616 from Alaska & Hawaii

PRECAUTIONS IN CASE OF RELEASE OR SPILL

STAY UPHIND AND AMAY FROM SPILL. KEEP ALL SOURCES OF IGNITION AND HOT METAL SURFACES AMAY FROM SPILL. IF SPILL IS INDOORS, VENTILATE AREA OF SPILL. FOAM, ESPECIALLY HIGH EXPANSION FOAM, MAY BE USED TO SUPPRESS VAPORS. KEEP OUT OF DRAIMS, SEMERS OR HATERHAYS. USE SAND OR OTHER INERT MATERIAL TO DAM AND CONTAIN SPILL. DO NOT FLUSH AREA HITH HATER. FOR SMALL SPILLS, DO NOT FLUSH HITH MATER; USE ABSORBANT PADS. CALL SPILL RESPONSE TEAM IF LARGE SPILL. NOTIFY APPROPRIATE STATE/LOCAL AGENCIES.

HASTE DISPOSAL METHOD:

DISPOSE OF PRODUCT IN ACCORDANCE HITH LOCAL, COUNTY, STATE, AND FEDERAL REGULATIONS.

Product Name: STADDARD SOLVENT Product Code No:11106

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Page 4 of

SECTION VII - STORAGE AND SPECIAL PRECAUTIONS

HANDLING AND STORAGE PRECAUTIONS:

KEEP CONTAINERS TIGHTLY CLOSED. KEEP CONTAINERS COOL, DRY, AND AWAY FROM SOURCES OF IGNITION. USE AND STORE THIS PRODUCT HITH ADEQUATE VENTILATION. AVOID INHALATION OF VAPORS AND PERSONAL CONTACT HITH THE PRODUCT. USE GOOD PERSONAL HYGIENE PRACTICE. "EMPTY" CONTAINERS RETAIN RESIDUE (LIQUID AND/OR VAPOR) AND CAN BE DANGEROUS. DO NOT PRESSURIZE, CUT, HELD, BRAZE, SOLDER, DRILL, GRIND OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS OR OTHER SOURCES OF IGNITION; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. "EMPTY" DRUMS SHOULD BE COMPLETELY DRAINED, PROPERLY BUNGED AND PROMPTLY SHIPPED TO THE SUPPLIER OR A DRUM RECONDITIONER. ALL OTHER CONTAINERS SHOULD BE DISPOSED OF IN AN ENVIRONMENTALLY SAFE MANNER AND IN ACCORDANCE HITH GOVERNMENTAL REGULATIONS. BEFORE HORKING ON OR IN TANKS WHICH CONTAIN OR HAVE CONTAINED THIS PRODUCT, REFER TO OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION REGULATIONS, ANSI 249.1, AND OTHER GOVERNMENTAL AND INDUSTRIAL REFERENCES PERTAINING TO CLEANING, REPAIRING, HELDING, OR OTHER CONTEMPLATED OPERATIONS.

SECTION VIII - FIRE AND EXPLOSION HAZARD DATA

HAZARD RANKING

NFPA HEALTH HAZARD: 1 HAZARD FLAMMABILITY: 2 CLASS REACTIVITY: 0 OTHER: -

0 = LEAST 1 = SLIGHT 2 = MODERATE 3 = HIGH 4 = EXTREME HMIS HEALTH: 1 HAZARD FLAM: 2 CLASS REACT: 0 P.P.E.: -

LOHER EXPLOSIVE LIMIT (% VOL.)

UPPER EXPLOSIVE LIMIT (X VOL.)

1.0

7.0

FLASH POINT

141, TCC F

EXTINGUISHING MEDIA:

SMALL FIRES: EXTINGUISH HITH DRY CHEMICAL, CO2 OR FOAM. LARGE FIRES: THE USE OF DRY CHEMICAL OR FOAM IS RECOMMENDED. HATER MAY BE AN INEFFECTIVE EXTINGUISHING AGENT.

FIRE & EXPLOSION HAZARDS:

THIS MATERIAL IS COMBUSTIBLE AND MAY BE IGNITED BY HEAT OR FLAME. THIS MATERIAL HILL BURN, BUT HILL NOT IGNITE READILY.

FIRE FIGHTING PROCEDURES:

THE USE OF A SCBA IS RECOMMENDED FOR FIRE FIGHTERS. HATER SPRAY MAY BE USEFUL IN MINIMIZING VAPORS AND COOLING CONTAINERS EXPOSED TO HEAT AND FLAME. AVOID SPREADING BURNING LIQUID HITH HATER USED FOR COOLING PURPOSES.

SECTION IX - PHYSICAL DATA

APPROX. BOILING POINT

VAPOR DENSITY (AIR = 1)

YAPOR PRESSURE

367 TO 405 F

5.2

NEGLIGIBLE

EVAPORATION RATE (N-BUTYL ACETATE = 1)

* YOLATILE

* SOLUBILITY IN HATER

0.08

1002

NEGLIGIBLE (< 5%)

SPECIFIC GRAVITY (TEMP/TEMP)

APPEARANCE

ODOR

0.772 (60F/60F)

CLEAR, LITTLE IF ANY COLOR

CHARACTERISTIC

Product Name: STADDARD SOLVENT-Product Code No: 11106

Page 5 of 5 Issue Date: 7/23/86

SECTION XI - DOCUMENTARY INFORMATION

ISSUE DATE: 7/23/86 PROI

PRODUCT CODE NO. 11106

PREV. DATE: 10/20/80

PREV. PROD. CODE NO. 1106

HSDS HO: 6316

PREV. HSDS NO: 858

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MATERIAL SAFETY DATA SHEET

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P 0.80X 2219, COLUMBUS, CHIO 43216 + 15141 389-3333

24-HOUR EMERGENCY TELEPHONE (606) 324-1133

DEFINITIONS

THIS DEFINITION PAGE IS INTENDED FOR USE WITH MATERIAL SAFETY DATA SHEETS SUPPLIED BY THE ASHLAND CHEMICAL COMPANY. QUESTIONS CONCERNING THESE SHEETS SHOULD BE DIRECTED TO THE ENVIRONMENTAL AND OCCUPATIONAL SAFETY DEPARTMENT.

PRODUCT IDENTIFICATION

PRODUCT CLASS: GENERAL OR GENERIC TOENTIFICATION.

MATATORUT CLASSFICATION: PRODUCT MEETS
OOT CRITERIA FOR HAZARDS LISTED.

HAZARDOUS COMPONENTS

A MAZARDOUS INGREDIENT IS ONE WHICH MEETS ONE OR MORE OF THE FOLLOWING CRITERIA:

IT IS LISTED IN THE ANNUAL REGISTRY OF TOXIC EFFECTS OF CHENICAL SUBSTANCES, OR IT IS KNOWN TO BE TOXIC WITHIN THE PARAMETERS OF THAT REGISTRY.

IT MAS A OSMA ESTABLISHED, 8-HOUR TIME-WEIGHTED AVERAGE PERMISSABLE EXPOSURE LIMIT (PEL) OR AGCEPTABLE CELLING (C), OR AN AMERICAN CONFERNACION OF GOVERNMENTAL INQUIRILAL HYGIENISTS' (ACGIM) THRESHOLD LIMIT VALUE, AND BY NATURE OF THE PRODUCT OR ITS KNOWN UBE, IT IS LIKELY TO BECOME AIRBORNE.

AND/OR

- IT CONTRIBUTES TO ONE OF MORE OF THE FOLLOWING HAZARDS OF THE PRODUCT:
 - A. FLASHPOINT BELLOW 200 DEG F (CC), OR SUBJECT TO SPONTANEOUS HEATING OR DECOMPOSITION.

 - B. CAUSES SKIN BURNS. (DOT)
 C. BIRONG OXIDIZING AGENT. (DOT)

EACH INGREDIENT MEETING ONE OR HORE OF THE ABOVE CRITERIA IS LISTED IN SECTION IT IF PRESENT AT A LEVEL AT LEAST GREATE THAN ONE PERCENT. INGREDIENTS WHICH ARE CLAIMED TO BE CARCINOGENS, TERATOGENS, MUTAGENS, OR CAUSATIVE AGENTS OF OTHER REPRODUCTIVE CISORDERS ARE LISTED IF KNOWN OR BELIEVED TO BE PRESENT, PROVIDED THAT THE DATA SUPPORTING SUCH CLAIMS IS CONSIDERED VALID.

EACH HAZARCOUS INGREDIENT IS LISTED BY CHEMICAL, GENERIC, OR PROPRICTARY NAME ITS LEVEL IN THE PRODUCT IS EXPRESSED IN CREATER THAN 60%, OR BY OTHER MEANS.

PHYSICAL CATA

INTITAL BOXIENS POINT: IF LIQUID AT

VAPOR PRESSURS: IF LIQUID AT 68 DEG F OR WHICH SUBLIMES.

VAPOD DEVELTY: FOR VOLATILE PORTION OF PRODUCT.

OF PRODUCT IS NOT KNOWN, INDICATED AS (1, 11, OR)1.

PERCENT VOLATILES: PERCENTAGE OF MATER-IAL WITH INITIAL BOILING POINT BE-LOW 925 DEG F.

EVAPORATION GATE: INDICATED AS FASTER OR SLOWER THAN ETHYL ETHER, UNLESS STATED.

FIRE AND FURL STORY MATARDS

FLASH POINT: | CLOSED CUP.

LOWER EXPLOSION LIMIT: INDICATED FOR COMPONENT WITH LOWEST VALUE.

POOUT DECOMPOSITION PORTUGE. KNOWN HAZARDOUS PRODUCTS RESULTING FROM HEATING, BURNING, ETC., OR REACTED RAW HATERIALS WHICH HAY ARISE THROUGH HEATING, BURNING, ETC.

SPECIAL FIREFISHTING PROCESSORY INDICATES EQUIPMENT TO PROTECT FIREMEN FROM TOXIC PRODUCTS OF COMBUSTION OR IF WATER IS NOT TO BE USED.

UNUSUAL FIRE AND EXPLOSION MAZARDS .

HAZARDS MCT COVERED BY OTHER SECTIONS OF THIS REPORT ARE SHOWN HERE.

HEALTH HAZARS DATA

RECIPIENTS OF THIS DATA SHEET SHOULD CONSULT THE OSMA SAFETY AND HEALTH STANDARDS (29 CFR 1910), PARTICULARLY SUBPART G OCCUPATIONAL HEALTH AND ENVIRONMENTAL CONTROL, AND SUBPART I PERSONAL PROTECTIVE EQUIPHENT, FOR GENERAL GUIDANCE ON CONTROL OF POTENTIAL OCCUPATIONAL HEALTH HAZARDS.

PERMISSIBLE EXPOSURE LEVEL: OSMA ESTABLE, LISHED PEL--IF NONE AVAILABLE, ADOPTED VALUE.

EFFECTS OF OVEREXPOSURE: GIVEN IN GEN-ERAL TERMS; LOCAL AND SYSTEMIC EFFECTS TO THE EYES, SKIN, IF MAT-ERIAL IS INMALED, UNLESS NOT APPLICABLE DUE TO PHYSICAL FORM OF PRODUCT.

REASTRON VI

MAZARGOUE POLYMETTATION: CONDITIONS TO AVOID HAZARDOUS POLYMERIZATION RESULTING IN A LARGE RELEASE OF ENERGY.

STABLE UNCER NORMAL CIRCUMSTANCES.

INCOMPATIBILITY: MATERIALS TO AVOID.

SPILL OF LIAN PROCESURES

REASONABLE PRECAUTIONS TO BE TAKEN AND THE METHODS OF CLEAN-UP TO BE USED IN THE EVENT OF SPILLAGE OF THE PRODUCT. CONSULT FEDERAL, STATE AND LOCAL REGULATIONS FOR ACCEPTED PROCEDURES AND ANY REPORTING OR NOTIFICATION REQUIREMENTS.

PROTECTIVE EQUIPMENT TO SE USED

THIS SECTION INCICATES PROTECTIVE EQUUP-MENT TO BE USED WHEN MANDLING THE PRODUCT.

SPECIAL PRECEUTIONS OF OTHER COMMENTS THIS SECTION IS TO COVER ANY RELEVANT POINTS NOT PREVIOUSLY MENTIONED.

ADDITIONAL COMMENTS

ASHLAND WISHES TO INFORM YOU THAT SERIOUS ACCIDENTS HAVE RESULTED FROM THE MISUSE OF "EMPTIED" CONTAINERS (DRUMS, 1 AND 5 GALLON PAILS, ETC.). REFER TO SECTIONS IV AND IX.

WE RECOMMEND THAT CONTAINERS BE EITHER PROFESSIONALLY RECONDITIONED FOR REUSE BY CERTIFIED FIRMS TO MELP REDUCE THE CERTIFIED FIRMS TO MELP REDUCE THE POSSIBLITY OF AN ACCORDANCE WITH APPLICABLE LAWS AND REGULATIONS. —EMPTY—DRUMS SHOULD BE IN ACCORDANCE WITH APPLICABLE LAWS AND REGULATIONS. —EMPTY—DRUMS SHOULD NOT BE GIVEN TO INGIVIDUALS.

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1. 接头车等一直		PROCESSORS, INC.
8902199	MARINE SHALE	1 11 CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
00022	MATERIALS CHARACT	ERIZATION DATA SHEET
MCDS Document #	APR 2 5 1989 PLANT (50	04) 362-3987 MSP CODE:
	THAT COLL GO THAT	04) 631-3161 WELLION
SUBMITTED	BY: SPECIAL PROJECTS D	
		IMENTAL SERVICES, INC.
Converter Name USN	ASA/Martin Mariette	
Cocilina Addices 1380	Old Gentrilly Rd.	Conjuny Contact: LEON Marks
racinty rainty success		Container Size: 55gal (or 85gal) with acrosol can my
the second secon	days will be a first to the second	EPA Waste No. DOOL
City State Zin New	Orleans, LA 70129	Generating Process Manufricturing
	11. TE (118)	Common Name of Waste Aerosol Caks Rate of Generation 2 dr. PER month
III. Environmou	+70 1 E VICITIAD XI	March Blodd (I'me Piers)
Jalanduna NO 1504	105/-3933 WI:	Values in Storms 4 dr. IN 55 MI GYUM
Facility EPA ID # LA	+800314587	Mary Innay
		Proper DQI Shipping Name Wash Compress (1945, M.Q.S.) Hazard Class (2015) ID No. UN 1954
	SITION (No Trade Name)	Proper DOT Shipping Name Work Contrastite State
(Totals must add up to 10	(0×) S	Hazard Class Care ID No. UN
Aerosol can	us for variousx	Transportation Equipment
13000	TOTAL COLLEGE	Placarding Flammable
- types)	*	PHYSICAL DESCRIPTION
	*	
	x	Physical State Liquid Semi-solid DC 3010 Phases/Layering Uni-Layer Bilayer DC Multilayer
	~x	A 1 1 Medium 1 1 low
	The state of the s	viscosity type to the language of Mixed
METALS (EP Toxici	ty Test, mg/1)	sales as QQ+ Surporded Solids (wt. %)
Arienic (A4) ADNE	444	BTU/lb 40 % Ash Content 99+ % Water (by weight)
Barium (Ba) SUSA	SUPPOCHOCE (Cu) SUSPECTED	Flash Point (F) VARIES Type
	Nickel (Ni)	Casific Carrily
, amonition	Zinc (Zn)	Boiling Point, (°C) Freezing Point, (°C)
Lead (Fb)		Marco Processes (mm Hs @ 24°C)
Mercury (11g)		pH (Avg) Neutral (Range) to
Selenium (Sc)		Total Alkalinity/Acidity (%)
	a hotereti i	Odor Mild
INORGANICS (m)	A/A A I A-	color Various
Total CN NON	E Indine NONE	
	ECTED Adjector SUSPECTED	HAZARDOUS PROPERTIES I I NONE
Sulfick		Water Reactive Reactive Explosive
Chloride		Shock Sensitive Pyrophoric Polymriable
Bisulfite		1 Radioactive 1 Pesticide Residuals 1 Ignitable
Sulfite		1 Corrolive 1 Toxic Vapor 1 Pathogen
Sulfate		Biological Etiological
Physphale		Other
Flourine		and the office of the control of the second of the control of the
Bromine		REQUIRED PERSONNEL PROTECTIVE
Chlorine	L	EQUIPMENT AND PROCEDURES: 500 MSL) SS
10 mm 1 m	Talana da Maria da M Maria da Maria da Ma	
ORGANICS (mg/		
Endrin NOA		
Melhoxychlor SUS	FETE Decaptans <u>SUSFECTED</u>	
Toxaphene	 	
2. 4-5		
2,4,5·T		PLEASE ATTACH ALL MATERIAL SAFETY DATA SHEETS,
Phenol(ics)		LOGISTIC SKETCHES, ANALYSIS REPORTS, HANDLING
∕ cos <u> </u>		PRECAUTIONS, ADDITIONAL HAZARD SUPPORT
Dioxin —	 	INICODMATION DATA & COMMENTS.
юс	L of Anti-almand marked day	
t and the state of	illow signor weilini menittian at Caribasitasi te lev	Michiga Carrol, arra carrol
tentify that the mater	ials tested are reixesentative or an tile more inci-	sobject to the comment
	2.4.00	Carry M 20100x
DATE 4-5	34–89 GENERATÕR'S SIGNAT	TURE: Maren M. Reller
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You 18 From MSP PI Hearing

MSD007



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MSDS	OR HS RO	8	CONTAINING OR LAST CONTAINED	HAZARO CLASS	10 #	EPA #	ORIGINAL MATERIAL - HAZARDOUS PROPERTIES
	ž	100	Waste Compressed Gas, NOS	Flammable Gas	UN1954	1000	Ignitable
1828			3M-Spray Adhesive	Flammable Gas			
65			Clear Acrylic 76229	Flammable Gas			
246			WD-40	Flammable Gas	•		
99			Rust-Oleum Top-Coat	Flammable Gas			
	ı		and a mixture of other non-flammable serosols	nable verosols			
			Waste Compressed Gas, NOS	Non-Flammable Gas	0861NU	:	
3958			SKC-NF/ZC-7B	Non-Flammable Gas			
9691			SKC-NF/ZC-7	Mon-Flammable Gas			
417			Molykote G - Rapid Spray	Non-Flammable Gas			
414			CRC 2-26	Non-Flammable Gas			
362			Great Stuff	Non-Flammable Gas			
326			Camie 2000	Non-Flammable Gas			
75			Release All #30	Non-Flammable Gas			

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Hazandous Praperties	Placard Nonflam Garondss WIFlamm Lordan	Ignitable Placard/La/2e/ Flacard/La/2e/ Gas	
EPA #			
#QI	UN1956	UN 1954	
Hazard Class	Secont Stoff Compressed Gas, NOS Non-Flammalde gus SKC-NF/2C-7 SKC-NF/2C-7 SRC-NF/2C-7 SRC-NF/2C-7 SRC-NF/2C-7 SRC-NF/2C-7 SRC-NF/2C-7 SRC-NF/2C-7 SRC-NF/2C-7 SRC-NF/2C-7 SRC-NF/2C-7 Gickloredifluce Great Stoff Gamie 2000 Frechloredifluce Frechloredthylem Ralease All #30 Methylem girloride III.I-trichloregthylem	Compressed Gas, NOS Flammable gad (Compressed Gas, NOS Flammable gad (Clear Acrylic 7622) property and acceptual mothers is classical property of non-flowing petroleum distillates couts (couts) methylone alleride edwyl karbur petroleum distillates couts methylone alleride edwyl karbur petroleum distillates couts (couts)	
Contains or REROSOL CANS Lost Contained Hazard Class	Ske-NF/2c-7B Ske-N	Compressed Gas, NOS Flammable gad 3M-Spray Adhesive 76 ("Eth. Lencehlander" ("Men Propare Allene alloride propare ("Sobothur") Rust-Oleum Tep- tolvene xyleur ("Coloride petroleum distillates alleride ethiller alleride ethillates alleride ethiller ethiller alleride ethiller ethill	22-141 50 SHEETS 22-142 100 SHEETS 22-144 200 SHEETS
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MA SOSM	80	√ I	
	395.8 41.4 39.8 30.6 7.5	182 A 182 O	

MSD007

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PI Hearing
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MATERIAL SA	FETY	ATA SI	HEET		HPCA 1-18
FOR COATINGS, RES					
REP 6/2/82 JB (Approved by U.S. Department of	ofLabor Essentian	, Similar to Form (MMC	0 23	01004
	Section I			- ' -	9
WANUFACTURERS NAME Rust-Oleum Corporation					13
STREET ADDRESS 11 Hawthorn Parkway city	STATE AND ZIP	CODE Verno	n Hills, Illin	iois 600	
EMERGENCY TELEPHONE NO (312) 367-7700 INFORMATION TELEPHONE NO (312) 367-7700 PRODUCT CLASS ACTOSOL TRADE NAME HARD HATO TOPCOATS	2159	FACTURERS COD 3, 2124, <u>2125</u> 5, 2156, 2163 7, 2190, <u>2192</u>	3, 2164, 2171	, 2137, <u>21</u> , 2175, <u>21</u>	て 2つ 143,2147,2148 178,2179,2183
Section II — HAZ					
INGREDIENT	PERCENT	TI		LEL	VAPOR PRESSURE
					mmHg@20°C
Xylol C-11 Methylene Chloride C-49 Toluene C-62 Ethylene Glycol Monobutyl Ether C-69 & P Naphtha C-68 thyl Ethyl Ketone C-51 Propellant (aliphatic hydrocarbons)	Less than 5%	100skin 200 100skin 50skin 500 200		1.0% None 1.2% 1.1% 1.1% 1.8%	9.5 340.0 38.0 0.9 15.0 70.6 70 PSIG
*Nearest 5%	in the second control of the second				
Section III	- PHYSIC		<u> </u>	1	L THEN AIR
BOILING RANGE Below 0°F (propellant) EVAPORATION RATE	PERCENT YOLA BY YOLUME		WEIGHT PER GALLON		
Section IV - FIRE A	ND EXPLO	SION HAZ	ARD DATA		
FLAUMABILITY CLASSIFICATION Extremely Flammable (Propellant)	FLASHP	OINT LESS 1	ian 0°F		LEL See II
Use National Fire Protection Asso dioxide, dry chemical or foam) design	ciation (NF ned to extin	PA) Class guish NFPA	B extinguis Class IB li	hers (car quid fires	bon ,
Do not spray near sparks or open fla heat or prolonged exposure to su incinerate (burn).	me. Do not in may cau	smoke whilese bursting	le spraying Do not	Exposure puncture	to or
Water spray may be ineffective. We prevent pressure build-up and possi extreme heat.	ater may b	e used to c lition or exp	ool closed o plosion when	containers n exposed	s to i to

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15.50 (A. 17. A. 17	Section V - HEALTH HAZARD DATA
THRESHOLD LIMIT VALUE F** ECTS OF OVEREXPOSU ACU	
CHR	ONIC Skin or Eye Contact: Primary irritation.
EMERGENCY AND FIRST AT	
physicia	Remove from exposure. Restore breathing. Keep warm and quiet. Notify a un. Spray (eyes): Flush immediately with copious quantities of running water for at minutes. Take to a physician for definitive medical treatment.
	Section VI — REACTIVITY DATA
STABILITY UNSTA	BLE STABLE CONDITIONS TO AVOIL NA
INCOMPATABILITY (Mereret MAZARDOUS DECOMPOSIT	and the control of t
HAZARDOUS POLYMERIZA	TION MAY OCCUR WILL NOT OCCUR
CONDITIONS TO AVOID	Do not store above 120°F
Rose two sales and the sales are	Section VII — SPILL OR LEAK PROCEDURES
Remove all s	ources of ignition (flames, hot surfaces, and electrical, static, or frictional sparks.) ing vapors. Ventilate area. Remove with inert absorbent and non-sparking tools.
WASTE DISPOSAL METHOD	Dispose of in accordance with local, state, and federal regulations. Do not incinerate (burn)
	Section VIII - SPECIAL PROTECTION INFORMATION
solid air born Bureau of M particulate, respirators or	open areas use Bureau of Mines approved mechanical filter respirator to remove e particles of overspray during spray application. In restricted ventilation areas use lines approved chemical-mechanical filters designed to remove a combination of gas and vapor. In confined areas use Bureau of Mines approved air line type
Provide gene hazardous in limit.	ral dilution or local exhaust ventilation in volume and pattern to keep TLV of most gredient in SECTION II below acceptable limit, LEL in SECTION IV below stated
	Recommended in confined areas
OTHER PROTECTIVE EQUIP	WENT TO THE RESERVE OF THE PROPERTY OF THE PRO
	Section IX — SPECIAL PRECAUTIONS
PAECAUTIONS TO BE TAKE	HIN HANDE NG AND STORING DO NOT PUNCTURE
DOL STORAGE CATEGORY	Class IA liquid
OTHER PRECAUTIONS	Do not puncture or incinerate. Do not spray near fire or open flame. Keep out of reach of children.
	Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

Rewind 20 Ay 85 246

IS DEPARTMENT OF LABOR

WAGE AND LABOR STANDARDS ADMINISTRATION
Bureau of Labor Standards

MATERIAL SAFETY DATA SHEET (SPRA 9-1-

SECTION I

MANUFACTURER'S NAME

WD-40 Company
ADDRESS (Number, Street, City, State, and ZIP Code)
1061 Cudahy Place (92110), P. O. Box 80607, San Diego, California 92138-9021
CHEMICAL NAME AND SYNONYMS
UD-40 Spray Cans
CHEMICAL FAMILY

FORMULA

SECTIO	N II	HAZAF	RDOUS INGREDIENTS		
PAINTS, PRESERVATIVES, & SOLVENTS	3	TLY (Units)	ALLOYS AND METALLIC COATINGS	7	TLY (Units)
PIGMENTS Not applicable			BASE WETAL Not applicable	1 .	
CATALYST	1		ALLOYS	i	
VEHICLE	十一	 	METALLIC COATINGS	į	
SOLVENTS	i	<u>:</u>	FILLER METAL PLUS COATING OR CORE FLUX	ī	
ADDITIVES	Ť	i	OTHERS	:	
OTHERS	1	1		1	
WATA BROWN MINTERS	SOF	THER LIC	DUIDS, SOLIDS, OR GASES	*	TLV (Units)
(1) Aliohatic netroleum distil	late	(stode	dard solvent) CAS 8052-41-3 over	50	500ppm
(2) Petroleum base oil (CAS 80			over		
(3) A-70 hydrocarbon propellan	t (1	iquifie	ed petroleum gas XCAS 68476 85 7	25	1000рр
(4) Proprietary corrosion inhi	bito	rs and	wetting agents *	Bal	ance

SECTION III	PHYSICAL DATA	
BOILING POINT (F.)	SPECIFIC GRAVITY IN QUEIN	.710
VAPOR PRESSURE ITT ME IN CARS @ 700 F. 50 DSig	PERCENT VOLATILE BY VOLUME (%) Total can contents	80
VAPOR DENSITY TAIR=11 greater than 1	EVAPORATION RATE	
socusicity in water insoluble - forms unstable emulsion.		
APPEARANCE AND ODOR light amber colored liqu	id slight characteristic odor.	

SECTION IV FIRE AND I	EXPLOSION HAZARD DATA	
FLASH POINT IMMORE VSEED NOT APPLICABLE TO Spray Cans	propellant portion	1-8 VOL: 9-5 VOL
EXTINGUISHING MEDIA CO2, dry chemical, foam		
SPECIAL FIRE FIGHTING PROCEDURES		
UNUSUAL FIRE AND EXPLOSION MAZARDS Considered "e	xtremely flammable" under	Consumer Product
Safety Commission regulations.		

^{*}These do not constitute any special toxicity or handling hazards.

		. \$	ECTIO	N V	HEAL	TH HAZARD DA	TA
a <u>nesthesia[®] b</u> can cause irr cause chemica	eadac itati one	Orying of he, dizzi on, nause umonitis.	skin, ness, a, vom	naus nitin	y of irri ea & ig, ar	id diarrhea.	ts) 500 ppm lation of vapor may cause atory irritation. Swallowing Aspiration into lungs can call a physician. For eye pses if woro. For skin or innalation, remove to f breathing is difficult, give
			SECT	ION	VI R	ACTIVITY DATA	1.
STABILITY	UNST	ABLE				5 10 AVOID	,
	STAE	LE	χ				
INCOMPATABILITY	Keterial	to avoid)			-		
HAZARDOUS DECOV	POSITIO	N PRODUCTS					
HAZARDOUS		MAY OCCUR				CONDITIONS TO A	VOID
POLYMERIZATION		WILL NOT DO	CUR		Х	·	
		L					
	IN CAS	OM CANS.	L 62K	ing (OR LEAK PROCE	ced in plastic bag or open
waste disposal w						not be punct	ured or incinerated, bury in land fill.
					<u> </u>		- ONLANGO
· · · · · · · · · · · · · · · · · · ·			N VIII	SPE	CIAL	ROTECTION INF	-UKAM HOW
RESPIRATORY PROTE		the will the transfer					SPECIAL
VENTILATION	Suff	acexhaust icient to	keep	501	vent :	vapor less	None
		TLV.				EVE PROTECTION	None
D'MER PROTECTIVE	<u>No</u>	ne requir					None required
		None	recui	red.			
<u> </u>			SECTIO	גו מכ	SPE	CIAL PRECAUTI	ON\$
PRECAUTIONS TO S	ETAREN	IN HANDLING	AND STO	DRING	Keep	from sources	of ignition. Do not take
internally.	Avoi	d excessi	ve in	nala	tion	of spray part	icles. Do not store above

Occupations Select and Health Administration MATERIAL SAFETY DATA SHEET

equised under USD1 Sereny and Health Regulations for Ship Repairing. Shipbuilding and Shippiessing (25 OF # 1815, 1915, 1917)

	SECTIONI	The second second	
MANUFACTURER'S NAME OSBORE Manufes	f rine Company	216-351	16.62-246 40. - 1500
#2018 15 - Der Street 619, 318 84 76 77 700	luar :a Clavelo	rd. OH 04116	
CHEMICAL NAME AND SYNONYMS		Clear Acrylic	76229
C-LW CALTAMILY Pressurized Frod	JEL	TM-693	

	SECTION	: II : <u>-</u>	±2.=	DOUS INGREDIENTS			
PA.NTS.	STAISE TATIVEE & SOLVENTS		TLV (Links)	ALLOYS AND METALLIC SEATINGS	1	*	TLV (Und)
PIGHENTS		1		BESE METAL			
CATALYST		1		ALLOYS			
VE-ICLE		6		WETALLIC COATINGS			
SOLVEN'S	Toluene, Yylene	35	300	FILLET METAL			
ADDITIVES	Acetone	119	1000	C-CES	, ¹	<u> </u>	
CT-6+8	Methylene Chiomide	1:4	200			<u> </u>	
	MAZAPODUS M.	AT JEE	5 0: CT-	ER ENDLIDE SOCIOS OF CASES		*	TLV
	Propare/isobutane Dro	?€`	:::: 201			23	1000
						<u> </u>	<u> </u>
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	SECTION III - P	HYSICAL DATA	
10-1-46 FO.NT (F.)	h.k.	SPECIFIC GRAVITY (MgCAS)	N.A.
(D'.CT. 3 # . 223 04 X CAAY	less than 14001301	MERCENT, VOLATILE	Ĉτ
\ A+2 & 2 E+6 TY (A. P+1)	heavier than air	EVAPORATION RATE	۱۰,۸,
SOLUBILITY IN MATER	less than 12		
ROCO CHA JOHANAMA	Clear and solvent		

SECTION IV - FIR		PLANUABLE LINE	5	LA	l . Vet
FLAS- PO. NT (MITTER - MED - 200 F T.C.	C		π. λ.		4
Extinguis- No MEDIA Water fog, Foat,	CO2 or Dry				
		ners cool. Use			
recuired to protect ;	ers::-:e: }	einst burstin	COLYS	nting co	rtainers.
UNUSUAL FIRE AND EXPLOSION HAZARDS	At elevated	terseratures	(1300 0	r cver)	
	cortainers	rzy vent, rupt	ure, or	turst.	
<u> </u>					

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Form CS-4 70

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		TION V. HEALTH HAZARD DATA
Scient .		plicable to multi-component products.
(313.610	incinet lish ca	use dizziness or in extreme case, absence of exagen
Jid produce	e narcosis.	
SENEY AND F	PS" A 2 P SCE2_ 9	if unconscious, remove person to fresh air and call
povsician. I	f sprayed in e	yes, flush intediately with large quantities of water
		SECTION VI - REACTIVITY DATA
	S	SECTION VI - READITIVITY DATA
STABILITY	UNSTABLE	I the control of the
ing. Mang interpretable	5º ABLE	x :Pressurized containers could rubture above 130°
WES MATABLITY		
# 62 4 9 20 25 26 20 4 > 4 2 2 22 75	CTD:	m burning: Carbon dickide, carbon monoxide and water.
• Jahan Jahan	NAY DESUR	2545.11343 12 47515
POLYMER EXTION	w126 407 DE	cua X
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ri .		ON VII - SPILL OR LEAK PROCEDURES
5" EM TO BE "AKE	TIN CASE WATER-AL	LIS RELEASED OF SPILLED
	Fluer with lar	ce quantities of water. Ventilate area.
	Flush with lar	ge quantities of water. Ventilate area.
		in the second
PU*(2:)*014. Y	erp Ce not	puncture or incinerate containers. Give to a disposal
#45*(2:3*0\$4. Y	erp Ce not	in the second
PU*(2:)*014. Y	erp Ce not	puncture or incinerate containers. Give to a disposal
service equi;	pped to safely	puncture or incinerate containers. Give to a disposal nandle and dispose of pressurized containers. VIII SPECIAL PROTECTION INFORMATION
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Service edu:	SECTION SECTION STATES TO SECTION SECT	puncture or incinerate containers. Give to a disposal nancie and dispose of pressurized containers. VIII SPECIAL PROTECTION INFORMATION Playoid breatning concentrated vapors or particles freally designed to be innaied. SPECIAL PROTECTION SPECIAL CONER.
Service education	SECTION SECTION STATES TO SECTION SECT	puncture or incinerate containers. Give to a disposal nancie and dispose of pressurized containers. VIII SPECIAL PROTECTION INFORMATION Playoid breatning contentrated vapors or perticles freship designed to be innaied. Special use - normal vantilation other.
Service edu:	SECTION SECTION SECTION SECTION SECTION SECTION SECTION SECTION OF THE PROPERTY OF THE PROPERT	puncture or incinerate containers. Give to a disposal nancie and dispose of pressurized containers. VIII SPECIAL PROTECTION INFORMATION Playoid breatning contentrated vapors or particles freship designed to be innaied. Special use - normal vantilation other.

PAGE 121 GPS 1 34-34

Do not store in tenderatures above 1200F.

Form 05/54-20

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St. Paul, Minnesota 55144 (612) 733-1110 DUNS NO.: 00-617-3082 DATA SHEET 15693 C PWO 7 3M Brand Spray Adhesive 76 AC&S Division 62-4438-4935-1 TLV® (unit) CAS. 1. INGREDIENTS : 47 100 ppm 75-09-2 Methylene chloride Styrene/isoprene/styrene polymer, thermoplastic copolymer, hydrocarbon resin, antioxidant and 11 UV absorber 40 Propane/isobutane blend 400 ppm Isoparaffin hydrocarbon 2. PHYSICAL DATA Solubility in Water Nil Compressed gas **Boiling Point** Specific Gravity (H₂O=1) 0.81 Compressed gas Vapor Pressure ⁻90 Percent Volatile 2.93 Vapor Density (Air = 1) м.А. 1.8 ether =1) vaporation Rate (Lt. yellow thin liquid Appearance and Odor 3. FIRE AND EXPLOSION HAZARD DATA UEL = --LEL = --Flammable Limits: -50° F. Propellant Flash Point (Test Method) N.A. Extinguishing Media Treat as pressurized container. Special Fire Fighting Procedures When exposed to flame, hazardous decomposition products may be produced. Unusual Fire and Explosion Hazards 4. ENVIRONMENTAL INFORMATION Spill Response N.A. Aerosol container.

Do not puncture or incinerate can in household incinerator. Incinerate properly in Recommended Disposal accordance with local regulations as the product contains halogens. Completely empty containers may be disposed of in a sanitary landfill in accordance with local regulations.

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				. Description	The work of the second of the
MADE NAME: 3M Brand Pre-	Total Annual School	18.71 miles (18.72) 14.24 16.4	:	Granica de Carre	
CHEALTH HAZARD DATA	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		BATTE TO		
ye Contact Product was moderatel		of laboratory	animals	when spraye	d .
Broduct was moderately	y irritating to the e	yes of Taboracory			
directly in the eye.					
ontact Product was slightly	cki	n of laboratory an	imals.	•	
Product was slightly	irritating to the ski	01 14000			
7,000					
				• ·	
Inhalation	rest	iratory system.	•	•	
Vapors may be irritat	ing to the upper resp	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
 1.5 					
Ingestion	been found to be prac	ctically non-toxic	orally.		· -
Liquid collected has	been found to be Par	•			
•					
Suggested First Aid	iately flush eyes wit	h aloney of water	for at 1	east 10 min	utes
Eye contact: Immed	iately flush eyes wit	u blency or mases	-		* * * * * * * * * * * * * * * * * * *
and c	all a physician.			,	- '
a Wash	with soap and water.				
Inhalation: Provi	de fresh air.				
Illiazazza	<u> </u>				
A CONTRACTOR OF THE SECOND					
6. REACTIVITY DATA	A and				
Unstable	Conditions to Avoid				
STABILITY Stable	i .	·			
Y] 218014					
INCOMPATABILITY	Materials to Avoid			<u> </u>	
	- Augid				
May Occur	Conditions to Avoid				· · · · · · · · · · · · · · · · · · ·
ARBUUS LYMERIZATION WOCCUT		·			
→ Oseon	cts r extremely hot surface		.03	or other	hazardous
Hazardous Decomposition Produ	cts averagely hot surface	ces could produce t	CI vabo	IS OF CHIEF	
Exposure to flame of	ettion products.				
chlorinated decompos	STETON PLOST				
7. SPECIAL PROTECTION INF	ORMATION	Skin Protection			
Eye Protection	•				
Safety glasses					·
Ventilation	rred; mechanical for	low usage.			
Respiratory and Special Protection					
As required.					
Other Protection					
8. PRECAUTIONARY INFORM	AATION				
8. PRECAUTIONARY INFORM	AATION , sparks and open fla	- uce only in a	reas ad	equately ver	itilated
Veen away from heat	, sparks and open fla vement to remove vapor	me. Use Only In	r build	up. Avoid	eye
with enough air mov	rement to remove vapor	and protone	d or re	peated skin	contact.
contact. Avoid pro	vement to remove vapor plonged breathing of v	TOPE AROVE 120°F.			*
Keen out of reach of	olonged breathing of the children. DO NOT	STORE RECTE 220		-	
	•	 -			
•		·			
	Company of the Compan				
9. DEPARTMENT OF TRANS	PORTATION	DOT Hazard Class			
OT Proper Shipping Name		FLAMMABLE GAS	บN1954		
COMPRESSED GAS, NO	S			Issue Date	Nov., 1980
COLIT RESULT					
	presents our current data and best o			Dec.,1981	

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COT 2 1 1565 FOR COATINGS	SA	FETY	DATA S	HEET		J) NPCA
OATE OF PREP		artis de la companie	ily Similar" to For		35	- 94
)6/4/76	•	Section I				5, 2 t 4 1,1
M CTURERS NAME AIRTECH INTERNATI	ONAL	, INC.		••••		
STREETADDRESS 2542 E. Del Amo Blvd.	CITY	STATE, AND ZIP	Cars	on, CA 9	0749	
EMERGENCY TELEPHONE NO. (213) 603-9683		•	<i>.</i>	•		
PRODUCTCLASS Release Agent	. :	MANUI	FACTURERS CO	DE ID ENTIFICATIO	H	
TRADENAME Release All #30			a North	••		
' Section II —	HAZ	ARDOUS	NGREDI	NTS		
INGREDIENT		PERCENT	PPM T	mg/m ⁴	LEL	VAPOR PRESSURE
Methylene Chloride	•	30	500			350 Min (70 T.)
l,l,1 - tri-chloroethane		60	500			
		-				
					:-	
Section	n III -	- PHYSICA	I DATA	<u> </u>		
104° - 162°F.	·.	YAPOR DĘ		HEAVIER	UGHTER	THANAIR
:/APORATION RATE FASTER X SLOWER, THAN ETHE	R P	ERCENT VOLATION	LE 85	WEIGHT PER GALLON	11.1 lbs	·
Section IV FIR	EAN	D EXPLOS	ION HAZ	ARD DATA		
of CATEGORY Non-flammable	••	FLASH POI	NOI	NE.	· • .	LEL
XTINGUISHING MEDIA N.A.	•	•		a ive	e r ja e	
	î		. •	L (6.26		
Sual fire and explosion hazards . N. A.			ı	•		
RE FIGHTING PROCEDURES N.A.		•			•	•
					-	N.
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CAMIE-CAMPBELL INC.

1c 782

in Release Agents

9225 WATSON INDUSTRIAL PARK

ST. LOUIS. MISSOURI 63126

314.968.3222

MATERIA	\L	SAF	ETY DATA SHEET		
ES-4487 THIS FORM DUPLICATES	U.S. (SECT	ION 1' '	•	
MANUFACTURER'S NAME			EMERGENCY TELEPHONE		
				<u>.</u>	
Anness (Number, Street, City, Street, and ZIP Cod 9225 Watson Industrial Par CHEMICAL NAME AND SYNONYMS	<u>k -</u>	<u>- st.</u>			
Fluorocarbon Dispersion			CAMIE #2000 TFE COS		
CHEMICAL FAMILY Acrylic Resin-Fluorocarbon	PC	olvmen	Not a single chemic	cal	
SECTION	4 II	- HAZAR	DOUS INGREDIENTS		than in the
PAINTS, PRESERVATIVES & SOLVENTS	*	(Units)	ALLOYS AND METALLIC COATINGS	5	(Units)
Pigments	. 5	N/A	Base Metal	ļ	
Cotolyst			Alloys		
Vehicle		N/A	Metallic Coatings	-	
Solvents Ferchloroethylene 82	. 5	100ppn	Filler Metal Plus Coating or Core Flux	 	
Additives			Others	<u> </u>	
Others	15	350pcm		<u> </u>	TLV
	US N	HXTURES	OF OTHER SOLVENTS	*	(Units)
Propane C.A.S. 74-	98	-6		15	350ppn
Propane C.A.S. 74- Perchloroethylene C.A.S.		- 10 - 10 - 10 - 10 - 10 - 10 - 10 - 10	4	2.5	: 30pp
Perchioroechyrene comes,				<u> </u>	
		ÿ_ :.		<u></u>	<u> </u>
SE SE	CTI	- ווו אס	PHYSICAL DATA	:	. S
Boiling Point (°F)	1	20	Specific Gravity (H ₂ O = 1)	<u> </u>	1.61
Vapor Pressure (mm Hg.)	<u> </u>	14.4	Percent Volatile by Volume (%)	_	7.5
Vapor Density (Air = 1)		5.83	Evaporation Rate (= 1)	1	2.8
Solubility in Water		None			
Appearance and Odor					
	. FII	RE AND	EXPLOSION HAZARD DATA		
SECTION IV			LEL	Ŧ	UEL
Flash Point (Method used) NO	ne		Flommoble Limits none	!	none
Extinguishing Media Chemica	٠١_	Foam:	COZ		
Special Fire Fighting Procedures Us	se_	local	procedure for chemical fir	es.	
Unusual Fire and Explosion Hazards		None			

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SECTION V. HEALTH HAZARD DATA Threshold Limit Value Approximately 100 ppm Dizziness may occur from breathing vapors. Effects of Overexposure Emergency and First Aid Procedures Splash: In eyes-flush with copious quantities of water. On skin - wash with soap and water. Remove to fresh air or administer oxygen. SECTION VI - REACTIVITY DATA Conditions to Avoid N/A Unstable Stability Stable Incomposability (Materials to avoid) None Phosgene gas at high temperatures Hazardous Decomposition Products Conditions to Avoid N/A May Occur **Polymerization** X Will Not Occur SECTION VII - SPILL OR LEAK PROCEDURES Steps to be Taken in Case Material is Released or Spilled Wash away with water Do not incinerate aerosol. Bury it. Waste Disposal Method contents may be incinerated. The second of the second of the second SECTION VIII - SPECIAL PROTECTION INFORMATION Standard : Respiratory Protection (Specify type) Special Preferred Local Exhaust Ventilation Other Mechanical (General) Eye Protection Preferred Preferred Protective Gloves

SECTION IX - SPECIAL PRECAUTIONS

Other Precontions Contents under pressure. Do not puncture or incinerate

None

Precoutions to be Taken in Handling and Storing Use in centilated area.

breathing vapor. Avoid contact with eyes and skin.

Other Protective Equipment

Do not store above 120°F.

1	

U.S. DEPARTMENT OF LABOR Form Approved OMB No. 44-R13 Occupational Safety and Health Administration MATERIAL SAFETY DATA SHEE GREAT STUF One Compone Required under USDL Safety and Health Regulations for Ship Repairing, Shipbuilding, and Shipbreaking (29 CFR 1915, 1916, 1917) SECTION I MANUFACTURER'S NAME (days) Insta-Foam Products, Inc. ADDRESS [Number, Sireel, City, State, and ZIP Code] 1500 Cedarwood Drive, Joliet CHEMICAL NAME AND SYNONYMS TRADE NAME AND SYNONYMS One Component Urethane Mixture **Urethane Chemicals SECTION II** - HAZARDOUS INGREDIENTS TLV ALLOYS AND METALLIC COATINGS × (Units) PIGMENTS BASE METAL CATALYST ALLOYS VEHICLE METALLIC COATINGS FILLER METAL PLUS COATING OR CORE FLUX SOLVENTS ADDITIVES OTHERS OTHERS TLV (Unit HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES * Polyether Polyol Approxb Triethylphosphate Flame Retardant ٠. Polymeric Isocyanate 32 02-1000 **Dichlorodifluoromethane** SECTION III - PHYSICAL DATA BOILING POINT (F.) SPECIFIC GRAVITY (H20-1) 1.25 VAPOR PRESSURE (mm Hg.) R-12 PERCENT, VOLATILE at R.T Approx EVAPORATION RATE VAPOR DENSITY (AIR=1) SOLUBILITY IN WATER Insoluble APPEARANCE AND ODOR Light brown liquid

Contains C Cl₂F₂ and N₂ which can develop pressure in sealed containers unusual fire and explosion hazards

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

or dry chemicals

FLAMMABLE LIMITS

FLASH POINT (Method used)

co,

EXTINGUISHING MEDIA

						¥4.2	
			\$1.2 kin(1)				
		· s	ECTION	V - HEA	LTH HAZA	RD	DATA
THRESHOLD LIMI	g	•	0.02 P	PM			
Breathles	Snes	SURE s, chest	disco	mfort a	and reduc	ced	pulmonary function.
		en ta en					
EMERGENCY AND Inhalatio	FIRST	AID PROCEDU	DRES motoma	tically	; vaso-c	lila	ators, oxygen
Skin Cont	1 11 1						ohol helpful
Eye Conta	ct:	Flush w	ith wa	ter 15	minutes	- c	call a physician
			1 90 - 10				
			SECTIO	. 11	EACTIVIT	Y DA	ATA
STABILITY	UNS	TABLE		compition Water c	ontamina	tio	on, protect from freezing
	STAI		<u>i 1</u>		<u>.</u>		
INCOMPATABILITY				r and s	trong ca	ust	tics
500°F, CO, Be	nzene	TION PRODUCE, Toluen	cTS e,Oxide	es of n	itrogen,	HCN	N, Acetaldehyde, Acetone
HAZARDOUS		MAY OCCU	t	x	Moistur		contamination water vapor
POLYMERIZATION		WILL NOT C	CCUR		May for	m C	CO ₂ gas pressure. Do not
				-			incinera
		P. V 100			10 - 10 - 1 - 1 - 10 - 10 - 10 - 10 - 1		CONTRACTOR SALES
15k ephakeas Lesson (1997)	45. (32)	製造 かいいんきゅんかい	4 - 4 - 4 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -		OR LEAK P	ROC	CEDURES
STEPS TO BE TAKE	abso	ase material bent ma	al is RELE terial	ASED OR S	spilled ist); pla	ce	in open top container or
plastic she	et a	nd treat	with a	aqueous	ammoniu	ım h	nydroxide or alcohol.
and the first of pay have							
WASTE DISPOSAL	METHO.	l in ac	cordan	ce with	local a	ind	EPA regulations.
					- · .		
		•					• • •
		**		ECIAL P	ROTECTIO	N IN	NFORMATION -
RESPIRATORY PRO	TECTIO	ON (Specify 15)	pr)		•		
VENTILATION	LOCA	L EXHAUST			•		SPECIAL
• 	MECH	IANICAL /Gen	crei)		. 14 4		OTHER .
PROTECTIVE GLOV		r comfo	r- -		EYE PROTEC	COO	n des or face shield
OTHER PROTECTIV					<u> Durcey -</u>		
.1 = 1		SE	CTION I	X - SPEC	CIAL PREC	AUT	TIONS
RECAUTIONS TO E	E TAK	closed	ing and s	tween 4	0° and 1	20°	F. Do not store next
to steam pir	oes.						
Read and und	NS	and ins	tructio	ons bef	ore usin	g.	
•					•		

670 934-140

MAGNAFLUX CORPORATION MATERIAL SAFETY DATA SHEET

PRODUCT: SKC-NF/ZC-7B CLEANER/REHOVER

IDENTIFICATION

ADDRESS:

7300 West Lawrence Avenue, Chicago, Illinois 60656

TELEPHONE:

(312) 867-8000

PACKAGES:

3.

1 gallon can, 5 gallon pail, 55 gallon drum, 12 or aerosol

CHEMICAL FAMILY:

Chlorinated Alkane

HMIS RATING:

Health 2, flammability 0, Reactivity 1

HAZARDOUS INGREDIENTS

1,1,1-Trichloroethane (Hethyl chloroform), CAS #71-55-6, TLV: 350 ppm, Conc. 100% Bulk, 95% Aerosol Carbon dioxide (aerosol only), CAS #124-38-9, TLV: 5000 ppm, Conc. 5% Dioxane, CAS /123-91-1, TLV: 25 ppm, Conc. about 13

Contains no other ingredient suspected of being hazardous according to information sources given in 29 CFR 1910.1200, OSHA Hazard Communication Rule.

HEALTH HAZARD

THRESHOLD LINIT VALUE: 350 ppm

ROUTES OF ENTRY, EFFECTS OF OVEREXPOSURE

Dizziness, drowsiness, nausea. Unconsciousness at high exposure Inhalation:

Irritates by dissolving skin oils. Not absorbed through skin in significant Skin Contact:

Eye Contact:

Irritating due to strong solvent action

Ingestion:

Low single dose toxicity in test animals

CARCINOGENICITY:

The first and third listed ingredients are currently under investigation as

possible carcinogens.

MEDICAL CONDITIONS KNOWN TO BE AGGRAVATED BY EXPOSURE TO PRODUCT:

FIRST AID

INHALATION:

Remove to fresh air. If not breathing, call emergency vehicle immediately. Give mouth-to-mouth resuscitation. If breathing is difficult, give oxygen.

Wash off in flowing water or shower. Remove contaminated clothes and wash

SKIN CONTACT:

before re-use. Use soothing lotion.

EYE CONTACT:

Lift upper eyelid, depress lower eyelid, and flush eye with a steady, gentle

flow of water. Roll eyeball in all directions while flushing.

INGESTION:

Do not induce vomiting; if vomit is inhaled, it may cause asphyxiation. Contact

physician immediately.

IMPORTANT:

POISON CONTROL CENTER NUMBER

In all severe cases, contact physician immediately. Local telephone operators are able to furnish number of Regional Poison Control Center to assist

physician.

Page 1 of 3

7300 West Lawrence Avenue | Chicago, Illinois 60656

FIRE HAZARD

Can be a major contributing factor to a fire in progress PRIMARY HAZARD:

SPECIAL FIRE FIGHTING PROCEDURE: Keep containers cool with water spray.

LASH POINT:

GENERAL:

None :

FLAMMABLE LIMITS IN AIR:

EXTINGUISHING MEDIA: UNUSUAL FIRE HAZARDS: 10 - 15%, using intense ignition sources. None

Aerosol cans may burst at temperatures over 130°F. Vapors partially decompose to toxic gases when exposed to flame, arcs, or red hot surfaces

REACTIVITY HAZARDS

Partially decomposes in flame, arcs, near red hot surfaces. STABILITY:

Powdered zinc and aluminum INCOMPATIBILITY:

HAZARDOUS DECOMPOSITION PRODUCTS: Phosgene, hydrochloric acid. Phosgene CAS #75-44-5 is extreme toxic, TLV 0.1 ppm and cannot be reliably detected by odor. Hydrochoric acid CAS #7647-01-0 is almost as toxic, TLV 5 ppm, and is detectable and even irritating at this concentration.

SAFE HANDLING PROCEDURES

Do not breathe vapors. Exposures above the TLY can result in clumsiness and poor juc ment, with resulting danger to the victim and those around him. Much like ingesting much alcohol. If victim is unconscious, death is possible, due to either suffocation (lack of oxygen), or cardiac arrest. For avoidance see next two sections.

Avoid frequent or prolonged exposure to skin as the solvent can irritate skin. Do not use around flame, arcs, red hot surfaces or lighted smoking materials, so as avoid exposure to phosgene and hydrochloric acid.

Do not heat aerosol cans above 1300F to eliminate the possibility of their bursting releasing unwanted vapors.

Store away from heat sources to minimize the danger from exposure to fires.

PERSONAL PROTECTIVE EQUIPMENT:

In poorly ventilated areas such as small rooms with no windows, or in sumps or other areas (SKC-NF vapors are dense and sink to low spots) the user should wear a respira with chemical cartridge

In confined, unventilated spaces, such as the inside of tanks or small compartments, inspector should wear a full mask with separate air supply

If hand exposure to SKC-NF is unavoidable, wear nitrile rubber gloves, to avoid skin contact.

Wear full goggles if the application of SKC-NF includes splashing or the possibility spraying into the eyes. Be sure the goggles are clean and not apt to degrade the inspection procedure.

CONTROLS:

SKC-NF vapors cannot be allowed to collect. It is preferred to use SKC-NF either in spray booth or next to an exhaust vent. Remember that the vapors tend to settle to floor.

General ventilation must be sufficient to keep the concentration below 350 ppm. Alm all of the SKC-NF that is used will evaporate into the surrounding air. Base ventil tion rate on consumption.

Page 2 of 3 (SKC-NF/2C-7B)

DISPOSAL

SPILLS AND LEAKS: Less than 1 Quart - Mipe up, following guidelines above in "Safe Handling Procedu:

One quart or more - EVACUATE AREA. Ensure that clean up crew wears all personal safety wear as presented in "Safe Handling Procedure". The nose is NOT a reliable

gauge of air contamination.

WASTE DISPOSAL: Dispose of as EPA hazardous waste #F002.

Hay be sent to solvent reclaimer. Ensure that aerosol cans are empty and depress: ized before discarding, unless a waste treatment facility is approved to accept the

PHYSICAL PROPERTIES

BOILING POINT: 162°F

VAPOR PRESSURE: 230 mm at 100°F

VAPOR DENSITY: PERCENT VOLATILE: 1001

3 times faster than ethyl alcohol EVAPORATION RATE: DENSITY: 1.3 WATER SOLUBILITY: Negligible APPEARANCE: Clear, colorless, mobile liquid

Neutral

WARNING PROPERTIES: Odor can be detected at 100 ppm, but is not strong enough to cause

discomfort at 1000 ppm.

10. DOT SHIPPING

For Bulk - Methyl Chloroform SHIPPING NAME:

For Aerosol - Compressed Gas, N.O.S.

MARKING: For Bulk - None

For Aerosol - Nonflammable Gas

HAZARD CLASS: For Bulk - ORM-A

For Aerosol - Nonflammable Gas

IDENTIFICATION: For Bulk - UN2831

For Aerosol - UN1956

CERTIFIED

DATE: October 7, 1986

11.

Supercedes MSDS dated April 25, 1986

SIGNED:

Bruce C. Graham, Chief Chemist

MAGNAFLUX Corporation

Pag. - of 3 (SKC-NF/ZC-7B)

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

MATERIAL SAFETY DATA SHEET

Required under USDL Safety and Health Regulations for Ship Repairing, Shipbuilding, and Shipbreaking (29 CFR 1915, 1916, 1917)

SEC	CTION I
MANUFACTURER'S NAME	EMERGENCY TELEPHONE NO.
MACNAFILIX CORPORATION	(312) 867-8000
ADDRESS (Number, Street, City, State, and ZIP Code) 7300 West Lawrence Avenue, Chicago, Illin	nois 60656
CHEMICAL NAME AND SYNONYMS	SKC-NF/2C-7 Cleaner (Aerosol)
CHEMICAL FAMILY	FORMULA

SECTION	V 11 -	HAZAF	RDOUS INGREDIENTS		1.1
PAINTS, PRESERVATIVES, & SOLVENTS	×	TLV (Units)	ALLOYS AND METALLIC COATINGS	×	TLV (Units)
PIGMENTS			BASE METAL		-
CATALYST			ALLOYS		
VEHICLE			METALLIC COATINGS		
SOLVENTS			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS	_	<u> </u>
OTHERS					21.2
HAZARDOUS MIXTUR	ES OF	OTHER LI	QUIDS, SOLIDS, OR GASES	<u> </u>	(Units)
	1.1.	1 Trichl	oroe thane	97	350pp
		bon Dio		3	3000p
					<u> </u>
				+	 -

SECTION III - PHYSICAL DATA						
BOILING POINT (°F.)	1650F IBP	SPECIFIC GRAVITY (H20=1)	1.3			
VAPOR PRESSURE (mm Hg.)	230 mm at 100°F	PERCENT, VOLATILE BY VOLUME (%)	100%			
VAPOR DENSITY (AIR+1)	4-5	EVAPORATION RATE	5			
SOLUBILITY IN WATER	Insoluble					

FLASH POINT (Method used)	FLAMMABLE LIMITS	LH	Uel
None	None		
EXTINGUISHING MEDIA			
RECIAL FIRE FIGHTING PROCEDURES Keep aerosol cans cool with water spray.		<u> </u>	

exposed to flame, arcs, red hot surfaces.

(Continued on reverse side)

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PAGE (1)

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		COTION	/ - HEALTH HAZARD DATA
THRESHOLD LIMIT	VALUE	350	ppm
EFFECTS OF OVERE	XPOSURE	Dizz	ziness, initially, loss of consciousness eventually.
EMERGENCY AND P	IRST AID PROCED	URES	
Remove to	fresh air. If in	eyes, rinse	se copiously with water.
		1 1 6274 + 6 17	
* •			N VI - REACTIVITY DATA
STABILITY	UNSTABLE	X C	CONDITIONS TO AVOID Using near flame, arcs, red hot surfaces.
	STABLE		
INCOMPATABILITY	(!!sterais to svoid)	. A	Alkali Metals
HAZARDOUS DECO	MPOSITION PRODU	icts	ors are exposed to flame, arcs, red hot surfaces.
HAZARDOUS	MAY OCCU	JR	ors are exposed to flame, arcs, red hot surfaces.
POLYMERIZATION	WILL NOT	OCCUR	X
	SEC	and the second second second	- SPILL OR LEAK PROCEDURES
STEPS TO BE TAKE	N IN CASE MATER	IIAL IS RELE	EASED OR SPILLED
<u> </u>			
Can be allo	wed to evapora		EASED OR SPILLED If spilled in aerosol can quantities. Wipe up residue with
<u> </u>	wed to evapora		
Can be allowed the composition of the composition o	wed to evapora oking. метноо	ite away if	if spilled in aerosol can quantities. Wipe up residue with
Can be allowed the composition of the composition o	wed to evapora	ite away if	if spilled in aerosol can quantities. Wipe up residue with
Can be allowed the composition of the composition o	wed to evapora oking. METHOD are not classe	ite away if	if spilled in aerosol can quantities. Wipe up residue with
Can be allowed the composition of the composition o	wed to evapora oking. METHOD are not classe	ite away if	if spilled in aerosol can quantities. Wipe up residue with
Can be allowed the control of the co	wed to evapora oking. METHOD are not classe	d as hazar	of spilled in aerosol can quantities. Wipe up residue with redous waste
Can be allowed the control of the co	owed to evapora oking. METHOD are not classed	d as hazar	rdous waste PECIAL PROTECTION INFORMATION Used in confined area, mask with separate air supply
Can be allowed the control of the can be allowed the can be allowed the can be	wed to evapora oking. METHOD are not classes SECTION OTECTION (Specify	d as hazar VVIII - SF Type) If us	if spilled in aerosol can quantities. Wipe up residue with rdous waste PECIAL PROTECTION INFORMATION used in confined area, mask with separate air supply
Can be allowed the control of the can be allowed the can be allowed the can be	SECTION OTECTION (Specify LOCAL EXHAUS MECHANICAL (COVES	d as hazar VVIII - SF Type) If us	rdous waste PECIAL PROTECTION INFORMATION used in confined area, mask with separate air supply special other
Can be allowed and the control of the cans of the can of the cans of the cans of the cans of the can	SECTION OTECTION (Specify LOCAL EXHAUS MECHANICAL (C	d as hazar VVIII - SF Type) If us T Spra General)	rdous waste PECIAL PROTECTION INFORMATION Used in confined area, mask with separate air supply ay Booth Preferred OTHER EYE PROTECTION None
Can be allowed. rag. No sm waste disposal. Empty cans RESPIRATORY PAGE VENTILATION PROTECTIVE GLOW	SECTION OTECTION (Specify LOCAL EXHAUS MECHANICAL (C	d as hazar VVIII - SF Type) If us	rdous waste PECIAL PROTECTION INFORMATION Used in confined area, mask with separate air supply ay Booth Preferred OTHER EYE PROTECTION None
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Can be allowing. No sm waste disposal. Empty cans RESPIRATORY PARE VENTILATION PROTECTIVE GLOOTHER PROTECTI	SECTION SECTION (Specify LOCAL EXHAUS MECHANICAL (COMMENT)	d as hazar NVIII - SF Type) If us T Spra Generall	rdous waste PECIAL PROTECTION INFORMATION Used in confined area, mask with separate air supply special other EYE PROTECTION OTHER EYE PROTECTION None IX - SPECIAL PRECAUTIONS
Can be allowed and the second and th	SECTION SECTION (Specify LOCAL EXHAUS MECHANICAL (CO VES NONC VE EQUIPMENT	d as hazar N VIII - SF Type) If us T Spra General) Non SECTION	rdous waste PECIAL PROTECTION INFORMATION Used in confined area, mask with separate air supply special other EYE PROTECTION None IX - SPECIAL PRECAUTIONS O STORING
Can be allowed and the second and th	SECTION SECTION (Specify LOCAL EXHAUS MECHANICAL (CO VES NONC VE EQUIPMENT BE TAKEN IN HAP V place, away f	d as hazar N VIII - SF Type) If us T Spra General) Non SECTION	rdous waste PECIAL PROTECTION INFORMATION Used in confined area, mask with separate air supply special other EYE PROTECTION None IX - SPECIAL PRECAUTIONS O STORING
Can be allowed and the second and th	SECTION SECTION OTECTION (Specify LOCAL EXHAUS MECHANICAL (CO VE EQUIPMENT BE TAKEN IN HAN ONS	d as hazar NVIII - SF Type) If us T Spra Generall Non SECTION HOLING AND	rdous waste PECIAL PROTECTION INFORMATION Used in confined area, mask with separate air supply ay Booth Preferred OTHER EYE PROTECTION None IX - SPECIAL PRECAUTIONS O STORING SOURCES.
Can be allowing. No sm waste disposal. Empty cans RESPIRATORY PARTICULATION PROTECTIVE GLOWING OTHER PROTECTIVE GLOWING TO GRAND TO GRAND TO GRAND TO GRAND TO GRAND TO GRAND THE PRECAUTIONS TO GRAND	SECTION SECTION OTECTION (Specify LOCAL EXHAUS MECHANICAL (CO VE EQUIPMENT BE TAKEN IN HAN ONS	d as hazar NVIII - SF Type) If us T Spra Generall Non SECTION HOLING AND	rdous waste PECIAL PROTECTION INFORMATION Used in confined area, mask with separate air supply ay Booth Preferred OTHER EYE PROTECTION None IN SPECIAL PRECAUTIONS O STORING SOURCES.
Can be allowed and the second and th	SECTION SECTION OTECTION (Specify LOCAL EXHAUS MECHANICAL (CO VE EQUIPMENT BE TAKEN IN HAN ONS	d as hazar NVIII - SF Type) If us T Spra Generall Non SECTION HOLING AND	rdous waste PECIAL PROTECTION INFORMATION Used in confined area, mask with separate air supply ay Booth Preferred OTHER EYE PROTECTION None IX - SPECIAL PRECAUTIONS O STORING SOURCES.

U.S. DEPARTMENT OF LABOR

Occupational Safety and Health Administration

MATERIAL SAFETY DATA SHEET

Required under USDL Safety and Health Regulations for Ship Repairing, Shipbuilding, and Shipbreaking (29 CFR 1915, 1916, 1917)

SECT	TION I
MANUFACTURER'S NAME	EMERGENCY TELEPHONE NO.
CRC Chemicals, USA	215-674-4300
ADDRESS (Number, Street, City, State, and 21f Code) 885 Louis Drive Warminster, Pa.	18974
CHEMICAL NAME AND SYNONYMS	CRC 2-26 (Aerosol)
Corrosion Inhibitor & Lubricant	FORMULA
	na na kwaka na manazara wa Kalabasa Naka na mpina pina pina mai kata mai kata mai kata mai kata mai kata mai k

SECTION	11 •	HAZAR	DOUS INGREDIENTS			
PAINTS, PRESERVATIVES, & SOLVENTS & TLY (Units) ALLOYS AND METALLIC COATINGS						
PIGMENTS			DASE METAL		-	
CATALYST			ALLOYS			
VEHICLE			METALLIC COATINGS			
SOLVENTS			FILLER METAL PLUS COATING OR CORE FLUX			
ADDITIVES		-	OTHERS			
OTHERS .		- E			اي جوالي	
HAZARDOUS MIXTURES	OF	OTHER LIC	DUIDS, SOLIDS, OR GASES	=	TLV (Units)	
olatile-1,1,1 Trichloroe	thai	ne		29	350	
High flash aliphatic hydrocarbon					200	
Carbon Dioxide (propellent)						
		1	ibitor in high flash para-	25		
		14.4 (45)	ffinic oil			

SEC	TION III - P	HYSICAL DATA	
BOILING POINT (*F.) Initial	*220 F	SPECIFIC GRAVITY (M: Q+1)	* 0.932
VAPOR PRESSURE (mm Hs.1 & 6. 2mm (aero	sol 85ps	PERCENT, VOLATILE	76%
	Dore th	EVALUATION AND	
SOLUBILITY IN WATER	hegligib	Marie -	
APPEARANCE AND ODORAMber liquid	l - pleas	ant odor	

FLASH POINT (Method viid)	FLAMMABLE LIMITS	Let	Uel.
*190 F. C.O.C.			<u> </u>
EXTINGUISHING MEDIA CO2, FORM	, Dry Chemical		
SPECIAL CIPE PLOUTING PROCESSIONS	edures for solvents		
Note: The second of the second			
erosol cans may explode at tempe			

PAGE (1)

(Continued on reverse side)

Form-OSHA-20 Rev. May 72

* Bulk Values

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Form OSHA-20 Rev. May 72

THRESHOLD LIMIT V	an°initial	high of	350r	oom down to	200ppm as solvents eva	IDO TO
FFECTS OF OVERE	CPOSURE		-		lation causes dizzines	
The first and subject and of the		· OF OKEN	· J & & Y	· · · · · · · · · · · · · · · · · · ·	THE COLL CHILDRES INTEXT NEED	ا ــــــ
Ind nausea.	AST AID PROCEDU	RES				
Eye Contact-	Flush with	large a			Skin Contact-wash wit	
mild soap an	d water, ap	ply a s	kin c	ream; Inhal	ation-remove to fresh	air
and apply ar	tificial remedical aid	spirati I.	on_if	necessary.	In any case, if sympt	owa
and the second second		SECTION	VI - R	EACTIVITY DA	TA	
STABILITY .	UNSTABLE	co	MOITION	s to Avoid lleat	, sparks & open flame.	
	STABLE	х				
INCOMPATABILITY !	Materials to aroid)	trong o	xidiz	ing agents		
HAZARDOUS DECOM	AACLT: AAL AAAA	· T C			eld toxic dases	
	MAY OCCUP			CONDITIONS TO	eld toxic gases.	
HAZAHDOUS POLYAIERIZATION	WILL NOT O	CCUR	x			
<u> </u>			I			
	1 1 m			001547.000	SCOURCE	\neg
A Charles of the Section of the	and the second second	1.4.55		OR LEAK PROC	EDURES	
STEPS TO BE TAKEN	in case materia	to aer	OSOF	packages If	spill is large enough	، ل
flush with wa	ater keep f	lames.	heat	and sparks	from area. Use respira	ito.
rotection i	f necessary	Small	spil	ls may be p	icked up with absorbar	t materi
WASTE DISPOSAL MI	erate or bu	incture	aeros	ol cans. Bu	ry or discard in confe	rmance
					ull or partially full,	
					· ·	
cans must be	handled as	"Pazaro	lous V	Naste"	3.1	
i jaga ili kalang alampa bilang kalang k	gårdlammer verse og 👢 了	•		PROTECTION IN		
RESPIRATORY PROT	ECTION (Specify to tained brea	thing a	ppara	tus for con	centrations above TLV.	·
VENTILATION	LOCAL EXHAUST			. below TLV	SPECIAL	
	MECHANICAL /GI	nerelj			STHER	
PROTECTIVE GLOVE				EVE PROTECTIO		
Not normally	y needed fo	r aeros	ol_us	<u>d</u>		
					<u></u>	
		ECTION IV	, CDE	CIAL PRECAUT	FIONS	
PRECAUTIONS TO BE	194 kirjer i Romanda disa 1111	LINE AND E	TOPING			:
Do not store	aerosol ca	ins abov	e 120	F. Protect	cans from puncturing.	

<u>Use with adequate ventilation</u>

GPO 934-110

OTHER PRECAUTIONS DO NOT Spray into open flame.

PAGE (2)

SECTION V - HEALTH HAZARD DATA

```
DOW CORNING CORPORATION
MATERIAL SAFETY DATA SHEET
                                                                                                                                                         EMERGENCY PHONE NO: (517)-474-5900
                                                                                TO COMPANY THE COMPANY OF THE COMPAN
                  . YARSZ CISAR-D (A)ETEXYLOM :ASEMUM BO EMAM TOUL
    HAMEFACTURERS NAME: DOW CORNING CORPORATION,
   HAMEFACTURERS NAME: DOW CORNING CONTONALION
ADDRESS: SOUTH SAGINAU ROAD, MIDLAND MI 48640
 PROPER SHIPPING NAME(49 CFR 172.101): COMPRESSED GAS MGS

D.G.T. MAJARD NAME(49 CFR 172.101) NONE

S.O.T. ID NC(49 CFR 172.101): ELABHABLE GAS LID, QTY

D.J.T. MAJARD CLASS (49 CFR 172.101): ELABHABLE GAS LID, QTY

RCRA MAJARD SLASS*(40 CFR 251): EGNITABLE (1006);

E.P.A. PRIORITY POLLUTANTS (40 CFR 123.53): ', I, I-TRICHLGROETHAME, METHYLENE CLASSING, MINTURE

CAS. NG.: MINTURE

JEWE: 11, 62, 44

JEWERT DESCRIPTION AGROSS.
                                                                                              IIITIK II PAIATON INGENIENI
                                                                                                                                                       //jots of overs
(* chas, sic.
    TYRESHOLD LIMIT VALUE OF RRODUCT: See above
   INERGÊNOY AND FIRIT AID PRICEDURES - Inhalathon miremove to frame altra
Parala george Datten Fish. Skin and eyes - flosh with exter
                                           FLANHABILITY (NEPA) 0

FLANHABLE LIMITS IN AIR, X BY VOLUME: Lower:

CHINGUISHING MEDIA:

CPECIAL FIRE FIGHTING PROCEDURES:

JNUSUAL FIRE AND EXPLOSION HAZARDS.
```

Verretering (F

DICATES REGISTERED OR TRADEMARK NAME OF SON CORNING CORPORATION

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HATERIAL SAFETY DATA SHEET

WATER OR NUMBER: HOLYKOTE(R) G-RAPID SPRAY
SECTION V PHYSICAL DATA

OUT ING POINT: *

PROOFIT SCAVITY: *
                                                                        DOW CORNING CERPORATION
   OUT CAS POINT: 4
PROCESTO SCAVITY:
SELTING POINT: 4
VARCE FRESCURE: A
VAROR DENSITY (AIR=1): *
VAROR DENSITY (AIR=1): *
VAROR DENSITY (AIR=1): *
VARORATION RAIS (ETHEN== 1): *
VAROR FRESCURE BY VIIIA (S): *
VIPTUAL AENOSOL PROPERTIES:

SECTION VIIIAE SETTIONS

SECTION VIIIAE SETTIONS
                         SECTION VI- REACTIVITY SATA REACTIVITY (MERA) 0
  STABILITY, STABLE

STABILITY, STABLE

STABILITY, STABLE

STABILITY (MATERIALS IS AVOID): TOT

PRODUCTS METAL CX SDES, CARSON

SISTEDE AND TRACES OF ENCOHELETELY BURNED CARSON PRODUCTS:
                 RUDDO TON LIEU MELTAZIETAVLOT COOTAL
ELECELERAS TOM CEDRA OT CHOCKED
                                                                 TESTEEN VET TORELLU LEAK AND SISTEMAL PROCEDURES
                 THE SE TAKEN IN CASE MATERIAL IS RELIASED CONFESSION USE APSCRUENT
THIS IS OCCUPEN AND CONFAIN FOR SALWAGE OR DISROSAL.
    HASTE DISTORAL METHODA DOW GERNING SUGGESTS THAT: DECTEORAL STATE AND FEDERAL STATE 
    -AIARDOUS SURSTANCE: NOME
-ONGENTRATION OF HAZARDOUS SUBSTANCEL NOT APPLICABLE
-EPORTABLE QUANTITY OF PRODUCT NOT APPLICABLE
```

DICATES REGISTERED OR TRADEMARK NAME OF DOW BORNING CORPORATION PAGE 2

門為四半許至著「西亞

```
DOM CORNING CORPORATION
                                                                                                    HATERIAL SAFETY DATA SHEET
OR NUMBER: MOLYKOTE(R) G-RAPID SPRAY
SECTION VIII - SPECIAL PROTECTION INFORMATION
RATORY - PROTECTION (SPECIAL TYPE): ORGANIC VAPOR TYPE.
                   LOCAL EXHAUST: NONE SHOULD BE NEEDED.

SPECIAL: NONE XNOWN TO DOW CORNING.
MECHANICAL (CENERAL) - PERCHANICAL
                  MECHANICAL (GENERAL): RECOMMENDED ...
THER NONE KNOWN TO DOW CORNING.

FROTECTIVE GLOVES NONE SHOULD BE NEEDED.
  TYS PROTECTION PROPER EYE PROTECTION SHOULD BE WORN IN ANY TYPE OF
  THER PROTECTIVE EQUIPMENT: AS REQUIRED BY YOUR COMPANY.
                      CECTION IX SPECIAL PRECAUTIONS
  PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Store below 126 F/47 C.
  THER PRECAUTIONS: Mone known to Dow Corning.

This product does not contain fluora-chlorohydrocarbons as the
   THIS DATA IS OFFERED IN GOOD FAITH AS TYPICAL VALUES AND NOT AS A PRODUCT TRECIFICATION. NO WARRANTY, EITHER EXPRESS OR IMPLIED, IS PERESY MADE. THE TRECIFICATION INDUSTRIAL HYGIENE AND SAKE HANDLING PROCEDURES ARE BELIEVED TO THE GENERALLY APPLIFABLE HOWEVER FACH USER SHOULD REVIEW THESE RECOMMENDATION THE SPECIFIC CONTEXT, OF THE INTENDED USE AND DETERMINE WHETHER THEY ARE THE TRESPONDED TO THE TRESPONDED OF THE TRESPOND
   REPARED BYT L C. VANVOLKINBURG
LAST REVISED DECEMBER 107 1981

PREVIOUS REVISION DATE: SEPTEMBER 30, 1781
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NDICATES REGISTERED OR TRADEMARK NAME OF DOW CORNING CORPORATION

AGE 3

0

MCDS Document #	APR 2 5 1989 LANT	504) 362-3987 504) 631-3161 MSP CODE:
SUBMITTED RY	SPECIAL PROJECTS	ntutetou (Formelly 8808639):
i - main e e .	GULF COAST ENVIRO	The second secon
Generator Name USNASA 1	Martin Marietta	Bill To: GUIFCORST Environmental
Facility Address 13800 Old (Company Contact: Lean Marks
		Contanier size: 55001 and 85001 with crushed contains
		EPA Wasie No. US
City. State. Zip New Orland		Generating Process Compacting contaminated containers
Inchnical Contact K.M. Zed		Common Name of Waste Crished Containers
Title Environmental	Engineer	Rate of Generation
Telephone NO. 1504 1257		Volume in Storage 5 dr. IN 55 and 85 and drums
Facility EPA ID # LA48000	1 X GPL	(Quant (Unit) (Container Size and Type)
CHEMICAL COMPOSITION	(No Trade Name)	Is Waste DOT Hazardous YES DA NO
(Totals must add up to 100%)	1	Proper DOT Shipping Name Hazardays Waste Solid, n.o.S.,
Steel	<u>≥90.0</u> ×	Hazard Class CRM-E ID No. NA 9189
Non-bazardoustra	sh{1} plastic ≤ 10.0 x	Transportation Equipment Truck
residue and debri		Placarding
_TrichlomFluorometha	<u>u ~ Z 1.0 x</u>	PHYSICAL DESCRIPTION
	%	Physical State Liquid Semi-solid Solid
·		Phases/Layering Uni-Layer Bilayer
	x	Viscosity High Medium Low
METALS (EP Toxicity Test, n	ng/1)	Type of Solids Organic Inorganic DK Mixed
		Total Solids (w. *) 9+ Suspended Solids (w. *) Not applicable
Arsenic (As) <u>NONE</u> Silv Barium (Ba) <u>SUSPECTE</u> D Cuj		BTU/lb < 10 % Ash Content 99+ % Water (by weight) < 1.0
		Flash Point (F) > 400 Type Open CUP
	kel (Ni)	Specific Gravity > 1.2 (5.g. OF steel = approx. 8.0)
cod (Pb)	((21)	Builing Point, (*C) Freezing Point, (*C)
Mercury (11g)		Vajxor Pressure (mm Hg @ 24°C)
Sclenium (Sc)		pH (Avg) nputral (Range) 10
The second secon		Total Alkalinity/Acidity (%)
INORGANICS (mg/1 or ppn	n)	Odor Ryngent when detectable
Total CN NONE lodi	ine NONE	color British / goldon / grey
FIRECH SUSPECTEDAD	estos SUSPECTED	HAZARDOUS PROPERTIES 1 NONE
Sulfide		
Chloride		Water Reactive Reactive Explosive
Bisulfite		1 Shock Sensitive 1 Pyrophoric 1 Polymriable 1 Radioactive 1 Pesticide Residuals 1 Ienitable
ullite		
iullate		74
Turkhale		Biological Etiological Other
lourine		
Bromine		REQUIRED PERSONNEL PROTECTIVE
Chlorine		EQUIPMENT AND PROCEDURES: See MSDS15
DOCANICS (!		
ORGANICS (mg/1 or ppm)	NOAN	
	anohalide NONE	•
Aciliaxychlor SUSPECTEDilor	captans <u>SUSPECTED</u>	
nraphene	· · · · · · · · · · · · · · · · · · ·	
.4.5		
.4.5-1		នេះ ប្រទេសមានសម្រាប់ ខេត្ត នៅ ខេត្ត នៅ ខេត្ត នៅ នៅ នៅ ខេត្ត នៅ
ficnol(ics)		PLEASE ATTACH ALL MATERIAL SAFETY DATA SHEETS,
CBs		LOGISTIC SKETCHES, ANALYSIS REPORTS, HANDLING
icisin — — — — — — — — — — — — — — — — — — —		PRECAUTIONS, ADDITIONAL HAZARD SUPPORT
·~		INFORMATION, DATA & COMMENTS.
FRIIICATION: 1 Incala: carry of	hat the alone and the first the first	tion is complete and accurate to the best of my knowledge and ability to

CENERATOR'S SIGNATURE: TOUR MINISPELLER

MARINE SHALE PROCESSORS, INC.

MATERIALS CHARACTERIZATION DATA SHEET

8902198 AICDS Document #

DATE 4-24-89

MATERIAL SAFETY DATA SHEET

Dow Chemical U.S.A. Midland, MI 48674 Emergency Phone: 517-636-4400

Product Code: 03392

Page: 1

PRODUCT NAME: CPR (R) 488A-1 RIGID SYSTEM

Effective Date: 01/21/87 Date Printed: 01/22/87

MSDS:002553

1. INGREDIENTS:

POLYMER OF MDI

Polymethylene polyphenylisocyanate Trichlorofluoromethane Surfactant

Substances listed in the Ingredients S as being present at a concentration of the substance is on the list of potent OSHA Hazard Communication Standard. A shows, the identity of this substance may be made available as provided in 29 CFR 1910.1200(1).

2. PHYSICAL DATA:

BOILING POINT: 525F, decomposes
VAP. PRESS: 0.00016 mmlig @ 131F (55C)
VAP. DENSITY: >1.0
SOL. IN WATER: Reacts
SP. GRAVITY: 1.2
APPEARANCE: Dark brown liquid
ODOR: Pungent odor.

3. FIRE AND EXPLOSION HAZARD DATA:

FLASH POINT: 410F, 210C METHOD USED: COC

FLAMMABLE LIMITS

LFL: Not determined

UFL: Not determined

EXTINGUISHING MEDIA: Carbon dioxide, dry chemical, foam, halon 1211. If water is used, it should be in very large quantity. The reaction between water and hot isocyanate may be vigorous.

(Continued on Page 2)
(R) Indicates a trademark of The Dow Chemical Company

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MSD007

Product Code: 03392

Page: 2

PRODUCT NAME: CPR (R) 488A-1 RIGID SYSTEM

Effective Date: 01/21/87 Date Printed: 01/22/87

MSDS:002553

3. FIRE AND EXPLOSION HAZARD DATA: (CONTINUED)

FIRE & EXPLOSION HAZARDS: Down-wind personnel must be evacuated.

Do not reseal contaminated containers since pressure build-up
may cause rupture.

FIRE-FIGHTING EQUIPMENT: People who are fighting isocyanate fires must be protected against nitrogen oxide fumes and isocyanate vapors by wearing positive pressure self-contained breathing apparatus and full protective clothing.

4. REACTIVITY DATA:

STABILITY: (CONDITIONS TO AVOID) Stable under recommended storage conditions. Store indoors at 50-85f. Protect from atmospheric moisture.

INCOMPATIBILITY: (SPECIFIC MATERIALS TO AVOID) Water, acid, base, alcohols, metal compounds, surface active materials. Avoid water as it reacts to form heat, CO2 and insoluble urea. The combined effect of the CO2 and heat can produce enough pressure to rupture a closed container.

HAZARDOUS DECOMPOSITION PRODUCTS: Isocyanate vapor and mist, carbon dioxide, carbon monoxide, nitrogen oxides and traces of hydrogen cyanide.

HAZARDOUS POLYMERIZATION: May occur with incompatible reactants, especially strong bases (alkalies, amines, metal salts) or water.

5. ENVIRONMENTAL AND DISPOSAL INFORMATION:

ACTION TO TAKE FOR SPILLS/LEAKS: Evacuate and ventilate spill area, dike spill to prevent entry into water system, wear full protective equipment including respiratory equipment during clean up.

Major spill: Call Dow Chemical U.S.A. (409) 238-2112. If

(Continued on Page 3)
(R) Indicates a trademark of The Dow Chemical Company

Product Code: 03392

Page: 3

PRODUCT NAME: CPR (R) 488A-1 RIGID SYSTEM

Effective Date: 01/21/87 Date Printed: 01/22/87

MSDS:002553

5. ENVIRONMENTAL AND DISPOSAL INFORMATION: (CONTINUED)

transportation spill involved call Chemtrec (800) 424-9300. If temporary control of isocyanate vapor is required a blanket of protein foam (available at most fire departments) may be placed over the spill. Large quantities may be pumped into closed but not sealed containers for disposal.

Minor spill: Absorb the isocyanate with sawdust or other absorbent, shovel into suitable unsealed containers, transport to well-ventilated area (outside) and treat with neutralizing solution consisting of a mixture of water and 3-8% concentrated ammonium hydroxide (or 5-10% sodium carbonate). Add about 10 parts of neutralizer per part of isocyanate with mixing. Allow to stand for 48 hours letting evolved CO2 escape.

Clean-up: Decontaminate floor using water, armonia solution with 1-24 added detergent jetting stand over affected area for at least 10 minutes. Cover mops' and brooms used for this with plastic and dispose properly (often by incineration).

DISPOSAL METHOD: Follow all federal, state and local regulations.

Liquids are usually incinerated in a proper facility. Solids are usually also incinerated or landfilled. Empty drums should be filled with water; let stand for at least 48 hours; drums should be drained, triple rinsed, and holed or crushed to prevent reuse. Dispose of drain and rinse fluid according to local, state, and federal regulations.

6. HEALTH HAZARD DATA:

EYE: May cause slight transient (temporary) eye irritation and very slight transient (temporary) corneal injury.

SKIN CONTACT: May cause allergic skin reaction in susceptible individuals. Prolonged or repeated exposure may cause skin irritation. Material may stick to skin causing irritation upon removal.

SKIN ABSORPTION: A single prolonged exposure is not likely to result in the material being absorbed through skin in harmful

(Continued on Page 4) (R) Indicates a trademark of The Now Chemical Company

is less clear than this notice, it is due to the quality of the document being filmed

Dow Chemical U.S.A. Midland, MI 48674 Emergency Phone: 517-636-4400

Product Code: 03392

PRODUCT NAME: CPR (R) 488A-1 RIGID SYSTEM

Effective Date: 01/21/87 Date Printed: 01/22/87

MSDS:002553

6. HEALTH HAZARD DATA: (CONTINUED)

amounts. The LD50 for skin absorption in rabbits is > 2,000

INGESTION: Single dose oral toxicity is low. The oral LD50 for rats is > 4,000 mg/kg.

INHALATION: May cause respiratory sensitization in susceptible individuals. At room temperature, vapors are minimal due to low vapor pressure. If heated or sprayed as an aerosol, excessive concentrations are attainable that could be hazardous on single exposure. Excessive exposure may cause irritation of the eyes, upper respiratory tract, and lungs. Effects may be delayed. Decreased ventilatory capacity has been associated with exposure to similar isocyanates; it is possible that exposure to MDI may cause similar impairment of lung function.

SYSTEMIC & OTHER EffECTS: Sesed on available data, repeated exposures are not anticipated to cause any additional significant adverse effects. The major active ingredient in this material has been shown to be negative in some in vitro ("test tube") mutagenicity tests and positive in others.

7. FIRST AID:

EYES: Irrigate with flowing water immediately and continuously for 15 minutes. Consult medical personnel. Due to high viscosity, this material may be difficult to remove from the eyes.

SKIN: Wash off in flowing water or shower.

INGESTION: Induce vomiting if large amounts are ingested. Consult medical personnel.

INHALATION: Remove to fresh air. If not breathing, give mouthto-mouth resuscitation. If breathing is difficult, give oxygen. Call a physician.

NOTE TO PHYSICIAN: Supportive care. Treatment based on judgment

(Continued on Page 5) (R) Indicates a trademark of The Dow Chemical Company

Product Code: 03392

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PRODUCT NAME: CPR (R) 488A-1 RIGID SYSTEM

Effective Date: 01/21/87 Date Printed: 01/22/87

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7. FIRST AID: (CONTINUED)

of the physician in response to reactions of the patient. No specific antidote. The manifestations of respiratory symptoms, including pulmonary edema, resulting from acute exposure may be delayed. May cause respiratory sensitization.

8. HANDLING PRECAUTIONS:

EXPOSURE GUIDELINE (S): ACGIH TLV and OSHA PEL are 0.02 ppm ceiling for methylene bisphenyl isocyanate (MDI). ACGIH TLV is 1000 ppm ceiling for trichlorofluoromethane (Freon 11). OSHA PEL is 1000 ppm for fluorotrichloromethane (Freon 11).

VENTILATION: Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines.

RESPIRATORY PROTECTION: Atmospheric levels should be maintained below the exposure guideline. When respiratory protection is required for certain operations, use an approved supplied-air respirator. for emergency and other conditions where the exposure guideline may be greatly exceeded, use an approved positive pressure self-contained breathing apparatus.

SKIN PROTECTION: for brief contact, no precautions other than clean body-covering clothing should be needed. When prolonged or frequently repeated contact could occur, use protective clothing impervious to this material. Selection of specific items such as gloves, boots, apron or full-body suit will depend on operation.

EYE PROTECTION: Use chemical goggles.

9. ADDITIONAL INFORMATION:

SPECIAL PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Store indoors at 50-65f in original, unopened containers. Protect from atmospheric moisture. Replace outage with inert dry gas -

nitrogen. Cautiously vent pressure buildup prior to fully opening container.

(Continued on Page 6) Indicates a trademark of The Dow Chemical Company Dow Chemical U.S.A. Midland, MI 48674 Emergency Phone: 517-636-4400 Product Code: 03392 Page:

Page: 6

PRODUCT NAME: CPR (R) 488A-1 RIGID SYSTEM

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Effective Date: 01/21/87 Date Printed: 01/22/87 MSDS:002553

9. ADDITIONAL INFORMATION: (CONTINUED)

MSDS STATUS: Revised 4, 6, 7, 8, and 9.

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MATERIAL SAFETY DATA SHEET

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Product Code: 03393

Page: 1

PRODUCT NAME: CPR (R) 488B-1 RIGID SYSTEM

Effective Date: 01/08/87 Date Printed: 01/22/87

MSDS:002552

1. INGREDIENTS:

Trichlorofluoromethane (Fluorocarbon (F) 11) CAS# 000075-69-4 23-33% Tertiary amine and organotin catalysts mixture 2-32 n-Butanol Proprietary polyether polyol blend and surfactants balance

Substances listed in the Ingredients Section are those identified as being present at a concentration of 1% or greater, or 0.1% if the substance is on the list of potential carcinogens cited in OSHA Hazard Communication Standard. Where proprietary ingredient shows, the identity of this substance may be made available as provided in 29 CFR 1910.1200(1).

2. PHYSICAL DATA:

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BOILING POINT: 74.5F, 23.6C (F 11) VAP. PRESS: 798 mmHg @ 25C (F 11) VAP. DENSITY: >1 SOL. IN WATER: NII SP. GRAVITY: >1 APPEARANCE: Light brown liquid. ODDR: Butanol odor.

3. FIRE AND EXPLOSION HAZARD DATA:

FLASH POINT: >350F, 177C METHOD USED: COC

FLAMMABLE LIMITS LFL: Not determined UfL: Not determined

EXTINGUISHING MEDIA: Water fog, alcohol-resistant foam, CO2, and dry chemical.

(Continued on Page 2) (R) Indicates a trademark of The Dow Chemical Company

Product Code: 03393

Page: 2

PRODUCT NAME: CPR (R) 488B-1 RIGID SYSTEM

Effective Date: 01/08/87 Date Printed: 01/22/87

MSDS:002552

3. FIRE AND EXPLOSION HAZARD DATA: (CONTINUED)

FIRE AND EXPLOSION HAZARDS: Contains volatile blowing agent (F 11). Excessive heat can cause dangerous pressure buildup in closed containers. Thermal decomposition of F 11 in air can

generate toxic phosgene.

FIRE-FIGHTING EQUIPMENT: Wear positive pressure self-contained breathing apparatus.

4. REACTIVITY DATA:

STABILITY: (CONDITIONS TO AVOID) Stable at recommended storage conditions. Store in original, unopened containers at 50-708.

INCOMPATIBILITY: (SPECIFIC MATERIALS TO AVOID) Strong oxidizers and isocyanates.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide, traces of nitrogen oxides, phosgene, and hydrogen cyanide under fire conditions.

HAZARDOUS POLYMERIZATION: Will not occur.

5. ENVIRONMENTAL AND DISPOSAL INFORMATION:

ACTION TO TAKE FOR SPILLS: Spills should be contained to prevent contamination of waterways. Dike spill and cover with oil absorbant material and sweep up.

DISPOSAL METHOD: Incinerate or bury in an approved landfill in accordance with local, state, and federal regulations.

(Continued on Page 3)
(R) Indicates a trademark of The Dow Chemical Company

Product Code: 03393

Page: 3

PRODUCT NAME: CPR (R) 488B-1 RIGID SYSTEM

Effective Date: 01/08/87 Date Printed: 01/22/87

MSDS:002552

6. HEALTH HAZARD DATA:

EYE: May cause severe irritation with corneal injury which may result in permanent impairment of vision, even blindness.

SKIN CONTACT: Prolonged or repeated exposure may cause skin irritation. May cause more severe response if confined to skin.

SKIN ABSORPTION: A single prolonged exposure is not likely to result in the material being absorbed through skin in harmful amounts. The dermal LOSO for rabbits is >2000 mg/kg.

INGESTION: Single dose oral toxicity is low. Oral LO50 for rats is >4000 mg/kg.

INHALATION: Excessive vapor concentrations are attainable and

could be hazardous on single exposure. Component trichlorofluoromethane is volatile at room temperature. In man, exposure
to concentrations >2500 ppm may cause central nervous system,
anesthetic or narcotic effects. At levels >5000 ppm, it may
increase sensitivity to epinephrine and increase irregular
heartbeats. [xcessive exposure may cause irritation to upper
respiratory tract and lungs. Vapors may irritate eyes.

SYSTEMIC & OTHER EFFECTS: Component trichlorofluoromethane did not cause cancer in laboratory animals in long-term animal studies. In vitro studies on components trichlorofluoromethane and butanol were negative.

7. FIRST AID:

EYES: Immediate and continuous irrigation with flowing water for at least 30 minutes is imperative. Prompt medical consultation is essential.

SKIN: Wash off in flowing water or shower.

INGESTION: Induce vomiting if large amounts are ingested.

Consult medical personnel.

INHALATION: Remove to fresh air. If not breathing, give mouth-

(Continued on Page 4)
(R) Indicates a trademark of The Dow Chemical Company

Product Code: 03393

Page

PRODUCT NAME: CPR (R) 488B-1 RIGID SYSTEM

Effective Date: 01/08/87 Date Printed: 01/22/87

KSDS:002552

7. FIRST AID: (CONTINUED)

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to-mouth resuscitation. If breathing is difficult, give oxygen. Call a physician.

NOTE TO PHYSICIAN: Exposure may increase "myocardial irritability". Do not administer sympathomimetic drugs unless absolutely necessary. No specific antidote. Supportive care. Treatment based on judgment of the physician in response to reactions of the patient.

8. HANDLING PRECAUTIONS:

EXPOSURE GUIDELINE(S): ACGIH TLV is 1000 ppm ceiling for trichlorofluoromethane. OSHA PEL is 1000 ppm for fluorotrichloromethane. ACGIH TLV is 50 ppm ceiling, skin for n-butyl alcohol. OSHA PEL is 100 ppm for butyl alcohol.

VENTILATION: Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines.

RESPIRATORY PROTECTION: Atmospheric levels should be maintained below the exposure guideline. When respiratory protection is required for certain operations, use an approved air-purifying

respirator. For emergency and other conditions where the exposure guideline may be greatly exceeded, use an approved positive pressure self-contained breathing apparatus.

SKIN PROTECTION: For brief contact, no precautions other than clean body-covering clothing should be needed. When prolonged or frequently repeated contact could occur, use protective clothing impervious to this material. Selection of specific items such as gloves, boots, apron or full-body suit will depend on operation.

EYE PROTECTION: Use chemical goggles. If vapor exposure causes eye irritation, use a full-face respirator.

(Continued on Page 5)
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Froduct Code: 03393

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PRODUCT NAME: CPR (R) 4888-1 RIGID SYSTEM

Effective Date: 01/08/87 Date Printed: 01/22/87

MSDS: 002552

9. ADDITIONAL INFORMATION:

SPECIAL PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Store in original, unopened containers at 50-70f. Replace outage with dry, inert atmosphere. Cautiously vent pressure buildup prior to fully opening container. Contains f 11 - protect from excessive heat.

MSDS STATUS: Revised 1, 2, 3, 4, 8, and 9.

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Chemical Name and Synonyms: Sodium Hydroxide Liquid Caustic Soda, 50% 1310-73 CAS No.: Formula: Chemical Family: NaOH DOT Hazard Class: Corrosive Material DOT Shipping Name: Caustic Soda Liquid, 50% SECTION 1 · PHYSICAL DATA pH of Solutions: Specific Gravity (H₂O=1): Vapor Density (Air=1): Boiling Point @ 760 mm Hg: solutions are strongly $60^{\circ}/60^{\circ}\Gamma = 1.530$ 142°C 288°F Not Applicable basic Volume % Volatile: Solubility (Weight % in Water): appreciable > 10 Freezing/Melting Point: 5°-11°C 41°-51°F **Bulk Density:** 12.76 lbs./gal. 060°F 347g/100g water@100°C Appearance and Odor, water white **Evaporation Rate** Heat of Solution: Vapor Pressure: to slightly turbid liquid; no Not Applicable Exothermic √ 1mmHg Hazard Data CTION 2 · HAZARDOUS INGREDIENTS Corrosive odium Hydroxide SECTION 3. FIRE AND EXPLOSION HAZARD DATA Flammable Limits in Air (% by Volume) Extinguishing Media: Flash Point °F (Method Used) None Not Applicable
LEL: UEL: Not Applicable Special Fire Fighting Procedures: Not Applicable Contact with some metals particularly magnesium, aluminum, Unusual Fire and Explosion Hazards: and zinc (galvanized) can generate hydrogen rapidly, which is explosive. SECTION 4 · HEALTH HAZARD DATA Permissible Exposure Limits (TLV): 2mg/m³ - OSHA, 29CFR 1910.1000, May 28, 1975 Classification (Poison, Irritant, Etc.) **Toxicity Data** See Section 5 Inhalation: Irritant LC_{sc}Inhalation Os Dermal Skin/Eye: Corrosive Corrosive Ingestion: , ingestion . LC so(Lethal Concentration) Aquatic: Human Exposure Information/Data: See Section 5 24-HOUR EMERGENCY ASSISTANCE: (304) 843-1300

Edition:

MSDS

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Trade Name and Synonyms:

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Laterial Safety Data Shee

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SECTION 5 · EFFECTS OF OVEREXPOSURE

This section covers effects of overexposure for inhalation, eye/skin contact, ingestion and other types of overexposure 💰 nformation in the order of the most hazardous and the most likely route of overexposure.

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Eye Contact: Causes severe burns; small quantities can result in permanent damage and loss of vision.

Skin Contact: Corrosive action causes burns and frequently deep ulceration with ultimate scarring. Prolonged contact destroys tissue. Mist from solutions can cause irritant dermatitis.

Swallowing: Ingestion can cause very serious damage to the mouth, esophagus, stomach, and other tissues with which contact is made and may be fatal.

Inhalation: Inhalation of mists can cause damage to the upper respiratory tract and to the lung tissue depending on extent of exposure. Effects can range from mild irritation of mucous membranes to severe pneumonitis.

MERGENCY AND FIRST AID PROCEDURES:

halation: Remove to fresh air. If not breathing, give artificial respiration, referably mouth-to-mouth. If breathing is difficult, give oxygen. Call a physician.

Eye or Skin Contact: Immediately flush eyes with plenty of water for at least 15 minutes. Hold eyelids open during this flushing with water. Call a physician. Immediately flush skin with plenty of water while removing contaminated clothing and boots. Call a physician. If skin feels slippery, caustic may still be present in sufficient quantities to cause rash or burn. Continue washing until slick skin feeling is gone. Thoroughly clean contaminated clothing and boots before reuse or discard.

Ingestion: 16 conscious, drink a quart of water. DO NOT induce vomiting. Take immediately to a hospital or physician. 16 unconscious or in convulsions, take immediately to a hospital or physician. DO NOT induce vomiting or give anything by mouth to an unconscious person.

Notes to Physician (Including Antidotes):

ECTION 6 . R	EACTIVITY	JAIA		
bility:	Stable	Conditions to Avoid: Materials listed below	•	
Hazardous Polymeria	ration:	Conditions to Avoid:	· · · · · · · · · · · · · · · · · · ·	
Will not o	ccur	None None	and the second	

Incompatibility (Materials to Avoid): Organic materials and concentrated acids—may cause violent reactions; caustic soda reacts with magnesium, aluminum, zinc (galvanized) tin, chromium, brass and bronze generating hydrogen which is explosive. Also, caustic soda may react with various food sugars to generate carbon monoxide (see comments, page 4).

Hazardous Decomposition Products:

Reaction with various food sugars may form carbon monoxide.

SECTION 7 · SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Spilled of Released Dike area to contain spill. Only trained personnel with proper protective equipment should be permitted in area. Reclaim if possible. Or, dilute spill with large amounts of water then neutralize with dilute acid. Use vacuum truck to pick up neutralized material for disposal (see below). After all visible traces have been removed, flush area with large amounts of water.

ing or disposing of chemical materials and/or their containers to prevent environmental contamination. It is your duty to dispose of the chemical materials and/or their containers in accordance with the Clean Air Act, the Clean Water Act, the Resource Conservation and Recovery Act and all state or local laws/regulations regarding disposal.

SECTION 8 · SPECIAL PROTECTION INFORMATION

NIOSH/MSHA-approved mechanical filter type for exposure to mists above iratory Protection: permissible exposure limit. Respiratory protection program must be in accordance with FR 1910.134

lation (Type): Local Exhaust - Sufficient to minimize employee exposure to mists below pamissible exposure limit.

Eye Protection:

Close fitting chemical safety goggles with

Rubber or PVC

Other Protective Equipment Rubber boots with safety toes, rubber aprons, PVC clothing, plastic hard hat; eye-wash fountain and safety shower in immediate area. Personnel protective clothing and use of equipment must be in accordance with 29CFR 1910.133.

Gloves:

SECTION 9 SPECIAL PRECAUTIONS

Precautions to be Taken During Handling and Storing:

- When handling, wear safety goggles and face shield, rubber gloves, rubber boots, rubber apron, cotton or polyester long-sleeved shirt and plastic hard hat.
- Wear NIOSH/MSHA-approved respirator for protection where mists may be generated.
- Never touch eyes or face with hands or gloves that may be contaminated with caustic soda.
- Never enter a caustic soda storage tank or container (tank truck or tank car) -- even if it appears to be empty.
- Avoid contact with organic materials and concentrated acids-may cause violent reaction; caustic soda reacts with magnesium, aluminum, zinc (galvanized), tin, chromium, brass and bronze, generating hydrogen which is explosive. Also, caustic soda may react with various sugars to generate carbon monoxide. When diluting, add 50% liquid caustic soda slowly to surface of cold water to avoid splashing.

er Precautions:

- DO NOT GET IN EYES, ON SKIN, ON CLOTHING. Can cause severe injury or blindness.
- AVOID BREATHING MIST.
- DO NOT TAKE INTERNALLY.
- WASH THOROUGHLY AFTER HANDLING.
- FOR ADDITIONAL PRODUCT INFORMATION, CONTACT PPG INDUSTRIES, INC.

References:

- 1. Dangerous Properties of Industrial Materials, N. Irving Sax, Fourth Edition, 1975
- 2. Occupational Exposure to Sodium Hydroxide, NIOSH, 1975

Omments: Hazardous carbon monoxide gas can form upon contact with food and erage products in enclosed vessels and can cause death. Follow appropriate tank try procedures (see ANSI Z177.1 - 1977).

@1980 PPG Industries, Inc.

Both Servickio

Safety Data Sheet

K-985



Market Market Control

CHEMICAL NAME TRADE NAME AEROWASH N.F. Alkaline Water CHEMICAL FAMILY SYNONYMS Base Cleaner

MOLECULAR WEIGHT FORMULA

NAME	<u> </u>	TLV UNITS	TOXICOLOGICAL DATA
odium metasilicate	〈 5	-	Irritant, skin, eyes, mucous membrane
thylene glycol-n-butyl	(5	50ppm	* Skin absorbed, hemolytic agent

*OSHA

Boiling Point - /60mm Hg		рH	12.3-12.7
Vapor Pressure, mm Hg € 20° C.		freezing point	30°F.
Specific Gravity (H ₂ 0 = 1)	1.03-1.04		
Solubility in Water	complete		
	limi	d tunical mild od	~ ·

liquid, typical mild odor Appearance and Odor AUTOIGNITION TEMPERATURE FLASH POINT ITEST METHODI NON-flammable FLAMMABILITY LIMITS IN AIR - % BY VOLUME LOWER UPFER

DRY CHEMICAL OTHER □ WATER FOG □ FOAM (Type) □ CO2 EXTINGUISHING MEDIA Alkaline corrosive solution - if released, prevent cont with skin or eyes. Although this product is non-flammab SPECIAL FIRE FIGHTING PROCEDURES good fire fighting practice dictates the use of selfcontained breathing apparatus and turn-out gear. UNUSUAL FIRE AND EXPLOSION HAZARDS

313-281-0930

This number is available days, nights, weekends, and holidays

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HOLD LIMIT VALUE Not established

-FECTS OF OVEREXPOSURE

ses eye irritation on contact. Skin irritation results on prolonged tact. Alkaline salts and ethylene glycol-n-butyl ether cause gastric upset and possible kidney damage if ingested.

FIRST AID PROCEDURES

FLUSH WITH FLOWING WATER AT LEAST 15

MINUTES

If irritation persists, consult a physician. Wash affected skin areas thoroughly with water. If swallowed, do not induce vomiting. Give milk or large quantities of water to drink. Consult a physician.

NEVER GIVE FLUIDS OR INDUCE VOMITING IF PATIENT IS UNCONSCIOUS OR HAVING CONVULSIONS

	UNSTABLE		CON	DITIONS TO AVOID	
STABILITY	STABLE	Х			
I. MPATIBILITY	Strong A	cids			
HAZARDOUS DECO	MPOSITION PR	ODUCTS E	thyl	ene glycol-n-butyl ether	
· AZARDOUS	MAY OCC			CONDITIONS TO AVOID	
POLYMERIZATION	DOES NO	T OCCUR	X		

STEPS TO BE TAKEN IN CASE OF SPILLS

Mop up or flush to drain. Rinse affected area with water. Avoid contact with skin or eyes.

WASTE DISPOSAL METHOD

May require neutralizing to a specified pH range before sewering.

CONSULT LOCAL AND STATE LAWS

RESPIRATORY PE	ROTECTION			
VENTILATION	LOCAL EXHAUST		SPECIAL	
	MECHANICAL (General)	Adequate	OTHER	
PROTECTIVE CLO	THING Rubber glove	s	EYE PROTECTION goggles, face	sł

boots, coveralls, aprons, as necessary to prevent skin contact.

AND SECTION OF SECTION

PRECAUTIONARY LABELING

AEROWASH

DANGER - May burn skin and eyes. Harmful if swallowed.

Contains sodium metasilicate. If swallowed do no induce vomiting. Give one or two glasses of milk or water. Never give anything by mouth to an unconscious person or one suffering convulsions. In case of contact with skin or eyes flush immediately with plenty of water for at least 15 minutes. If swallowed, or for eyes, contact a physician immediately.

Do not use for washing by hand.

Keep out of Reach of Children.

HANDLING AND STORAGE CONDITIONS

Do Not Freeze.

JAN _ 2 1985 MODITY STREET

ALLIED PRODUCT CODE .

98.08

7664-93-9

MOLECULAR WEIGHT

BENERALINEORMATION?

TRADE NAME (COMMON NAME)

SULFURIC ACID

CHEMICAL NAME AND/OR SYNONYM

Sulfuric Acid Synonym: Battery Acid

FORMULA

77 to 99 wt. % H2SO4 in water

ALLIED CORPORATION ADDRESS ING . STREET CITY STATE AND ZIP CODE

CHEMICAL SECTOR P.O. Box 1139R

Morristown, N.J. 07960 CONTACT

Director, Product Safety

PHONE NUMBER (201) 455-4157

AST ISSUE DATE July. 1982

CAS NO

GRAENT ISSUE DAT Sept., 1985

ESH FIRST AID MEASURES

MERGENCY PHONE NUMBER (201) 455-2000

Skin or Eyes: Immediately flush with plenty of water continuing for at least 15 minutes. Remove contaminated clothing while washing. Continue flushing with water if medical attention is not immediately available.

Ingestion: Do not induce vomiting. If conscious, give several glasses of milk (preferred) or water.

Inhalation: Remove to fresh air. Observe for possible delayed reaction, If breathing has stopped, give artificial respiration. If breathing with difficulty, give oxygen, provided a qualified operator is available.

GET IMI. DIATE MEDICAL ASSISTANCE for ingestion, inhalation, eye contact, irritation, or burns.

C:学 HAZARDS INFORMATION

HEALTH

Inhalation of fumes or acid mist can cause irritation or corrosive burns to the upper respiratory system, including nose, mouth, and throat. Lung irritation and pulmonary edema can also occur. LC₅₀ (mist, animals): 20-60 mg/cu.m. -Ref. (a).

Can cause irritation and corrosive burns to mouth, throat, and stomach. Can be fatal if swallowed. Applicable to dilute solutions: LD₅₀ (rat): 2140 mg/kg - Reference (b).

. Can cause severe burns.

Liquid contact can cause irritation, corneal burns, and conjunctivitis. Blindness may result, or severe or permanent injury. Mist contact may irritate or burn. Reference (b).

ERMISSIBLE CONCENTRATION AIR

1 mg/cu.m. (as H₂SO₄) (OSHA)

BIDLOGICAL

TLV same (ACGIH)

None.

INUSUAL CHRONIC TOXICITY

(1) Erosion of teeth, (2) lesions of the skin, (3) tracheo-bronchitis, (4) mouth inflammation, (5) conjunctivitis, (6) gastritis.



1020 SAMS AVE. . P.O. BOX 10274 . NEW ORLEANS, LA 70181-0278

JULY 31,1987

MARTIN MARIETTA NEW ORLEANS, LA MAIL STOP 3733

ATTN: SAPETY DEPARTMENT

RE: S	SAFETY DATA INFORMATION .
COMPON:	
ATTACHED PLEASE PIND THE SAFETY	DATA INFORMATION ON THE FOLLOWING PRODUCT(S)
HYDROFIOURIC ACID 70%	
NECESSARY INFORMATION TO HANDLE	THE HANUFACTURER(S) SO THAT YOU HAVE THE THE PRODUCTS YOU PURCHASE FROM US IN A SAFE ATE THIS INFORMATION TO ALL PERSONS WHO COME DUCTS.
IF YOU NEED ANY ADDITIONAL INFOR	WATION ON THESE OR ANY OF OUR OTHER PRODUCTS
WE ASK THAT YOU SIGN AND RETURN	THE ACKNOWLEDGEMENT COPY ATTACHED.
	YOURS TRULY, MAGNOLIA CHEMICALS & SOLVENTS, INC.
	OUNTILL CONTROL 125
ACCOMMEDGENCENT OF RECEIPT:	
DATE	
COMPANY	و الله الله الله الله الله الله الله الل
Val.	· · · · · · · · · · · · · · · · · · ·

(PERSON AUTHORIZED TO SIGN FOR COMPANY)



Hydrofluoric Acid, Aqueous Page 5 of 5

SECTION B. FIRST AID MEASURES

for Acid Burns to the Body (Not the Eyes)

- 1. Remove the victim from the contaminated area and immediately place him under a safety shower or wash him with a water hose, whichever is available.
- 2., Remove all contaminated clothing.
- 3. Keep washing with large amounts of water for a minimum of 15 to 20 minutes.
- 4. Have someone make arrangements for medical attention while you continue flushing the affected area with water.
- 5(a). If available, after thorough washing, the burned area should be immersed in a solution of 0.2% iced aqueous Hyamine 1622 or 0.13% iced aqueous Zephiran Chloride. If immersion is not practical, towels should be soaked with one of the above solutions and used as compresses for the burned area. Ideally compresses should be changed every 2 minutes. At our plants we generally keep 10 15 liters of solution made up available for use. Solutions are replaced annually if not previously used.*
- 5(b). An alternative treatment to 5(a) is for the physician to inject sterile 10% aqueous calcium gluconate solution subcutaneously beneath, around, and in the burned area. Initially use no more than 0.5 cc per square centimeter and do not distort appearance of skin. If pain is not completely relieved, additional treatment is indicated.
- 6. Seek medical attention as soon as possible for all burns regardless of how minor they may appear initially.

B. For Acid in the Eyes

- 1. Irrigate eyes for at least 15 minutes with copious quantities of water, keeping eyelids apart and away from eyeballs during irrigation.
- 2. Get competent medical attention immediately, preferably an eye specialist.
- 3. If a physician is not immediately available, apply one or two drops of 0.5% Pontocaine Hydrochloride solution followed by a second irrigation for 15 minutes. Use none of the solutions described for skin treatment. Use no oils or greases unless instructed to do so by a physician.

C. If HF is Swallowed

- 1. Drink large amounts of water to dilute. Do not induce vomiting.
- 2. Several glasses of milk or several ounces of milk of magnesia may be given for their soothing effect.
- 3. Take victim to a doctor.

D. First Aid for Inhalation

- 1. Move victim to fresh air. Keep him lying down, quiet and warm.
- 2. Get competent medical attention immediately.
- 3. If breathing has stopped, start artificial respiration at once.
- 4. Oxygen should be administered to a victim who is having difficulty breathing and by an authorized person only, until the victim is able to breathe easily by himself.
- 5. Do not give stimulants unless instructed to do so by a physician.
- 6. Do not permit victim to become active for at least 24 hours. Victim should be examined by a physician and held under observation for at least this 24-hour period.
- Hyamine 1622 is a trade name for Benzethonium Chloride, Merck Index monograph 1078, a quaternary ammonium compound sold by Rohm and Haas, Philadelphia. Zephiran Chloride is a trade name for Benzalkonium Chloride, Merck Index monograph 1059, also a quaternary ammonium compound, sold by Winthrop Laboratories, N.Y.C.
 - Pontocaine Hydrochloride is a trade name for Tetracaine Hydrochloride, Merck Index monograph 8904, sold by Winthrop Laboratories, N.Y.C.

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《《神经》的时,11位是他们是我们的这个时间,他就是这一个地震的人,这是一个时间,他们也是这种的

Gard ON VARIOS (COM)

FIRE AND EXPLOSION

AUTO IGNITION TEMPERATURE FLAMMABLE LIMITS IN AIR (% 6Y VOL.)

Not Flammable

NA – Not Applicable

LOWER NA

UPPER NA

OPEN CUP | OCLOSED CUP

ction with certain metals generates flammable and potentially explosive hydrogen gas. Considerable heat is evolved when contacted with many substances. Heat increases pressure and may explode container. Will react violently with water.

D. PRECAUTIONS/PROCEDURES

FIRE EXTINGUISHING AGENTS RECOMMENDED

Use water or suitable agent for fires adjacent to non-leaking tanks or containers of HF.

FIRE EXTINGUISHING AGENTS TO AVOID

Do not use solid water streams near ruptured tanks or spills of HF. Acid reacts violently with water and can splatter acid onto personnel.

SPECIAL FIRE FIGHTING PRECAUTIONS

Wear self-contained breathing apparatus approved by NIOSH and full protective clothing. Use water spray to keep containers cool.

VENTILATION

Sufficient to reduce vapor and acid mists below permissible TLV levels. Packaging and unloading areas and open processing equipment may require mechanical exhaust systems.

NORMAL HANDLING

Do not breathe vapor or mist. Use only with adequate ventilation. Avoid all contact with skin, eyes and clothing, even with dilute solution. Do not add water to acid. Instead, dilute by adding acid to water cautiously and with agitation.

PAGE

are in approved containers only. Store in a cool, well-ventilated area. Flammable hydrogen gas can be generated in metal corage containers. Diking of storage tanks is recommended. Keep containers tightly closed. See also Section K.

SPILL OR LEAK

Wear full protective equipment described in Section E. Contain spills and cautiously dilute with large excess of water. Neutralize carefully with alkali such as soda ash or lime. Provide good ventilation. Flush residue in accordance with applicable disposal regulations. Attempt to keep unneutralized product out of sewer. Any release to the environment of this product may be subject to Federal and/or state reporting requirements. Check with appropriate agencies.

SPECIAL: PRECAUTIONS/PROCEDURES/LABEL INSTRUCTIONS

Personnel should have medical surveillance for fluoride. Employees should be thoroughly trained in safety procedures. (See references). To prevent ignition of hydrogen gas that may be present from contact with metals, smoking, flames and sparks should not be permitted in storage areas. Label signal word: DANGER! Label also reads: POISON.

E. PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY PROTECTION

Where required, use a respirator approved by NIOSH for HF gas or mists, as applicable. Some exposures may require a NIOSH-approved, self-contained breathing apparatus or air-supplied respirator. See references (e), (g).

EVES AND FACE

As a minimum, wear hard hat, chemical safety goggles (plastic lenses), fullface plastic shield. Do not wear contact lenses. For increased protection, use air-supplied acid hood.

HANDS, ARMS, AND BODY

For routine product use, wear acid-resistant jacket, crousers, boots and gauntlet gloves. For increased protection, use air-supplied aid suit.

OTHER CLOTHING AND EQUIPMENT

Eyewash and quick-drench shower facilities, protected from freezing, should be available where HF is stored or handled.

FIRE AND EXPLOSION

AUTO IGNITION TEMPERATURE

FLAMMABLE LIMITS IN AIR (% BY VOL.)

Not Flammable NA - Not Applicable DOPEN CUP CLOSED CUP

LOWER NA

UPPER NA

TUAL FIRE AND EXPLOSION HAZARDS

ction with certain metals generates flammable and potentially explosive hydrogen gas. Considerable heat is evolved when contacted with many substances. Heat increases pressure and may explode container. Will react violently with water.

PRECAUTIONS/PROCEDURES

FIRE EXTINGUISHING AGENTS RECOMMENDED

Use water or suitable agent for fires adjacent to non-leaking tanks or containers of HF.

FIRE EXTINGUISHING AGENTS TO AVOID

Do not use solid water streams near ruptured tanks or spills of HF. Acid reacts violently with water and can splatter acid onto

SPECIAL FIRE FIGHTING PRECAUTIONS

Wear self-contained breathing apparatus approved by NIOSH and full protective clothing. Use water spray to keep containers

Sufficient to reduce vapor and acid mists below permissible TLV levels. Packaging and unloading areas and open processing equipment may require mechanical exhaust systems.

NORMAL HANDLING

Do not breathe vapor or mist. Use only with adequate ventilation. Avoid all contact with skin, eyes and clothing, even with dilute solution. Do not add water to acid. Instead, dilute by adding acid to water cautiously and with agitation.

are in approved containers only. Store in a cool, well-ventilated area. Flammable hydrogen gas can be generated in metal Lorage containers. Diking of storage tanks is recommended. Keep containers tightly closed. See also Section K.

Wear full protective equipment described in Section E. Contain spills and cautiously dilute with large excess of water. Neutralize carefully with alkali such as soda ash or lime. Provide good ventilation. Flush residue in accordance with applicable disposal regulations. Attempt to keep unneutralized product out of sewer. Any release to the environment of this product may be subject to Federal and/or state reporting requirements. Check with appropriate agencies.

SPECIAL: PRECAUTIONS/PROCEDURES/LABEL INSTRUCTIONS

Personnel should have medical surveillance for fluoride. Employees should be thoroughly trained in safety procedures. (See references). To prevent ignition of hydrogen gas that may be present from contact with metals, smoking, flames and sparks should not be permitted in storage areas. Label signal word: DANGER! Label also reads: POISON.

PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY PROTECTION

Where required, use a respirator approved by NIOSH for HF gas or mists, as applicable. Some exposures may require a NIOSHapproved, self-contained breathing apparatus or air-supplied respirator. See references (e), (g).

EYES AND FACE

As a minimum, wear hard hat, chemical safety goggles (plastic lenses), fullface plastic shield. Do not wear contact lenses. For increased protection, use air-supplied acid hood.

HANDS, ARMS, AND BODY

or routine product use, wear acid-resistant jacket, trousers, boots and gauntlet gloves. For increased protection, use air-supplied .id suit.

OTHER CLOTHING AND EQUIPMENT

Eyewash and quick-drench shower facilities, protected from freezing, should be available where HF is stored or handled.

HEZARDSACIONE

RE AND EXPLOSION

AUTO IGNITION TEMPERATURE

Not Flammable

Not applicable

Not applicable

DOMEST. OCLOSED CUP

FIRE AND EXPLOSION HAZARDS

mable and potentially explosive hydrogen gas can be generated inside metal drums and storage tanks. Concentrated and (as sold) can ignite combustible materials on contact.

D: PRECAUTIONS/PROCEDURES

FIRE EXTINGUISHING AGENTS RECOMMENDED

Use water spray or other suitable agent for fires adjacent to non-leaking tanks or other containers of sulfuric acid.

Do not use solid water streams near ruptured tanks or spills of sulfuric acid. Acid reacts violently with water and can spatter acid onto personnel.

SPECIAL FIRE FIGHTING PRECAUTIONS

At high temperatures, sulfuric acid mist or sulfur trioxide gas can be released from vented or ruptured containers. If water ALIASH. is added to concentrated sulfuric acid, violent spattering can occur, and considerable heat may be evolved. Wear NIOSHapproved self-contained breathing apparatus with full facepiece and full protective clothing. Cool non-leaking fire-exposed containers with water spray.

ENTILATION

Sufficient to reduce vapor and acid mists to permissible levels. Packaging and unloading areas and open processing equipment may require mechanical exhaust systems. Corrosion-proof construction recommended.

Keep sources of ignition away. Do not get in eyes, on skin, on clothing. Do not breathe vapor or mist. Use with adequate ventilation and use protective equipment as outlined in Section E. Procedures are detailed in references listed in Section J (Allied). Do not add water to acid. When diluting, always add acid to water, using caution and proper agitation.

e in cool, well-ventilated area away from combustibles and reactive chemicals. Vent metal containers weekly or more Juently in hot weather to prevent hydrogen gas build-up. Diking of storage tanks is recommended.

SPILL OR LEAK IALWAYS WEAR PERSONAL PROTECTIVE EQUIPMENT - SECTION EI

Dilute small spills or ler's cautiously with plenty of water. Neutralize residue with alkali such as soda ash or lime. Adequate ventilation is required for soda ash due to release of carbon dioxide gas. No smoking in spill area. For major spills, keep unprotected persons away. Protected persons should contain the acid by diking the spill with soil or clay. Recover the acid if possible. (See Section I for disposal methods.) Attempt to keep out of sewer. Any release to the environment of these products may be subject to Federal and/or state reporting requirements. Check with appropriate agencies.

PECIAL: PRECAUTIONS/PROCEDURES/LABEL INSTRUCTIONS

SIGNAL WORD - DANGERI

Vapor may contain explosive hydrogen. To prevent ignition of this if present, smoking, flames, and sparks should not be permitted in storage areas.

E.S. PERSONAL PROTECTIVE EQUIPMENT.

Where required, use a respirator approved by NIOSH for sulfuric acid or mists, as applicable. Some exposures may require a self-contained breathing apparatus with full facepiece or supplied-air respirator with a full facepiece, helmet, or hood. -References (e, f, g).

ES AND FACE

As a minimum, wear hard hat, chemical safety goggles, and full-face plastic shield. Do not wear contact lenses. For increased protection, use supplied air acid hood.

a minimum, wear acid-resistant apron, protective clothing, boots and gauntlet gloves for routine product use. For inased protection, include acid-resistant trousers and jacket.

ISTMER CLOTHING AND EQUIPMENT

Eyewash and quick-drench shower facilities, protected from freezing, should be available wherever Sulfuric Acid is stored or handled.

,	

O PRESIDENTIAL	The state of the s				
TATEFIAL IS IAT NORMAL CONDITIONS		APPEARANCE AND OOOR			
S LIQUID □ SOLID □ GAS	Oily, colorless to slightly yellow, clear to turoid liquid. Odorless,				
	SPECIFIC GRAVITY				
BOILING POINT . 193 00	C (H ₂ O = 1) *a. 1.706	- 1	VAPOR DENSITY		
b. 279	b 1.835	ł	Not applicable		
MELTING POINT c. 310	c. 1.842		Tot applicable		
SOLUBILITY IN WATER 1% by Weight)	рн		VAPOR PRESSURE		
Complete	1% solution: pH = 0.9	:	negligible @ ambient		
EVAPORATION RATE	% VOLATILES BY VOLUME				
(Butyl Acetair + 1) (Ether + 1)	(At 20°C)		°a. 60°Be= 77.7% H ₂ SO ₄		
Not applicable	Not applicable		b. 66°Be=93% H ₂ SO ₄ c. 99% H ₂ SO ₄		
UNSTABLE STABLE	Temperatures of 300°C or higher gas, which is toxic, corrosive, and	: yields sulf	ur trioxide		
Nitro compounds, carbides, dienes, alcohols and permanganates: cause fires and possibl violent—Ref. (i), (continued, Section K).	(when heated): cause explosions-Refs. y explosions. Allyl compounds and ald	(i, j, k). Oxi ehydes: un	idizing agents, such as chlorates		
and permanganates: cause fires and possibly violent—Ref. (i), (continued, Section K).	(when heated): cause explosions-Refs. y explosions. Allyl compounds and ald	(i, j, k). Oxi ehydes: un	idizing agents, such as chlorates		
Nitro compounds, carbides, dienes, alcohols and permanganates: cause fires and possibl violent—Ref. (i), (continued, Section K). **AZARDOUS DECOMPOSITION PRODUCTS Sulfur trioxide gas: see above. Also this is a	(when heated): cause explosions-Refs. y explosions. Allyl compounds and ald fire risk if in contact with organic mater	(i, j, k). Oxi ehydes: un	idizing agents, such as chlorates		
Nitro compounds, carbides, dienes, alcohols and permanganates: cause fires and possibl violent—Ref. (i), (continued, Section K). ***********************************	(when heated): cause explosions-Refs. y explosions. Allyl compounds and ald fire risk if in contact with organic mater CONDITIONS TO AVOID N.A.	(i, j, k). Oxi ehydes: un	idizing agents, such as chlorates		
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24.5 ppm:24 hr./bluegill/lethal/fresh water		
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CLEAN WATER ACT SECT 3111 YES NO	F SO, REPORTABLE QUANTITY. 1000 100% H ₂ S basis)	40 CFR 116-117
NASTE DISPOSAL METHODS IDISPOSER MUST COMPLY	WITH FEDERAL, STATE AND LOCAL DISPOSAL OR DISCHARGE LAWSI	
Waste sulfuric acid should be cautiously dilu- of in accordance with applicable disposal corrosive waste—D002) applicable to the un	ited with water and neutralized with an alkali. Neutralized waste regulations. Waste may have to be disposed of by an approved ineutralized acid).	contractor. (EPA
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TERA STATUS OF UNUSED MATERIAL IF DISCARDED	HAZARDOUS WASTE NUMBER, IIF APPL No. D002 (corrosive)	10 CFP 261 22
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ो सम्बन्धान/प्रकार	· · · · · · · · · · · · · · · · · · ·	
PERMISSIBLE CONCENTRATION REFERENCES		
(1) OSHA standard at 29 CFR 1910.1000	(1981).	
(2) TLV from the ACGIH 1984-85 list, "T	hreshold Limit Values for Chemical Substances",	
Am. Conf. of Governmental Industrial	Hygienists, Cincinnati 45202.	
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REGULATORYSTANDARDS	D.O.T. CLASSIFICATION. Corrosive material	49 CFR 17
None additional.	DOT ID Number: UN 1830.	
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The second secon		
Cinconati 45202.	d Limit Values, 4th Edition, 1981, Am. Conf. of Governmental	
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Cinconati 45202.	ts of Chemical Substances, 1982-83, Accession #WS 556 00 000	· · · · · · · · · · · · · · · · · · ·

K. MADDITIONAL INFORMATION

J. REFERENCES-General (continued)

- (e) "Criteria for a Recommended Standard. . . Occupational Exposure to Sulfuric Acid", NIOSH U.S. Dept. of HHS, 1974,
- PB233098, Nat. Tech. Info. Service, Springfield, VA 22161.
 (f) NIOSH/OSHA, "Pocket Guide to Chemical Hazards...", 1978.
- (g) "NIOSH/OSHA-Occupational Health Guidelines for Chemical Hazards-Sulfuric Acid", 1978.
- (h) Allied Chemical Technical Service Report for storage and handling procedures.
- (i) NFPA Manual 491M, "Manual of Hazardous Chemical Reactions, 1975, Nat. Fire Protection Assoc., Boston 02210.
- (j) Allied Corporation Product Safety Data Sheet for Sodium Sulfite, 1982.
- (k) Bretherick, L., Handbook of Reactive Chemical Hazards, 2nd Ed., 1979, Butterworths, Boston.

G. REACTIVITY DATA-Incompatibility (continued)

Alkalis, amines, water, hydrated salts, carboxylic acid anhydrides, nitriles, olefinic organics, glycols, aqueous acids: cause strong exotnermic reactions. -Refs. (i, k). Carbonates, cyanides, sulfides, sulfides, metals such as copper: yield toxic gases. -Refs (j, k). Also for metals, see hydrogen generation, Section C.

Information (hazards, precautions, first aid, etc.) is abbreviated. More detailed information is contained in references found in Section J

PSOS FILE = - 877

HYDROFLUORIC ACID, AQUEOUS

A. GENERAL INFORMATION

TRADE NAME (COMMON NAME OR SYNONYM) Hydrofluoric Acid, Aqueous (Hydrofluoric Acid Solution, Aqueous HF, HF 70%, Hydrofluoric Acid, 70%)



P9884393CE GOX 1027U NEW ORLEANS, LA 70151-02 TELEPHONE 504 733 TOUC

FORMULA 70% HF in water by weight

MOLECULAR WEIGHT 20.01 (HF)

ADDRESS ING., STREET, CITY, STATE AND ZIP CODE)

Allied Chemical P.O. Box 1139R

CONTACT

Morristown, N.J. 07960

Director - Product Safety

PHONE NUMBER (201) 455-4157 ISSUED DATE June 12, 1980

REVISED DATE April, 1982

FIRST AID MEASURES

Exposure to hydrofluoric acid requires special treatment. See page 5.

EMERGENCY PHONE NUMBER (201) 455-2000

C. HAZARDS INFORMATION

HEALTH

Mild exposure: Can irritate now, throat and respiratory system. Severe Exposure: Can cause nose and throat burns, lung inflammation and pulmonary edema. Also depletes calcium levels in the body if not promptly treated, resulting in death due to hypocalcemia. LC50's (animal) range from 456 to 1774 ppm/1H - Reference (a).

NGESTION

Can cause severe mouth, throat and stomach burns. Can affect kidney function and be fatal if swallowed. Profound and possibly fatal hypocalcemia is likely to occur unless medical treatment is promptly initiated.

Both liquid and vapor can cause severe burns which may not be immediately painful or visible. HF will penetrate skin and attack underlying tissues and bone. Large burns (over 25 square inches) may also cause hypocalcemia which, in rare instances, has been fatal. Solutions as dilute as 2% or lower may cause burns - Reference (h).

Both liquid and vapor can cause irritation or corneal burns or conjunctivitis.

Solutions as dilute as 2% or lower may cause burns - Reference (h).

Threshold Limit Value (TLV): 3ppm (equivalent to 2.5 mg/m3) as F.

PERMISSIBLE CONCENTRATION: AIR 3 ppm.*

BIOLOGICAL THRESHOLD mg(F)/liter of urine - Reference (e). 7 (post-shift) - 4 (pre-shift)

UNUSUAL CHRONIC TOXICITY

Bone and joint changes in humans (Fluorosis).

Embryotoxic in the rat at 0.47 - 4.98 mg/cu.m./4 hr. daily for the duration of gestation - Reference (d).

*Continued, Section K

Attachment: p.5

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BOILING POINT 66°C	SPECIFIC GRAVITY (H2O = 1)	VAPOR DENSITY
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MELTING POINT -71 °C		1.97 @ 75 ⁰ F
eg nation of garages of		1.76 € 80°F
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G. REACTIVITY DATA		
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ADDITIONAL INFURMATION

(h) Allied Chemical data, unpublished.
(i) Heyroth, F. F., "Halogens", Chapter XXII in Patty, editor, <u>Industrial Hygiene and Toxicology</u>, 2nd Ed., 1963, Vol. II, p. 844, John Wiley, NYC.

(j) Coast Guard CHRIS system, form HFX, "Hydrogen Fluoride, Oct., 1978. (k) Allied Chemical Product Bulletin No. 505-044, "Hydrofluoric Acid".

(I) Allied Chemical Technical Service Report No. 33.78, "Recommendations for the Storage and Handling of 70% Hydrofluoric Acid".

Information (hazards, precautions, first aid, etc.) is abbreviated. More detailed information is contained in the references given in Section J.

D. PRECAUTIONS / PROCEDURES - Storage (continued):

Storage tanks in HF service are subject to indiscriminate hydrogen blistering and should, therefore, be routinely inspected and repaired if needed. Non-destructive tank thickness testing (NDT) should be utilized for periodic checks of tank wall

C. HAZARDS INFORMATION - Health

Permissible Concentration (continued)

NIOSH (1976) proposed a Biological Limit of 7 mg(F)/L in urine, supplemented by other medical data - Reference (e), Chapter 1.

THIS PRODUCT SAFETY DATA SHEET IS OFFERED SOLELY FOR YOUR INF CONSIDERATION AND

EDIAND ASSUMES NO RESPONSIBILIT

is less clear than this notice, it is due to the quality of the document being filmed

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Cont. Is Exp. 25

HSP PI HEARING

MSD007

Philipp Brothers Chemicals, Inc.



10 Columbus Circle

TELEX: 235002

CABLES: PHIBROCHEN NEETYORK

TELEPHONE: (ZIZ) SB6-E020

SPECIFICATION SHEET

HYDROFLUORIC ACID 70%

PROPERTIES:

Colorless, fuming, mobil liquid; will attack glass and any silicacontaining material.

TYPICAL SPECIFICATIONS:

ASSAY 70.0% FLUOSILICIC ACID (H₂SiF₆) 1.56

SULFURIC ACID
(H₂SO₄) .06

CHLORINE .005Max
IRON .005Max
ARSENIC .005Max
HEAVY METAL (Pb) .005Max
IGNITION RESIDUE .02%

PACKING:

220 KG. STEEL DRUMS

APPLICATION:

Polishing, etching and frosting of glass; pickling cooper, brass, stain-less and other alloy steels; electropolishing of metals; cleaning stone, acidizing oil wells.

SHIPPING REGULATIONS:

ICC, CG, IATA, White Label

8/81

PHILIPP ROAD HOLSROOK, MASS.

680 NEWFIELD STREET MIDDLETOWN, CONN.

BALTIMORE MARYLAND PHILADELPHIA PENNSYLVANIA DETROIT MICHIGAN CHICAGO

TURCO PRODUCTS MATERIAL SAFETY DATA SHEET 4 - EXTREME 3 - HIGH - MODERATE Tenetta Special . CHRONIC HEALTH HAZARD 11/15/85

ISSUE DATE:

TUTE OF SAUE-GO. 12 CTION I - PRODUCT NAME:

Manufacturer's Name:

TURCO PRODUCTS

Address:

24600 So. Main Street, Carson, CA 90749

Emergency Telephone No.:

(213) 634-3300

HAZARDOUS INFORMATION:

COMPONENTS	C.A.S. Number	CERCIA RO BRILL #	WASIS	ACGIH TLV	OSHA TWA	%,Wī
Chromic Acid Potassium hexafluorotitanate	1333820 16919270	1000 Ntlstd	0007	50μg/m³Cr 2.5mg/m³(F)	C.lmg/m'CrO ₃ 2.5mg(F)/m'	8
5 3 1 1 5 5 5 6 6	7	·	i dre turi ptili		o	
CARCINOGENS	MTP	<u> </u>	IARC		OSHA	
Compound, cleaning NOI	HA	ZARD CLASS xidizer	isted	not ro HAZARDID NA 1463		

SECTION III - PHYSICAL DATA	
	SPECIFIC GRAVITY: Not applicable
	VOLATILE, % BY VOL: Not applicable
VAPOR PRESSURE (mmHg): Not applicable VAPOR DENSITY (AIR + 1): Not applicable	EVAPORATION RATE (Bu. Ac. = 1k Not applicable
APPEARANCE AND ODOR	SOLUBILITY IN WATER: Complete
Orange/white powder - little or no odor	pH 3% in H ₂ 0 1-2

SECTION IV — FIRE AND EXPLOSION HAZARDS:

FLASH POINT AND METHOD USED:

EXTINGUISHING MEDIA Dry chemical, carbon dioxide. Avoid contact of dry chromic acid with water if possible. Dry chromic acid exposed to high heat may decompose to form a hot viscous foam which may cause a steam explosion with water.

SPECIAL FIRE FIGHTING PROCEDURE AND PRECAUTIONS Use self-contained respiratory protection and full protective gear. Any water runoff may contain hexavalent chrome and should not be allowed to enter sewer or waterways.

UNUSUAL FIRE AND EXPLOSION HAZARDS May increase intensity of fire when in contact with combustible materials. Cool fire exposed containers cautiously with water spray, being alert for possibility of steam explosion.

SECTION V - EMERGENCY, FIRST AID AND HEALTH INFORMATION:

EFFECTS OF OVER EXPOSURE EYES. Contact with product, product dust or product solution will cause severe irritation, possible conjunctivitis, possible chemical burn, possible permanent tissue damage and possible blindness.

SKIN Contact with product, product dust or product solution will cause severe irritation and possible chemical burns. Contact with breaks in skin can cause ulceration. Chromic acid is a skin sensitizer. May be absorbed through skin.

INHALATION: Inhalation of product dust or mist from product solution may cause ulceration and perforation of masal septum, and irritation and damage to respiratory system. Symptoms of such irritation may resemble those of asthma. Overexposure to hexavalent chrome may cause lung cancer risk.

INGESTION: Can be harmful or fatal if swallowed. Toxic effects may not appear immediately.

MEDICAL CONDITIONS WHICH MAY BE AGGRAVATED: Chromic acid is a systemic poison affecting the liver, kidneys and gastrointestinal tract, repeated overexposure may aggravate any preexisting dysfunction of these systems.

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A LANGE THEOLOG OVER BALL AND THE
FIRST AID: EYES. Immediately begin flushing eyes accurate with all surfaces. Obtain medical least 15 minutes. Hold lids apart to assure contact with all surfaces. Obtain medical
attention and flush with plenty of water without delay. If irritation is evi-
dent or blistering occurs, obtain medical attention.
THALATION Remove to fresh air. Administer oxygen if breathing is difficult. Obtain medi-
al attention if irritation persists.
The services immediately dilute by giving large volume of the burney water or mucilaginous
or touching back of throat with finger. Repeat until vomit fluid is clear. Follow by most successful to an uncon- drinks. Obtain immediate medical attention. Never attempt to induce vomiting or give anything by mouth to an uncon-
scious person.
PRIMARY ROUTES OF ENTRY: INHALATION A SKIN CONTACT
SECTION VI - REACTIVITY DATA:
STABILITY: STABLE X UNSTABLE HAZARDOUS POLYMERIZATION WILL NOT OCCUR
CONDITIONS TO AVOID Contact with strong acids, strong alkali, reducing compounds, flammable
or combustible materials.
HAZARDOUS DECOMPOSITION PRODUCTS:
None The Company of t
The proposition of the propositi
COUL OR RELEASE PROCEDURE: CONCENTRATE: Cleanup personnel anound use appropriate has been event up and shoveled
soill into DOT-approved drums for disposal, keep springly in water and solution collected in DOT-approved drums for
into disposal druns. Residual amounts should be dissolved in eater the control of
Confine smill. Stop leak at source if
USE SOLUTION. Cleanup personnel should use appropriate protective equipment. Contain a part of this can be done safely. Ventilate area. Evacuate personnel. Pump liquid into DOT-approved drums for this can be done safely. Ventilate area. Evacuate personnel and place in DOT-approved drums for disposal.
this can be done safely. Ventilate area. Evacuate nonessential personnel. Pusp ladde in DOT-approved drums for disposal. disposal. Absorb remaining material onto inert, inorganic absorbent and place in DOT-approved drums for disposal.
disposal. Absorb remaining material onto inert, inorganic absorbent and place in 50 disposal. Continue washing and collect- Wash area with water. Collect washings and place in DOT-approved drums for disposal. Continue washing and collect- ing washing until all chrome is removed. Keep spill and all washings from entering sewer or waterways.
conter for recycling of lease, in
possible. (2) Transfer to licensed hazardous waste treatment of sition under applicable local, state and regional regulations as hazardous waste.
sition under applicable local, beats
SPENT SOLUTION AND RINSES: Dispose per (1) or (2) above, or spent solution and rinses can be
other objectionable ions removed by precipitation. Clare
sewer if local regulations permit.
PROTECTION INFORMATION:
NICCH-SUNG PERDITATION TO COME COME
RESPIRATORY PROTECTION: For dust conditions, a Niosh-approved respective respirators are used, a formal training and screening program must be iniadvised. If respirators are used, a formal training and screening program must be iniadvised.
tiated. See CFR 1910-134.
VENTILATION Maintain sufficient mechanical ventilation to keep particulate concentration
below TLV.
PROTECTIVE EQUIPMENT: CHEMICAL FACE SHIELD OR GOGGLES: X
TACE
RECOMMENDED PERSONAL HYGIENE Wash hands and face with soap and water before smoking or eati
in attached and contaminated civiling.
home. Discard concaminated smooth
SECTION IX — OTHER INFORMATION: SPECIAL PRECAUTIONS — STORAGE AND HANDLING. Store in dry protected area away from strong acids or
bases, reducing compounds, flammable or combustible material.
bases, reducing compounds, flammable of combastistic mixing. Slowly add to solution while mixing, taking care to avoid splashing or spattering.
Use appropriate protective equipment. REPAIR AND MAINTENANCE OF CONTAMINATED EQUIPMENT: Relieve any pressure. Cover openings to avoid repair and interior by flushing with water. Collect flushings for
REPAIR AND MAINTENANCE OF CONTAMINATED STATE OF THE REPAIR AND MAINTENANCE OF THE REPAIR AND M
REPAIR AND MAINTENANCE OF CONTAMINATED EQUIPMENT: Relieve any pressure. Cover openings for splashing. Clean exterior and interior by flushing with water. Collect flushings for splashing. Clean exterior and interior by flushing with water. Collect flushings for splashing. Use protective equipment for eyes, skin and inhalation. DATE REVIEWED:
DATE PREPARED. BB 11/15/85

BB 11/15/85

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McGean-Rohco, Inc.

CEE BEE A-202

Product Name:

1250 Terminal Tower, Cieveland, Ohio 44113, 216/621-6425

MATERIAL SAFETY DATA SHEET

Emergency Phone No.: 213-803-4311

Chemirec Phone No.

Platit Audiess.	9520 E. Cee Bee Drive	Downey,		•	80	<u>0/424-93</u>	100
Prepared By:	TSCA Coordinator		Issue Date: 4/83		Revised Date: 8/86		B6
	INGREDIENTS AND HAZAR	DOUS COM	PONENTS		:		i.
	Material			*	TLV	CAS.	Carcrade
· _ · _ · _ · _ · _ · _ · _ · _ · _ · _	Methylene chloride			65- 75	330	75-09-2	No
	Phenol			10- 15	19	108- 95-2	No
	Formic acid			10- 15		64-18-6	No
					mg _M 3		
			:				

PHYSICAL DATA

Boiling Point:	110°F	Freezing Point: UK	Specific Gravity:	1.2	pH:	<2
Vapor Pressure at	20 C: UK	Vapor Density (Air = 1): UK	% Volatiles by Volume:	90	Odor:	Pungent
Evaporation Rate (Butyl Acetate = 1) <1			Solubdity in Water:			
Appearance and F	orm: E	Brown liquid				

FIRE AND EXPLOSION HAZARD DATA

	Flammable Limits in Air:			
Α		Upper:		
A	% By Volume	Lower:		
A		-		
If involved in a fire, full protective clothin	self-contained g should be wo	breathing equipment and orn.		
as: None				
· ·	Note: UK = L	Inknown NA = Not Applicable		
	A If involved in a fire, full protective clothin s:	A %By Volume A lf involved in a fire, self-contained full protective clothing should be wo		

Effects of Overexposure and Primary Entries to Bridy: Primary entries through contact and inhalation of vapors. Very corrosive to skin and eyes. Inhalation can cause headaches and dizziness. ing term excessive inhalation could affect kidneys and liver. E. .. igency and First Aid Procedures: Flush skin and eyes with water for at least 15 minutes. Get medical attention. For inhalation, remove to fresh air. REACTIVITY DAYA Conditions to Avoid: Unstable OS Stable Incompatability — Materials to Avoid: Alkalies Hazardous Decomposition Products: None known Will Not Occur Hazardous Polymerization: May Occur SPILL OR LEAK PROCEDURES Neutralize and absorb on a suitable absorbent. Xisposal Methods: Take to an approved waste disposal facility for removal of solvent and incineration. Follow all Local, State and Federal regulations. SPECIAL PROTECTION INFORMATION Organic catridge. NIOSH or MSHA approved. Respirator: Sufficient to keep below TLV limits. Ventilation: Other: Sufficient to prevent skin contact. GlovesSolvent Eye and Face Goggles and face shield resist Handling and Storage: Store at 32-105°F in a well-ventilated area. Keep tightly closed.

> THIS PRODUCT SAFETY DATA SHEET IS OFFERED SOLELY FOR YOUR INFORMATION, CONSIDERATION AND INVESTIGATION.

McGEAN-ROHCO, INC. PROVIDES NO WARRANTIES, EITHER EXPRESS OR IMPLIED, AND ASSUMES NO RESPONSIBILITY FOR ACCURACY OR COMPLETENESS OF THE DATA CONTAINED HEREIN.

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MCDs Document #

MATERIALS CHARACTERIZATION DATA SHEET SALES (504) 465-3310

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Resource Recovery Mid-South, Inc., 425 E. Resource Mid-South Mid-Resource Mid-R	8900956	FEB 1.0 1989
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Company Contact: Jim. Bolton — Contant Size:	Generator Name NASA-Langley Res. Ce	int. Rill to Pinner St Suffolk VA 22424
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Acting EPA ID # VA2800005033 Volume in Storage 110 Gals National State 1917 150 15	004	Rate of Generation Z X 33 Galls PER Une time
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PHYSICAL DESCRIPTION Physical State Liquid		30-32
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Phases/Layering Uni-Layer Bilayer Multilayer		Physical State [] Liquid K Semi-solid 1 Solid
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specia (As) 4 5 Silver (Ag) 4 5 Total Solids (wt. %) 60 Suspended Solids (wt. %) 60 arium (Ba) 4 100 Copper (Cu) 4 1 BTURD 19, 7750. % Ash Content 40-50% Water (by weight) 1 Admium (Cd) 4 Nickel (Ni) 4 1 Specific Gravity 1, 4-1, 5 Boiling Point, (**) 470° F Type CC Specific Gravity 1, 4-1, 5 Boiling Point, (**) 4 5 Specific Gravity 1, 4-1, 5 Boiling Point, (**) 4 5 Specific Gravity 1, 4-1, 5 Boiling Point, (**) 4 5 Specific Gravity 1, 4-1, 5 Boiling Point, (**) 4 Specific Gravity 1, 4-1, 4 Specific Gravity 1, 4 Specifi	AETALS (EP Toxicity Test, mg/1)	
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RGANICS (mg/1 or ppm) dr in 0 Organohalide 0 ethoxychlor 0 Mercaptans 0 saphene 0 4-5 0 specification 0 PLEASE ATTACH ALL MATERIAL SAFETY DATA SHEETS, Bus 0 LOGISTIC SKETCHES, ANALYSIS REPORTS, HANDLING Denoil O PRECAUTIONS, ADDITIONAL HAZARD SUPPORT INFORMATION, DATA & COMMENTS. RTIFICATION: I hereby certify that the above and attached description is complete and accurate to the best of my knowledge and ability to ermine, that no deliberate or willful omission of composition or properties exists, and that all known or suspected hazards have been disclosed.	lorine	
drin 0 Organohalide 0	PCANICS (mg/1 or n=-)	
At thoxychlor Mercaptans		
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4.5 0 4.5 T 0 enol(ics) 0 PLEASE ATTACH ALL MATERIAL SAFETY DATA SHEETS, BS 0 LOGISTIC SKETCHES, ANALYSIS REPORTS, HANDLING DOXIN 0 PRECAUTIONS, ADDITIONAL HAZARD SUPPORT INFORMATION, DATA & COMMENTS. RTIFICATION: I hereby certify that the above and attached description is complete and accurate to the best of my knowledge and ability to ermine, that no deliberate or willful omission of composition or properties exists, and that all known or suspected hazards have been disclosed. Tify that the materials tested are representative of all the materials subject to the contract.	welcaptans	
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LOGISTIC SKETCHES, ANALYSIS REPORTS, HANDLING PRECAUTIONS, ADDITIONAL HAZARD SUPPORT INFORMATION, DATA & COMMENTS. STIFICATION: I hereby certify that the above and attached description is complete and accurate to the best of my knowledge and ability to ermine, that no deliberate or willful omission of composition or properties exists, and that all known or suspected hazards have been disclosed. The stranding properties and the properties of the contract.	enol(ics) 0	
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RTIFICATION: I hereby certify that the above and attached description is complete and accurate to the best of my knowledge and ability to ermine, that no deliberate or willful omission of composition or properties exists, and that all known or suspected hazards have been disclosed. In the materials sested are representative of all the materials subject to the contract.	oxio 0	
ritine, that no deliberate or willful omission of composition or properties exists, and that all known or suspected hazards have been disclosed. The properties exists, and that all known or suspected hazards have been disclosed.	· · · · · · · · · · · · · · · · · · ·	
ritine, that no deliberate or willful omission of composition or properties exists, and that all known or suspected hazards have been disclosed. The properties exists, and that all known or suspected hazards have been disclosed.	c 478	INFORMATION, DATA & COMMENTS.
1/1/20	C 478 RTIFICATION: I hereby certify that the above and a	INFORMATION, DATA & COMMENTS.
. 2/6/59	CTIFICATION: I hereby certify that the above and a ermine, that no deliberate or willful omission of compo	INFORMATION, DATA & COMMENTS. Ittached description is complete and accurate to the best of my knowledge and ability to spition of properties exists, and that all known or suspected hazards have been disclosed.
	C 478 RTIFICATION: I hereby certify that the above and a sermine, that no deliberate or willful omission of compo	INFORMATION, DATA & COMMENTS. Ittached description is complete and accurate to the best of my knowledge and ability to spition of properties exists, and that all known or suspected hazards have been disclosed.



NASA SAFFAMINA

20 RESEARCH DRIVE HAMPTON, VIRGINIA 23666 TELEPHONE: (804) E65-0880 NATIONAL 1-800-423-9918 VIRGINIA 1-800-468-5348

REPORT OF ANALYSIS

10/20/88

TO.
RESOURCE RECOVERY MIDSOUTH INC
425 EAST PINNER
SUFFOLK, VA 23434

ATTN: JIM CLARK

SAMPLE OF: WASTE MATERIAL

RECEIVED DATE 09/19/88

SAMPLE ID: 09168801BH

BAL LOG NO(s). RC544

Physical:	Corrosivity:	NEG	LIMITS
,	pH=	NEG	
	Reactivity:		
	Cyanide		
	Sulfide	a contract of	
	Ignitability:	N/R	
TOXICITY	FLASH Pt., of	•	60
	and the second of the second o		
ınorganic:	Arsenic, mg/l	< 0.01	5.0
	Barium, mg/l	< 0.03	100
	Cadmium, mg/l	<0.005	1.0
	Chromium, mg/l	< 0.05	5.0
	Lead, mg/l	< 0.05	5.0
	Mercury, mg/l	<0.004	0.2
	Selenium, mg/l	< 0.01	1.0
	Silver, mg/l	< 0.01	5.0
Organic:	Endrin, mg/l		0.02
	Lindane, mg/l		0.4
	Methoxychlor, mg/l		10
	Toxaphene, mg/l		0.5
The second second	2,4-D, mg/l		10
	2,4,5-TP(Silvex), mg/1		1.0

The EP Toxicity analyses were performed on an extract prepared according to 40 CFR 261.



RESPECTFULLY SUBMITTED,

SEE REVERSE SIDE FOR EXPLANATION OF SYMBOLS AND ABBREVIATIONS

Water, Wastewater, Hazardous Waste, Industrial Hygiene and Chemical-Bactenological Analysis

bionetics **ANALYTICAL LABORATORIES**

REPORT OF ANALYSIS

TO: RESOURCE RECOVERY MIDSOUTH INC. 425 EAST PINNER SUFFOLK, VA 23434

ATTN: JIM CLARK

MATRIX: WASTE MATERIAL SAMPLE DATE:

RECEIVED DATE: 09/19/88

SAMPLE ID: 09168801BH

BAL LOG NO(s). D4393

10/20/88

20 RESEARCH DRIVE HAMPTON, VIRGINIA 23666 TELEPHONE: (804) 865 0890 NATIONAL 1-800-423-9918 VIRGINIA 1-800-468-5548

1651	IESI			SOLIS
FLASH POINT			430.	oF
BTU		15	360.	
8010 COMPOUNDS		<	5.	mg/kg
8020 COMPOUNDS	anda. Analah	* · · · · · · · · · · · · · · · · · · ·	10.	mg/kg

RESPECTFULLY SUBMITTED.



SEE REVERSE SIDE FOR EXPLANATION OF SYMBOLS AND ABBREVIATIONS

Water, Wastewater, Hazardous Waste, Industrial Hygiene and Chemical-Bacteriological Analysis



RESOURCE RECOVERY MID SOUTH, INC.

Mailing Address: P. O. Box 3228, Suffolk, VA 23434

Telephone (804) 539-0005 1-800-727-2929

Tuesday, February 7, 1989

Marine Shale Processors, Inc. 110 James Drive West Suite 120 St. Rose, LA 70087

Attention: Mr. Mike Jaubert

Dear Mr. Jaubert,

Enclosed you will find a Materials Characterization Data Sheet on a wastestream from the NASA-Langley Research Center. Also enclosed are copies of some lab results we obtained. We would appreciate your approving this material into Marine Shale Processors, Inc. as soon as possible. Thank you very much for your time and consideration in this matter.

Sincerely.

James J. Bolton Technical Specialist

Enclosures

JЈВ

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DEPARTMENT OF ENVIRONMENTAL QUALITY THE BEST OF THE PROPERTY O	PROPERTY AND RECYCLE / REUSE - ST
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Please print or type. (Form seeigned for use on eller () h) hyperriter.) July 10.	Form Approved. OMB No. 2050-0039 Expres 9-30-91
WASTE MANIFEST AND THE TRANSPORT OF THE PROPERTY OF THE PROPER	Manifest . 2, Page 1 Information in the shaded areas
J. Generator's Name and Mastery Address VETERANS ADMINISTRATIONS MEDICALS CENTER	स्वार्य
VETERANS ADMINISTRATION MEDICAL CENTER 3601 SOUTH SIXTH AVENUE TO TUCSON, ARIZONA 85723. 4 Generator's Phone (602) 792-1450	mellerer dide
4. Generator's Phone (602) 792-14507	у верим
5. Transporter 1 Company Name HAZCHEM ENVIRONMENTAL SERVICES AIZID 191812 141813	
8. 35 La US EPA ID Number	The second secon
9. Designated Fectity Name and Site Address: 17 to 1922 10 10 10 10 10 10 10 10 10 10 10 10 10	0.101018
MARINE SHALE PROCESSORS, INC. 19 of the control of	er en
MORGAN CITY, LOUISIANA 70380 LAD 9 8 1 10 5 7	77 10 16
11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	No. 1 Type Ouantity Li WiVol.
WASTE CORROSIVE SOLID, N.O.S.	No. Type of Ouantity 11 W/Vol. Will and
CORROSIVE MATERIAL, UN-1759	01010
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A STATE OF THE PROPERTY OF THE	THE HEAVER CONTRACTOR SERVICES
Ray thangel and barrers on a	appearance and the control of the control of
15. Special Handling Instructions and Additional Information	Comments of the second states of the second
WEAR APPROPRIATE PROTECTIVE CLOTHING, GLOVES PROTECTION, ETC. LAND DISPOSAL RESTRICTION	S. EYE WEAR, RESPIRATORY
IF UNABLE TO DELIVER, RETURN TO GENERATOR	the constitution of the co
proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper according to applicable international and national government regulations.	condition for transport by highway
If am a large quantity generator, I certify that I have a program in place to reduce the volume and confident practicable and that I have selected the practicable method of treatment, storage, or of	toxicity of waste generated to the degree I have determined to be
the best waste management method that is available to me and that I can altered pure stress with a more stress waste management method that is available to me and that I can afford I not stress with a more	पर अपन्यात । इसे के अध्यक्षण चर्मा अपना है ने मिला है। उन्हें के उन्हें के उन्हें के
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Transporter 1 Acknowledgement of Receipt of Materials 1)	101/15/1/2012 1014 17 18 19 19 19 19 19 19 19
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18. Transporter, 2. Advisored germent of Receipt of Materials and participation of the Participation of the Control of the Con	न्य देशको प्रतिकार किल्ला अस्ति का उनके देवन हैं। उनके प्रतिकार के उनके किल्ला किल्ला किल्ला है जिल्ला है जिल्ला
Michael T. Holberg / Signature	1014 1 112 18 9
19. Discrepancy Indication Space	7
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest exc	and as posed in Part 19
Pumpd/Typed Name Signature Signature History	Month Day Yar
EPA Form \$100-22 (Rev. P18) WHITE - DEO, GR. Generalor, YELLOW - TSDRF, BLUE - Transporter 2.	PINI DISPONENTI, GOLD - Generator DEG FORM NW.3 (R 918)

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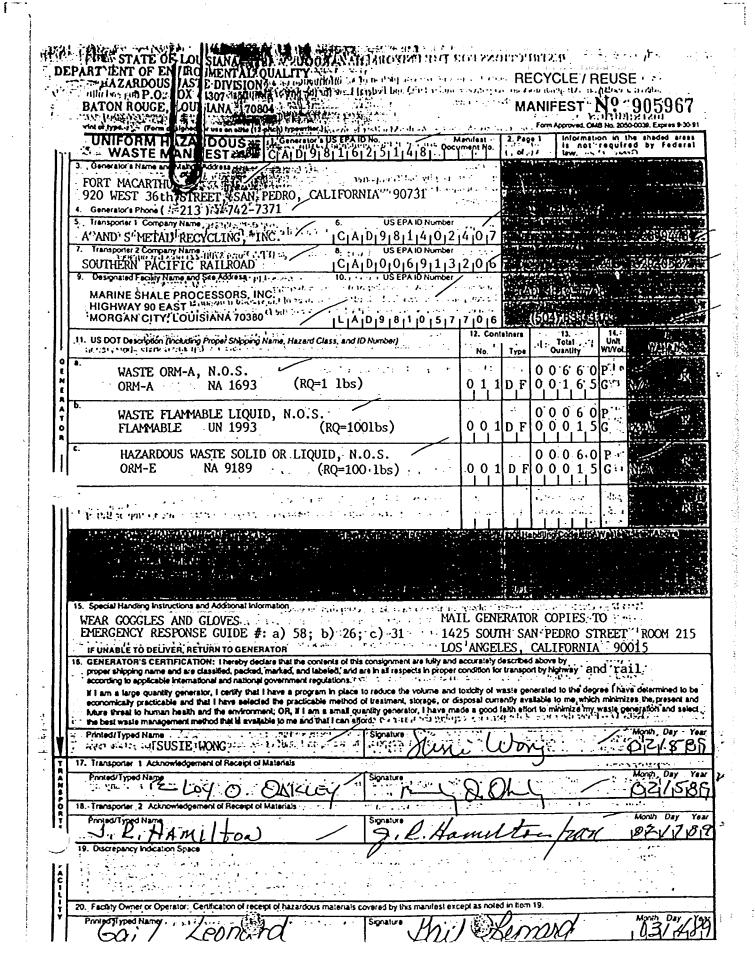
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	The sale of the sa	ERIZATION DATA SHEET # 8900205
	MCDS Document # LAN Q 1 4000 O ROY 1698	LNIZATION DATA SECTION
	JAN 31 1989 O. BOX 1698 - SALES (50	04) 465-3310 MSP CODE:
	Generator Name V.A. MEDICAL CENTER	The state of the s
	Liebby Metrics 3601 S. SIXTH AVENUE	BILL TO HAZCHEM ENVIRONMENTAL SERVICES, INC.
	City Mate Jap TUCSON AZ 85723	Address: 3855 S. EVANS DLVD. # 405 City, State, Zip. TUCSON ARIZONA 85714
	technical contact JEANNE NORDSTROM	Telephone # 602 - 741 - 0100 - 100 - 100
	Tale INDUSTRIAL HY GIENIST SEED	Company Contact TOHN GUNDLACH
	Telephone NO . 602 . 792-1450 IN . 6070	CONTAINER SIZE 1-30 GLI FIBER DRUM, 1-5 GLI POLY
	Fachic HA ID # AZD Z60010312	EPA Worte No. DODZ firsterson a set I go is many year
	CUTMENT COMPOSITION	Generaling Proces SULAURIC ACID SPILL CLEANUP
	CHIMICAL COMPOSITION (No Traile Name) (Intale most adding to Thomas land)	Common Name of Waste NOIVE
	SODIUM SULFATE ZO .	Rate of Generation ONE TIME PER ONLY
	SODIUM OXIDE 5	Volume in Morage 1 30991 IN ZIC FIBER
	SODIUM CARBONATE 5	
	SULFURIC ACID 10 -	Is Waste DOLL Hovandent Days 1 1 100
	WATER 10 "	Proper DOI Shipping Name CORROSIVE SOLID NOS
	INERT CLAY ABSORBENT 50	Proper DOI Shipping Name CORROSIVE SOUD, NOS Hazard Class MATERIAN No. UNITS9
	State of the second state	Transportation Equipment FLAT- BED TRUCK
	METALS (EP Toxicity Test, mg/1)	Placarding
	Alseria IAs MS Sheri Agi NS	30-941 = 160 lbs. 5-941 = 4016s.
	Alsema (As	PHYSICAL DESCRIPTION
	Codmand de Na kel (Sa	Physical State Diquid Semi-solid
	Chromamace Zuc Cm	The state of the s
	Lead d'h:	Type of Solids 1 Organic Marel
. 1	Mercusy (H)	Total Solids for St. 100 Suspended Solids for St.
0	Selement (See	BIU/Il 2500 - Ad Content 30 - Water the weight 10
7	INORGANICS (mg 1 or ppm)	Flash Point of 1 NONE Type CLOSED CUP
독기	AK 1	Specific Gravity _0.81
1,		Builing Point, (*C) NONE Freezing Point, (*C) NONE
, ₍₂	Prev CS Ashestos	Vapor Pressure (njin Hg (a 24°C) NONE
USPE	Chlorde	pt I (Avr) 4-5 (Range) 4 to 5
Š	Bispline	Oder SULFUR
V)	Saltite	Color BROWN
ې	Sulfate	
\(\mathcal{I}\)	Phosphate	HAZARDOUS PROPERTIES ! I NONE
3000	Having	1 Water Reactive
\mathcal{U}	Brownine	1/4 Shock Sensitive 1/4 Pyrophoric 1/4 Polymen coble
ONE	t h'orme	1 T R shootive 1 T Pesticide Residuals († 1 Igodalife
Q	ORGANICS (mg 1 or ppm)	Comosive 1 ! form Vapor 1 ! Pathesen
<	todan NONE Organolade NONE	Biological I Itological
	Methods folio Methods NONE	1 Other
h	Toxaphene	REQUIRED PERSONNEL PROTECTIVE
V	2.40	EQUIPMENT AND PROCEDURES:
≥.	2.4,7.1	WEAR APPROPRIATE GLOVES.
	Phenology	PROTECTIVE CLOTHING AND
	14.12	FALE RESPIRATOR
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	lix	PLEASE ATTACHAIL MATERIAL SAFETY DATA SHEFTS, LOGISTIC
	_	SKETCHES, ANALYSIS REPORTS, HANDLING PRECAUTIONS, ADDI- TIONAL HAZARD SUPPORT INFORMATION, DATA & COMMENTS.
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	CINITICATION: Uncerts certify that the above and attached descripti- determine, that on deliberate or willful ornission of composition or properti-	on is complete and accurate to the best of my knowledge and abdity to
	A certify that the materials tested, are representative of all the materials subje-	esteris, and that an anomal or susperter hazards have been disclosed.
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MCDS Document #	43.43.43.44.4	ERIZATION DATA JHEET
8900205	JAN 0 9 1989	KENNER, LA. 70063 4) 465-3310 MSP CODE:
Lacility Address 360 City, Mate, Jup Tuck Technical Confact J. A	Medical Center 7 15,5,14h Ave 30n, Az 85723 U Wrd5 tron	Bill To Hazchen Environmental Service Address 38555; Evans Haas City State to Tucson, Az 85714 Telephone 602-741-0100
Telephone NO 602	1 Hygienist 1792-145011 6070 6	Company Contact Brandon Correy Continuer Size 30 gallon Fiber Orum IPA Waste No. AZ 0982 011843
CHEMICAL COMPOSI	b	Continuing Process Waste Lab Chernical Continuin Name of Waste Scale Linic Acid Rate of Generation 30sclerk Year
Sodo A3 Inart C	h 65 = 11	Volume in Storage 1 3030 In 2 C Fi ber
		Proper DOI Majaging Name Costosice Solid NOS Hazard Class Solid ID No. 444 1759
METALS (EP Toxicity To	est, mg/1)	Placarding Corrosive for a 100016
Barium (Ba) Cadmum (Cd) Chromium (cr)	Copper (Cin Nickel (Sin Zinc (Zint	PHYSICAL DESCRIPTION Physical State Liquid Semi-solid Solid Phases/Layering Uni-Layer Bilayer Multilayer Viscosity Multilayer Low Low
Lead (th) Mercury (th) Selemen (Se)	=======================================	Type of Solids Organic I Mixed Total Solids (wt. %)
INORGANICS (mg/1 or	todace 15	Flash Point (*1) Nowe Type Nowe Specific Gravity
Sultah Chlorale Bisultate	Ashesia \{	PH (Avg) 4 (Range) 3 to C
Sulite Subste Dosphate		Orlor Acidit
Flurine Bronine Chlurine ORGANICS (mg/1 or p)		HAZARDOUS PROPERTIES 1 None 1 Water Reactive Reactive Explosive 1 Shock Sensitive Pyrightoric Polymerizable 1 Radinactive Pesticide Residuals 1 Corrosive
Indian Aleboxychkar	Organohalide Netrapians	Biological Etiological Other
Toxaphene 2, 4-D 2, 4.1-T Thereforest PCBs		EQUIRED PERSONNEL PROTECTIVE EQUIPMENT AND PROCEDURES: Dear Drotect. ive Clothing, and Templitory Protection
1OC.		PLEASE ATTACH ALL MATERIAL SAFETY DATA SHEETS, LOGISTIC SKETCHES, ANALYSIS REPORTS, HANDLING PRECAUTIONS, ADDITIONAL HAZARD SUPPORT INFORMATION, DATA & COMMENTS.
, determine, that no deliberate o		on is complete and accurate to the best of my knowledge and ability to its exists, and that all known or suspected hazards have been disclosed. (I to the contract.
DATE 1/3/89	GENERATOR'S SIGNATURE:.	leanne Mads from

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FEB 1 3 1989 GENERATOR'S WASTE MATERIAL PROFILE SHEET 2110 E. 15TH STREET, LOS ANGELES, CA 90021

8800962

998 **PHONE** (213) 623-9443

p.

Production of the control of the con		
Generator Name: FORT MACARTHUR		MSP CODE:
Facility Address: 920 WEST 36th ST	REET	Container Size: SEE ATTACHMENTS
	-	EPA Waste No.: SEE ATTACHMENTS
the form the same to be a second to the same and the same		REASON: SEE ATTACHMENTS
City, State, ZIP: SAN PEDRO, CA 90)731	Common Name of Waste: LAB PACK
Technical Contact: SUSIE WONG		Rate of Generation: PER
Title: CHIEF SAFETY OFFICER		(Quan) (Units) (Time Interval)
Telephone No.: (213) 742-7371	EYT	Volume In Storage 13 15 CH IN MAN DILLING
Facility EPA I.D.#: CAD 981625148	LAI	(Quan) (Units) (Container)
Tacinty CI A I.D.W.	· · · · · · · · · · · · · · · · · · ·	Is Waste DOT Hazardous XYES DNO
CHEMICAL COMPOSITION		Proper DOT Shipping Name: SEE ATTACHMENTS
(Totals must add up to 100%)		Hazard Class: SEE ATTACH ID No. SEE ATTACH
	%	Transportation Equipment TRUCK/RAIL CAR
र प्रोति । स्टिक्स्सनेक्स व्य क्षित्रे कृति करण	%	Placarding: IF APPLICABLE
SEE ATTACHMENTS	%	Generating Process: SITE CLEAN UP
	%	Obligating Cooperation
SEE LAB PACK	%	PHYSICAL DESCRIPTION
	%	Physical State 29 Liquid
	~	Phases/Layering None Bilayered Multilayered
		Viscosity ☐ High ☐ Medium ☐ Low
Note that the state of the state of	- 	Type of Solids (3 Organic 3 Inorganic 50Mixed
METALS (EP Toxicity Test, mg/1)	1	Total Solids (wt %) Suspended Solids (wt %)
Arsenic (As)O Silver (Ag)	0	BTU/Ib % Ash Content
Barium (Ba) Copper (Gu)	0	Flash Point (°F) Type
Cadmium (Cd) O Nickel (NI)	0	Specific Gravity
Chromium (Cr) O Zinc (NI)	0	Boiling Point (°C) Freezing Point (°C)
Lead (Pb) 0 0	0	Vapor Pressure (mm Hg @ 24°C)
Mercury (Hg) 0 0	0	ph (Avg) to
Selenium (Se) 0	0	Total Alkalinity/Acidity (%)
	•	Odor VARIOUS
INORGANICS (mg/1 or ppm)	_	Color VARIOUS
Total CN Bromine	0	
Free CNO lodine	0	HAZARDOUS PROPERTIES D NONE
SulfideO Asbestos	0	☑ Ignitable ☐ Corrodes Steel ☐ Toxic Vapor
BisulfiteOO	0	☐ Reactive ☐ Pyrophoric ☐ Shock Sensitive
Sulfite 0 0	0	☐ Explosive ☐ Water Reactive ☐ Radioactive
Sulfate 0 0	0	☐ Biological ☐ Pathogen ☐ Etiological
Phosphate 0 0	0	☐ Pesticide Residuals
Fluorine 0 0	0	Other CAM -A OKM-E
Chlorine 0 0	0	
Chloride 0 0	0	REQUIRED PERSONNEL PROTECTIVE
		EQUIPMENT AND PROCEDURES:
ORGANICS (mg/1 or ppm)		<u> </u>
EndrinO Organohalide	0	WEAR GOGGLES AND GLOVES
MethoxychiorO Mercaptans	0	and the state of the second of
Toxaphene 0 0	0	VARIOUS EMERGENCY RESPONSE GUIDE #'s
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Phenol (lcs) 0 0	0	
PCB 0 0	0	क्षा के के कि के क्षांक्र करियों के प्रकार कर कि प्रकार के किया के किस के किस के किस के किस के किस के किस कि क स्थान
тос 0 0	0	PLEASE ATTACH ALL MATERIAL SAFETY DATA
0 0		SHEETS, LOGISTIC SKETCHES, ANALYSIS REPORT.

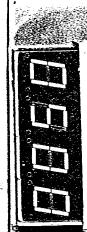
HANDLING PRECAUTIONS, ADDITIONAL HAZARD SUPPORT INFORMATION, DATA & COMMENTS.

CERTIFICATION: I hereby certify that the above and attached description is complete and accurate to the best of my knowledge and ability to determine that; no deliberate or willful omission of composition or properties exists, and that all known or suspected hazards have been disclosed. I certify that the materials tested are representative of all the materials subject to the contract.

DATE: FEB. C8, 198/

COD

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GENERATOR'S WASTE MATERIAL PROFILE SHEET 2110 E. 15TH STREET, LOS ANGELES, CA 90021

998 PHONE (213) 623-9443

Generator Name:	Sunfaced Thes	. ·	MSP CODE:
Facility Address:	على الكتاب الأعاب الأعلا	તલા. ા	Container Size: Size ALL National Allo
			EPA Waste No.: SIEL ATTACHERTS
	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	+ 14° 1	REASON: SIL ATTACABLATS
City, State, ZIP:	SAIL PEUNU, GA 9	0/31	Common Name of Waste: As 11/103
Technical Contac			Rate of Generation: PER
Title:	12 SACLIY JEFICEN		(Quan) (Units) (Time Interval)
Telephone No.: (CVT.	Volume In Storage 13 IS CH IN PAR DAIM
	1 5 0 0 0 15 1/2	EXT:	Volume in Storage (Quan) (Units) (Container)
Facility EPA I.D.#			(Quan) (Units) (Container) Is Waste DOT Hazardous DYES DNO
CHEMICAL COM	POSITION		Proper DOT Shipping Name: 313 ATTACHEMIS
(Totals must add	1.44		Hazard Class: ID No.
		%	
	4 1 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4		Placarding:
55E M	TAGGERIS	%	Generating Process: Size Carrier of
	are entre of	04	Generating 7 rocess.
Sec. IA	F PACK SA		PHYSICAL DESCRIPTION
	:	70	Physical State D'Liquid
		73	Phases/Layering None Bilayered Multilayered
		%	Viscosity D High D Medium D Low
		%	Type of Solids D Organic D Inorganic D Mixed
METALS (EP Toxi	icity Test, mg/1)		Total Solids (wt %) Suspended Solids (wt %)
Arsenic (As)	Silver (Ag)	Ú.	BTU/lb % Ash Content
Barium (Ba)	Copper (Gu)		Flash Point (°F) Type
Cadmium (Cd)	U Nickel (NI)		Specific Gravity
Chromium (Cr)	U Zinc (NI)	U	Boiling Point (°C) Freezing Point (°C)
Lead (Pb)		U	Vapor Pressure (mm Hg @ 24°C)
Mercury (Hg)	1/ U	· · ·	ph (Avg) (Range) to
Selenium (Se)	J		Total Alkalinity/Acidity (%)
Selemont (Se)	i		Odor VARIOUS
INORGANICS (mg	g/1 or ppm)		Color ARIANS
Total CN	Bromine	<u> </u>	
Free CN	U lodine	<u> </u>	HAZARDOUS PROPERTIES NONE
Sulfide	U Asbestos	U U	☐ Mignitable ☐ Corrodes Steel ☐ Toxic Vapor
Bisulfite	<u> </u>	U	☐ Reactive ☐ Pyrophoric ☐ Shock Sensitive
Suffite	Ú Ú	U	☐ Explosive ☐ Water Reactive ☐ Radioactive
Sulfate	J O	V	☐ Biological ☐ Pathogen ☐ Etiological
Phosphate	υ	U	Pesticide Residuals
Fluorine	Ú IÚ	U	DYOther OKNI-A OKM-E
Chlorine	ાં છ	· · · · · · ·	
Chloride	V U	U	REQUIRED PERSONNEL PROTECTIVE
			EQUIPMENT AND PROCEDURES:
ORGANICS (mg/1	or ppm)		1998 Anni San
Endrin	U Organohalide	<u> </u>	JEAR GOGGLES AND GLOVES
Methoxychlor	Mercaptans	<u> </u>	Andrew Committee
Toxaphene	0 0	i	VARIOUS EMERCHACY RESPONSE GUIDE F'S
2. 4-D	U U	<u> </u>	
2. 4. 5-T	<u>v</u> 6	0	
Phenol (Ics)	ti ti	i,	
PCB	0 0	<u> </u>	the first of the second second to the second
TOC		-	PLEASE ATTACH ALL MATERIAL SAFETY DATA
	0 0		SHEETS, LOGISTIC SKETCHES, ANALYSIS REPORT.
			HANDLING PRECAUTIONS, ADDITIONAL HAZARD
BOD	<u>. j</u>	•	SUPPORT INFORMATION, DATA & COMMENTS.

knowledge and ability to determine that; no deliberate or willful omission of composition or properties exists, and that all known or suspected hazards have been disclosed. I certify that the materials tested are representative of all the materials subject to the contract.

rEBOX 1181 SIGNATURE:





OUR REFERENCE 7-998

CERTIFICATION LETTER

YOUR REFERENCE

FORT IMMCARTHURY

920 WIST RE-ESPANT

SAN ROLE, OF 90931

CAD 981625148

I am an authorized employee of A & S Environmental Recovery, Inc. I hereby certify that the Lab Packs represented by this Materials Characterization Data sheet and lab packing lists are prepared and shipped in full compliance with the Marine Shale Processors, Inc. Lab Pack Guidelines.

DATED: \$ FEB 1989

SIGNED: the No

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ATTACHMENT FOR FORT MACARTHUR

D.O.T. 21C

15 DF GALLON

SHIPPING NAME: WASTE ORM-A, N.O.S. NA 1693

INVENTORY LIST #: 1

ITEM #		'S' or 'L'	CONTAINER	QTY/SIZE	UN/NA NO.	EPA WASTE CODE NO.
1	DIAZINON	1	METAL	1×164L	WA 2783	NA
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4	NON-REGULATED	,	MATERIAL	S		
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6	HAND SOAP	1	ALY	1 X19t		NA
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ATTACHMENT FOR FORT MACAETHUR

D.O.T. 21C

15 DF GALLON

SHIPPING NAME: WASTE ORM-A, N.O.S. NA 1693

INVENTORY LIST #: Z

ITEM //	'S' or 'L'	CONTAINER	QTY/SIZE	UN/NA NO.	EPA WASTE CODE NO.
1 DIAZINON	1	METAL	1 X 1 GAL	NA 2783	N/A
2	<u> </u>				
183 Charles Shipper All Control		<u></u>			
4 NON-REGULATED	M	MERIALS			
5					A A A TANK
6 HAND SOAP	2	POLY	1X/9t		NA
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ATTACHMENT FOR FORT MACARIHUR

D.O.T. 21C

15 DF GALLON

SHIPPING NAME: WASTE ORM-A, N.O.S. NA 1693

INVENTORY LIST #: 3

ITEM #		'S' or 'L'	CONTAINER	QTY/SIZE	UN/NA NO.	EPA WASTE CODE NO.
1	DIAZINON	1	METAL	1 X 16AL	NA 2783	N/A
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D.O.T. 21C

15 DF GALLON

SHIPPING NAME: WASTE ORM-A, N.O.S. NA 1693

INVENTORY LIST #:4

ITEM		'S' or 'L'	CONTAINER	QTY/SIZE	UN/NA NO.	EPA WASTE CODE NO.
1	DIAZINON	1	METAL	1 X 16AL	NA 2783	NA
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ATTACHMENT FOR FORT MACAZIHUR

D.O.T. 21C

15 DF GALLON

SHIPPING NAME: WASTE ORM-A, N.O.S. NA 1693

INVENTORY LIST #:5

ITEM #		'S' or 'L'	CONTAINER	QTY/SIZE	UN/NA NO.	EPA WASTE CODE NO.
1	DIAZINON	1	METAL	1 × 164L	NA 2783	N/A
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ATTACHMENT FOR FORT MACARTHUR

D.O.T. 21C

15 DF GALLON

SHIPPING NAME: WASTE ORM-A, N.O.S. NA 1693

INVENTORY LIST #: 6

ITEM #	'S' or 'L'	CONTAINER	QTY/SIZE	UN/NA NO.	EPA WASTE
1 DIAZINON	1	METAL	1 X 1 GAL	NA 2783	N/A
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D.O.T. 21C

15 DF GALLON

SHIPPING NAME: WASTE ORM-A, N.O.S. NA 1693

INVENTORY LIST #: 7

ITEN #	'S' or 'L'	CONTAINER	QTY/SIZE	UN/NA NO.	EPA WASTE CODE NO.
1 DIAZINON	1	METAL	1 X 16AL	NA 2783	N/A
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D.O.T. 21C

15 DF GALLON

SHIPPING NAME: WASTE ORM-A, N.O.S. NA 1693

INVENTORY LIST #: 8

ITEM #		'S' or 'L'	CONTAINER	QTY/SIZE	UN/NA NO.	EPA WASTE CODE NO.
1	DIAZINON	4	METAL	1 X I GAL	NA 2783	NA
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ATTACHMENT FOR FORT MACARIHUR

D.O.T. 21C

15 DF GALLON

SHIPPING NAME: WASTE ORM-A, N.O.S. NA 1693

INVENTORY LIST #: 9

ITEM #	'S' or 'L'	CONTAINER	QTY/SIZE	UN/NA NO.	EPA WASTE CODE NO.
1 DIAZINON	4	METAL	1 X 164L	NA 2783	N/A
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ATTACHMENT FOR FORT MACAZIHUR

D.O.T. 21C

15 DF GALLON

SHIPPING NAME: WASTE ORM-A, N.O.S. NA 1693

INVENTORY LIST #: 10

ITEM #		'S' or 'L'	CONTAINER	QTY/SIZE	UN/NA NO.	EPA WASTE CODE NO.
1	DIAZINON	1	METAL	1 X 1 GAL	NA 2283	N/A
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ATTACHMENT FOR FORT MACARTHUR

D.O.T. 21C

15 DF GALLON

SHIPPING NAME: WASTE ORM-A, N.O.S. NA 1693

INVENTORY LIST #: ||

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1 DIAZINON L METAL 2 3 4 5 6 7 8 9 10 11 12	NO.	EPA WASTE CODE NO.
2 3 4 5 6 7 8 9 10 11	1 X 1 GAL NA 2783	3 N/A
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ATTACHMENT FOR FIFT. Mc A n THUN

D.O.T. 21C

1 5 DF GALLON

SHIPPING NAME: HAZARDOUS WASTE SOLID OR LIQUID, N.O.S. NA 9189
INVENIORY LIST #: [2_

ITEY #		S' or L'	CONTAINER	QTY/SIZE	UN/NA NO.	EPA WASTE CODE NO.
1	BIRD REPELLENT	S	FIBER	11/1/26	NAS 189	NA
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ATTACHMENT FOR FORT McCarthur

D.O.T. 21C DF GALLON 15

SHIPPING NAME: WASTE FLAMMABLE LIQUID, N.O.S. UN 1993

INVENTORY LIST #: /3

ITEM #	'S' or 'L'	CONTAINER	QTY/SIZE	UN/NA NO.	EPA WASTE CODE NO.
1 petroleum oil	1	Poly	1-19+	1270	D001
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STATE OF LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY MAZARDOUS TASTE DIVISION									
P.O. BOX 4307 NATON ROUGE, LOUISIANA 70804 Please print or type. • (Form designed for use on elite (12-pitch) typewriter.) REUSE/RECYCLI	E	, ex							
UNIFORM HAZARDOUS 1. Generator & US EPA ID No. Ma	anifest 2	Page 1 Informa	to 2050-0039 Expires 9-30 tion in the shaded areas required by Federal						
Veterans Administration Modical Conton Veterans Administration Modical Conton									
San Francisco, CA 94121	3	នួយស្រួ ងប្រាស់ ទីល្អប្រជុំព្រះបានប្រ	()						
5. Transporter 1 Company Name 6. US EPA ID Number		T. A X PEX	DECORPORE						
North State Environmental C A D 9 8 2 4 6 2 8	3 11 14 . 5	Transporter e Phone State Transporter a							
9. Designated Facility Name and Site Address JO. US EPA ID Number	alı la E	Transporter's Phone							
Marine Shale Processors, Inc.									
Highway 90 East Morgan City, Louisiana 70380 L A D 9 8 1 0 5 7 7	06	(504) 631=	101 1						
11. US DOT Description fincluding Proper Shipping Hame, Hazard Class, and ID Humber)	12. Contains	Total Ouantity	Unit Will No						
Waste Flammable Solid NOS, Flammable Solid, UN1325	2 D	F 20	P D001/6R						
D003/D008	444	4111							
Waste Organic Peroxide, Solid NOS, Organic Peroxide, NA9187	1 D	F /0	P D003 R						
Waste Corrosive Liquid NOS, Corrosive Material, UN1760	2 D	F /0	P 2 D001/R 2 D002						
Waste Flammable Liquid NOS, Flammable Liquid, UN1993	2 D	F 60	P D001/1R D002/018						
Additional Descriptions for Materials Listed Above was released. Lab packs: "See attached containing released by a lab packs: "A lab packs: "See attached containing released by a lab packs: "See		Handling Codes for W	United Across						
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully ar proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper according to applicable international and national government regulations.	nd accurately or condition fo	r described above by it transport by highwa	Y						
If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxic economically practicable and that I have selected the practicable method of treatment, storage, or dispoind the threat to human health and the environment; OR, if I am a small quantity generator, I have made at the best waste management method that is available to me and that I can afford the storage of the best waste management method that is available to me and that I can afford the storage of the stora									
Printed/Typed Name NO HW W. MAHONEY Signature Signature Tohn L	J. n	nalimin	Month Day Year						
17 Transporter 1 Acknowledgement of Receipt of Materials A Printed/Typed Name Signature Signature	-,	1	Month Day Year						
S KURT DREGER Kut I	/an		19/1/7/8/9						
Printed/Typed Name	$\stackrel{\frown}{\sim}$	·	Month Day Year						
19 Discrepancy Indication Space) un	ml_	681 Hel 110						
			<i>:</i>						
20 Fectility Owner or Operator. Certification of receipt of hazardous materials covered by this mail Pyrmed/Typed Names	milest except	as noted in Item							
Cai Leonard Signature Mail of	Semo	nd	Month Day Year						
FALVIOUS EDITION IS OBSOLLTE									

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STATE OF LOUISIANA DEPARTMENT OF EA MONIENTAL QUALITY LIAZARDORY ASTE DIVISION					
DATON ROUGE : NUBIANA 70004 Please qual of pros	i.F				
UNIFORM HAZARDOUS 1. Generator & US EPAID No.	Aanilest	Form.	Approved OMB No	2050	0039. Expired 9-30-9
J. Generator's National Marking Address	D Q Q	10	1 law.		an by regeral
Veterans Administration Medical Center 4150 Clement Street	oment	Umber			
San Francisco, CA 94121 Generator's Phone (415) 221-4810			A XIVE X		
5. Transporter 1 Company Name 6. US EPA 10 Numb	9	Ç. Sta	te Transporter's		00000000000000000000000000000000000000
North State Environmental CADBBLIBE Transporter 2 Company Name Repair Name Repai	BA K	O. Tra	naporter's Phone	415)	88 2838
North State Environmental hhbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbb	b h h	F. 100	nsporter's Phone		00-201012
Marine Shale Processors, Inc.		ジ語	(5)		
Highway 90 East Morgan City, Louisiana 70380 LADPBLOST	D 0 C	7.00	ikly's Phone sec		
11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	7 P D	STORIS	(504) 631 <u>~3</u>	14.	CONTRACTOR OF THE PARTY OF THE
G 2.	No	Type	Total Quantity	Und Wt∕Vo	NO COLONIA
Waste Poison B Liquid NOS, Poison B, UN2810	1	DF	50	Р	P030 pR P P106 P098
Waste Poison B Solid NOS, Poison B, UN2811	2	DF			Market Agent
n C.	الل		20	P	D003/D005
Waste Oxidizer NOS, Oxidizer, UN1479	1	DF	10	P	D0027 pR
d Hazardous Waste Solid NOS, ORM-E, NA9189	$ \frac{1}{1}$ $\frac{1}{1}$	D F	1111	P	CADINE OF
			10		ED003 R
J. Additional Descriptions for Materials Listed Above. Lab. packs II See rattached containes of Marks 1 e		K. Han	ding Codes for Wa	ISIOS LIS	ed Above
MSP approval; code, NSTE/VADM/8809531/I.p					
A: 1x30ga1/3B	14. 15.6.14		X 1 1 1 2 3 3 3 3 3		
15 Special Handling Instructions and Additional Information			and the state of the	eros,	WASHINGTON TO
Use gloves, goggles, and respirator if drums are o	pened.				
16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully proper shipping name and are classified, packed, marked, and labeled, and are in all respects in properties of the	and accura	lely des	scribed above by		
If I am a targe quantity generator, I certify that I have a morram in place to reduce the influence of					
economically practicable and that I have selected the practicable method of treatment, storage, or displaying threating the analysis of the destination of the destin					
Printed/Typed Name Signature	\ .		<i>i</i>		Month Day Year
1 17. Transporter 1 Acknowledgement of Receipt of Materials	ω_{\cdot}	$\frac{v_{\parallel}u}{\parallel}$	honey	19	011171819
Printed/Typed Name Synature Synature Final Reference Synature Synature Final Reference Synature Synature Final Reference Synature Final Reference Synature Synature Final Reference Synature F)			Month Day Year
O 18 Transporter 2 Acknowledgement of Receipt of Materials	1/10			K	2/1/17/819
T Printed/Typed Name Signature		\geq			Aonth Day Year
John E. Bunner Solin E	- . K	u	nne	_	21 /21/89
19 Discrepancy Indication Space	حسب	·			
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20 Facility Owner or Operator: Certification of receipt of hazardous materials covered by this m	nandest ex	cept as	noted in Itsm	19.	
Prymed/Typed Name (ni / Lecnard Signature / Mili	Sil				A/1261Kg
PREVIOUS EDITION IS OBSOLETE ESt Form 6700-22 (Rev. 9/60) Original-DEO. (1)-Generator's 2nd. Yellow-Disposer, Pint-To-	ranspælle.	. Gn1d	I-Generator 1st	DEO 1	FORM HIM-3 (POVED)

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MARINE SHALE PROCESSORS, INC.

MCDS Document #	SALES (504)	1403-3310	MSP CODE:	
309531 LETERALS ADMIN		les despera, published as		
309531 VETERANS ADMIN	LISTAHTION 1)	EC021988	نفير اور المور	
The state of the s	_	Bill TO: NURTH ST	ATE ENVIRON	HTMENTAL
Generalor Name MEDICAL CENT	2055	Company Control Ku	RT DREGER	tad Makadani Ciron 4 ₄
Facility Address 4150 CLEMENT	7 - T	Contanier Size: 5EE	ATTACHED CO	ONTAINER SHI
		EPA Wasie No. SEE	LITHCHED CO	NTAINER SHE
City. State. Zip SAN FRANCISCO &	CA 94181 .	Generating Process DISE	DSAL OF CUT	DATED CHEN
Technical Contact JOHN MAHONE		Common Name of Waste _	LAS PACKS	
Title INDUSTRIAL HYGIENIS		Rate of Generation UNE	TIME PIR C	MCA
Telephone NO. 1 415 1 221-4810	evr. 3070	#Quan	I I I I I I I I I I I I I I I I I I I	I HUR BUTCH BU
Tacility EPA ID # CA 936001032	8	Volume in Storage ONE	TIME IN K	MCU Subser light
化二氯甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基		Is Waste DOT Hazardous	15 12 17	
CHEMICAL COMPOSITION (No Trade N	ame)	Proper DOT Shipping Nam	SEE ATT	ACHED
(Botals must add up to 100%)	ŧ	Hazard Class IC	NO. CONTHINE	2 SHEETS
The state of the s	<u> </u>	Transportation Equipment .	TRACTUR AN	D TRAILER
SE ATTACHED CONTAIN	7EK *	PlacardingASi	LEGUIRED	
SHEETS	%			-
	×	PHYSICAL DESCRIPT	ION	
		Physical State [] U	iquid Semi-so	olid Solid
		Phases/Layering	Ini-Layer Bilayer	Multilayer
	*	Viscosity	tigh Medium	
METALS (EP Toxicily Test, mg/1)		Type of Solids 11 1 C	•	
SEE ATTACHED CONTHINEN	_ 5HEETS	Total Solids (wt. %)	•	
Arsenic (As) Silver (Ag)		8TU/lb % Ash Co	ontent % Water	(by weight)
Barrum (Ba) Copper (Cu)		Flash Point (°F)	Туре	
Cachnium (Cd) Nickel (Ni)		Specific Gravity		
Chromium (cr) t Zinc (Zn)		Boiling Foint, (*C)	Ficezing Point,	(C)
Lead (Pb)		Vapxi Pressure thim Hg	@ 24°C1	
Mercury (Hg)		pH (Avg)	(Range)	_ 10
Selenium (Se)		Total Alkalinity/Acidity (%		
INORGANICS (mg/1 or ppm)		Odu SEE AT	CACHED CON	1tainer
SEC ATTACHED CONTAIL	iez sheets	Color SHEETS		_ <u></u>
Total CN Todine			A section of	
Fire CN Asbesios	18	HAZARDOUS PROP	ERTIES	I NONE
Sulfide		Water Reactive	Reactive	Explosive
Chloride		Shock Sensitive	1 Pyrophoric	Polymerizable
Bisulfae		Radioactive	Pesticide Residual:	s Ignitable
Sulfite		Consilve	Toxic Vapor	[] Pathogen
Sulfate		Biological	1 Etiological	ا سامان و امرسی ن
Phosphate		1 1 Other SEE AT		HUELL THEE
Fluorine			A PARTICIONE	- 1
Bromine		REQUIRED PERSON	and the second s	
Chlorine		EQUIPMENT AND P	KOCEDURES:	17.016
CRGANICS (mg/1 or ppm)		NOKITHE SAG	ETY PRECA	Y LIONS
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Kleihoxychlor Mercaptans				
Totaphene 240 SEE ATTACUED	CONTOUR SO			
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		DICACC ATTACU AI	L MATERIAL SAFET	V DATA CHEFTC
Phenokics)		FLEASE ATTACH AL	S, ANALYSIS REPOI	TS HANDLING
PC6:		POCCALITICAL AD	S, ANALTSIS REPO DITIONAL HAZARI	SUPPORT
Dioxin			TA & COMMENTS.	
CERTIFICATION: I hereby certify that the ab		INTUKMATIUN, U	nin a comments.	reledge and ability to
determine, that no deliberate or willful omission	we and attached descripti	ion is complete and accura- iecoxide, and that all knows	or suspected hazards ha	ve been disclosed.
	or composition or property			
I certify that the materials jested are representati	ve of all the materials subje	ct to the contract.		

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	PACK	CONTAINER NO:			PAGE	,	_ OF	CA8360010
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		or less)		(fiber (
	TEM	MATERIAL DESCRIPTION	QUANTITY	VOLUMI:	1 .	INZNRD ISS	טאאט	EI'N WASTE
	01	BENZIDINE dihydrochbrid	1	407		MABLÉ	199	3 NRM
	02	Phenylhydrazine Nydrochloride	1	1000				NRM
	03	ETHYL BROMUAKETATE		1001				0001/000
	04	PHENOL	<u>a</u>	1 lb				U188
	05	STRYCHNINE SULFATE	1	58				P108
	06	PENTACHLOROTHIOPHONS		1000				Dool
	07	2,4-Divitropteral	1	1000				P048
	08	2,6-Dichlerophenol-	11	259				0001
	09	TRI-N-PROPY!	t	109				Door
	10	TRI-Phenylmethyl phosphowide	1	10g				\ <u>\</u> \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
Ĺ	11	P-Nstraphenol	1	105				NRM
	12	p-nitroaniline		50g				NRM
	13	thiourea	1	1000	<u> </u>			4219
	14	thiourea Hydrochlorthiazide		109				D001
	15	Ethy/ Chloro formate	/	5000				D001
	16	Hydrogen Flouride QO% Mridine 80%		1009	<u> </u>	/		D001
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PACE	COMMITTALITY NO.		. 		- OF _	
DCSC	CRIPTION: Waste Poison	B, Lieuso	NOS	UN/NA NO: _ ircle One)	281	0
	R SIZE:30	,	CONTAIN	ER TYPE:	FIBER	
, nai,	or less)		a mer (or Poly)		
ITEN NO.	The company of the contract of	QUANTITY	VOLUMI:	DOT HAZARD	מאילעט	EPA WASTE
01	 Electric Mississer and electric services. 	8		POISON B		
02	POTTASIUM FERRXYANIDE WITH TEXE AMOUNS OF HYDROGEN CYANIDE (DULL AUROSE ELEGRISHITE SOL).	<u></u>	Igal	L0120N R	2810	P030
03	Sou).					
04					- i Air a	
	SODIUM CYANIDE	/	100g	POISON B	2811	P106
05	POTTASIUM CYANIDE	/	100g	Poison B	2811	P098
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AINC	RIPTION: WOSTE FLAMM R SIZE: 5 or less)		CONTAIN	UN/NA NO: trcle One) ER TYPE: or Poly)	POL	у
ITEM NO.	MATERIAL DESCRIPTION	QUANTITY	VOLUMI:	DOT HAZARD CLASS		EPA WASTO
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NO.	MATERIAL DESCRIPTION	QUANTITY	VOLUMIT	DOT HOZORD	חאיאט	בויח שחכונ NO.
01	SODIUM AZIDE	/	10g	ORM-E	9189	P105
92	BENZOYI Chlorida		11/	ORM-E	<u> </u>	D003
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ITEM NO.	MATERIAL DESCRIPTION	QUANTITY	VOLUMI:	DOT HAZARD CLASS	UN/NA	EI'N WASTE
01	Barium Chloride	/ .	116	Poison B	280	D005
02	Barium chlorite thiophasgene	/	259	Poison B	2811	D002
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AINE	R SIZE: 5 or less)		ONTAINC	ircle One) ER TYPE: — or Poly)	POLL	/
ITEM NO.	MOTERIAL DESCRIPTION	QUANTITY	VOLUMIT	DOT HAZARD CLASS	חאלאת	EPA WASTE
01	Calcium Hydride	/	1000	Poison B	 2811	D003
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NO.	MATERIAL DESCRIPTION	QUANTITY	VOLUME	CLASS	חאאאט	EPA WASTE
01	VANADIUM PENTOXIDE		1009	OXIDIZER	1479	P120
02	PHOSPHOROUS PENTOXIDE	1	116	OXIDIZEL	1479	A
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Gal.	RIPTION: WASTE ORGANI R SIZE: 5 gal or 1056)		(Fiber i	or Poly)		型/ 素:
ITEM	MATERIAL DESCRIPTION	QUANTITY	VOLUME:	DOT HOZORD	(B) VNU	EPA WASTE
01	BEN ZOYL PEROXIDE	1	1.65	ORGANIC PEROXIDE	9187	D003
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i National Sys	<u></u>	<u></u>)		•	r Star Star Star Star Star Star Star Star
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02	Hydrazine, dihydrachloric	1	1009		Name of Visitor	W133
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Gal.	or less)	•	(Fiber d	or Poly)	,	
ITEM NO.	MATERIAL DESCRIPTION	QUANTITY	VOLUMI:	DOT HAZARD CLASS	חא/אט	EI'N WASTE
01	O.IN PERCHIPAR Acid IN Glacial Acetic Acid	/	1pt	Corrosine matrial	1760	D001/D002
os	0.33M Perchloric Acid	/	50 ml	\downarrow		D001/D002
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AINC	R SIZE: 5 or less)	· · · · · · · · · · · · · · · · · · ·	CONTAIN	ircle One) ER TYPE: — or Poly)	POL	У
ITEM NO.	MATERIAL DESCRIPTION	CUONTITY	VOLUMI	DOT HAZARD CLASS	חאיאט	EPA WASTE
01	Propionic AUD		100g	Corrosive majerial	1759	D002
02	Caprylie Acco	1	109		1759	D002
03	4,4'-DINITYO-2,2'- STUBENEDISWIND ACID	:1 -	1009		1759	D002
04	Phenylacetic Acid		1009		1759	D002
05	n-valeric Acid	/	1009		1759	D002
06	ISOVALERX ACID		100 ml		1759	D002
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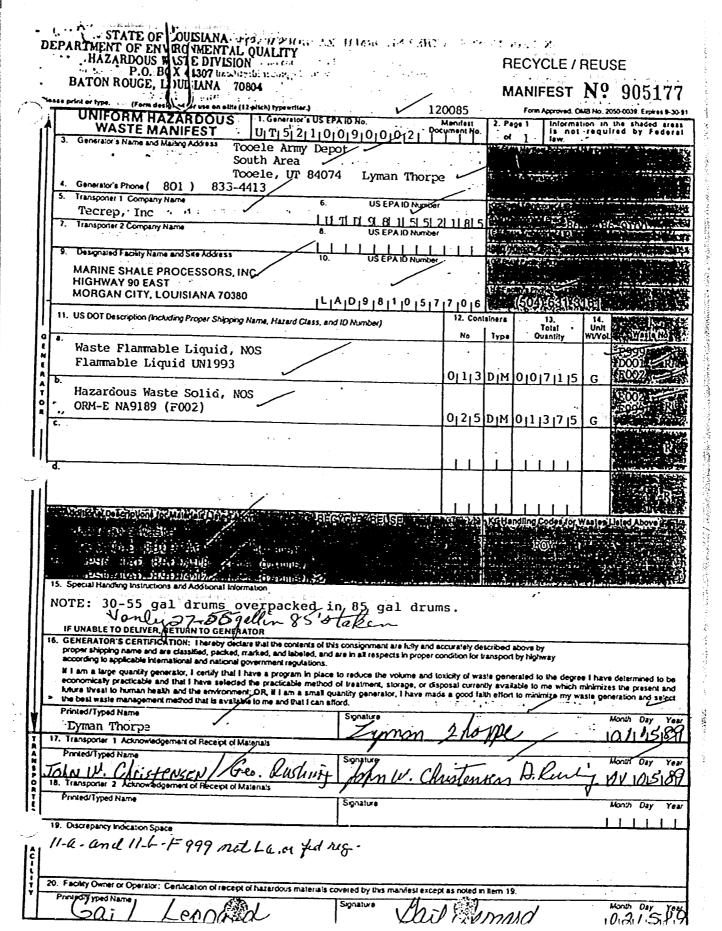
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ITEM NO.	 In the second control of a second control of the seco	QUANTITY	VOLUMI:	DOT HAZARD CLASS	(N) N/I	EI'N WASTE
01	NO. 2813 RANEY NICKEL CATALYIST POWDER.	/	11b	Flammable Soli L	1325	0001/0005/
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MCDS Document # P.O. BOX 1698 •	KENNER, LA 70063
BROOFES JAN 1 7 1988 (50	04) 465-3310 MSP CODE:
Generator Name TODELE ARMY DEPOT	Bill to: PSC ENVIRONMENTAL
Facility Address South AREA	Address: 2230 SOUTH MAIN STREET
City, State, Zip TOOPLE UT. 84074	City, State, Zip: SALT LAKE CITY, UTAH 84115
Technical Contact LYMAN Thorpe	Telephone #: (801) 486-9100
Title ENV. COOD.	Company Centact: PHIL BALCER / SLC
Telephone NO. 1801 1833 - 4413 EXT:	Contanier Size: 55 GAL DRUM
Facility EPA ID # <u>UT S21 009 000 2</u>	EPA Waste No. (FOOZ)
Andrew Control of the	Generating Process Spill CLEAN-UP VEBRIS & SLVI
CHEMICAL COMPOSITION (No Trade Name)	Common Name of Waste WASTE SLUENT SLUDGE
Itotals must add up to 100%) NEMICAL SUPPLE *	Rate of Generation ONE PER THE
	12 Na St Cal 1
	Volume in Storage 12 DC OM IN 3 GEC.
CARBON TETRACHORIDE 10 x	the section of the section of
Digethal - Methyl Phosphonate 5 2	Is Waste DOT Hazardous DALYES I INO Proper DOT Shipping Name HAZARDOUS WASTE Socio N
Mana Chloro BENJENE ! X	Harriel Class NA9189 - ID No. ORM - E
FUEL OIL (CONGEALED) 74 x	Transportation Equipment
A GARAGE CONTRACTOR OF A CONTRACTOR OF THE CONTR	Placarding
METALS (EP Toxicily Tesl, mg/l)	And the second s
Assenic (As) SUSPECTED Silver (Ag) SUSPECTED	PHYSICAL DESCRIPTION
Barium (Ba) Copper (Cu)	Physical State Liquid Semi-solid 19k1 Solid
Cadmium (Cd) Nickel (Ni)	Phases/Layering [4] Uni-Layer Bilayer Multilayer
Chromium (cr) Zinc (Zn)	Viscosity [≱] High Medium Low
Lead (Pb)	Type of Solids Organic Inorganic Mixed
Mercury (Hg)	Total Solids (wt. %) 100 Suspended Solids (wt. %) —
Selenium (Se) V	ATU/Ib 10,000 % Ach Content 95 % Water (by weight) -6
INORGANICS (mg/l or ppm)	Flash Point (°F) > 140 Type
None None None	Specific Gravity
TOTAL CN SUSPECTED Todine SUSPECTED	Boiling Point, (°C) Freezing Point, (°C)
Free CN Asbestos	Vapor Pressure (mm Hg @ 24°C)
Sulfide	pH (Avg) (Range) 0 8
Chloride	Total Alkalinity/Acidity (%)
Bisulfite	Odor SOLVENT - CARBON TETRACHLORIDE
Sulfite	ColorDARC
Sulfate	Salar Adams and Markey
Phosphate	HAZARDOUS PROPERTIES I I NONE
fluorine	1 Water Reactive 1 Reactive 1 Explosive
Bromine	1 Shock Sensitive Pyrophoric Polymerizable
Chlorine Y	[1 Radioactive 1 1 Pesticide Residuals 1 Ignitable
ORCANICS (mall as sem)	1 Centrosive 1 Toxic Vapor 1 Pathogen
ORGANICS (mg/1 or ppm)	Biological Etiological
Endrin SISPECTED Organohalide SISPECTED	1 1 Other SCLUENT CONTAMINATION
Methoxychlor Mercaptans	is in the transfer of the second of the seco
Tozaphene	REQUIRED PERSONNEL PROTECTIVE
2,40	EQUIPMENT AND PROCEDURES: This MATERIAL IS IN DRUMS THAT ORIGINALLY CONTAINE
2,4,5-T Phenol(ics)	THE LIQUID FROM MCDS # 8809746.
IN Bi	IT WAS TRANSFERED TO NON LEAKING DEUMS
Dioxin	This Merenias is A Sicio W/No Liouis
TOC	PLEASE ATTACH ALL MATERIAL SAFETY DATA SHEETS, LOGISTIC
	SKETCHES, ANALYSIS REPORTS, HANDLING PRECAUTIONS, ADDI-
	TIONAL HAZARD SUPPORT INFORMATION, DATA & COMMENTS.
CERTIFICATION: I hereby certify that the about and attached days	iption is complete and accurate to the best of my knowledge and ability to
	verties exists, and that all known or suspected hazards have been disclosed.
I certify that the materials tested are representative of all the materials su	
1 0 00	Limen VIThorp
DATE 1-9-89 GENERATOR'S SIGNATUR	

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Generation Name TOGELE ARCHY VEPOT Tacility Address SOUTH ARCEN (Ny, State, 20) Tog. Co.E., UT. 8497V. Technical Contact LYMAN THACKE 1818	3800417 JAN 1,7 1988 (ES (504)	
Freiting Address SOUTH ACLES	TOOKIE ARMY DEPOT	The state of the s
CHY, State, 219 LOCKE, UT. 8407V Technical Contact Lymbol Market Lend Contact Lymbol Market Lend Contact Len	S 1 1 2 - 1	
TECHNICAL CONTROL Title PAON NO. (201 1 833 - MYC) EXT. TECHNICAL COMPOSITION (No trade Name) TOURISH PAID V UT 52 L 00 9 000 2 CHEMICAL COMPOSITION (No trade Name) TOURISH PAID V UT 52 L 00 9 000 2 CHEMICAL COMPOSITION (No trade Name) TOURISH PAID V UT 52 L 00 9 000 2 CHEMICAL COMPOSITION (No trade Name) TOURISH PAID V UT 52 L 00 9 000 2 CHEMICAL COMPOSITION (No trade Name) TOURISH PAID V UT 52 L 00 9 000 2 CHEMICAL COMPOSITION (No trade Name) TOURISH PAID V UT 52 L 00 9 000 2 CHEMICAL COMPOSITION (No trade Name) TOURISH PAID V UT 52 L 00 9 000 2 CHEMICAL COMPOSITION (No trade Name) TOURISH PAID V UT 52 L 00 9 000 2 TOURISH PAID V UT 52 L 000 2 TOURISH PAID V UT 52 L 000 2 TOURISH PAID V UT 52 L 000 2 TOURISH PAID V UT 52 L 000 2 TOURISH PAID V UT 52 L 000 2 TOURISH PAID V UT 52 L 000 2 TOURISH PAID V UT 52 L 000 2 TOURISH PAID V UT 52 L 000 2 TOURISH PAID V UT 52 L 000 2 TOURISH PAID V UT 52 L 000 2 TOURISH PAID V UT 52 L 000 2 TOURISH PAID V UT 52 L 000 2 TOURISH PAID V UT 52 L 000 2 TOURISH PAID V UT 52 L 000 2 TOURISH PAID V UT 52 L 000 2 TOURISH	The state of the s	
Title O. J. Coole C. J. Coole		City, State, Zip: SABI DAKE CITY, OTAH 04113
Note Note		
Selfing PAID UTS2 DO 9 020 2		Company Cintact: FILL BALCER
CHEMICAL COMPOSITION (No trade Name) (Totals must add up to 100%) ALT THE MATERIAL CONSIST 100% OF HOSES (MASTIC) TRAPER X TYVECK SUITS, LOBGER GLOUSS & ARSOR RAAD SAUSAGE SHAPPED ** LADS.** MATERIAL IS CONTRAINMENTED ** ** ** ** ** ** ** ** **		
CHEMICAL COMPOSITION (No tade Name) Totals must add ups 100%) ALC TIME MATERICAL CONSIST 100% OF AIRSES (PLASTIC) PAPER TYPECK SUITS, PAPER TYPECK SUITS, WORKER GLOUZY MESOR RANK SAUSAGE SHAPPED & MATERICAL IS CONTAN INATED TOTAL CONTENT OF THE STORE SHAPPED & MATERICAL IS CONTAN INATED TOTAL CONTENT OF THE STORE SHAPPED & MATERICAL IS CONTAN INATED TOTAL CONTENT OF THE STORE SHAPPED & MATERICAL IS CONTAN INATED TOTAL CONTENT OF THE STORE SHAPPED & MATERICAL IS CONTAN INATED TOTAL CONTENT OF THE STORE SHAPPED & MATERICAL IS CONTAN INATED TOTAL CONTENT OF THE STORE SHAPPED & MATERICAL IS CONTAN INATED TOTAL CONTENT OF THE STORE SHAPPED & MATERICAL IS CONTAN INATED TOTAL CONTENT OF THE STORE SHAPPED & MATERICAL IS CONTAN INATED TOTAL CONTENT OF THE STORE SHAPPED & MAN AND INATED SHAPPED & MAN AND INATED SHAPPED & MATERICAL IS CONTAN INATED TOTAL CONTENT OF THE STORE SHAPPED & MATERICAL IS CONTAN INATED TOTAL CONTENT OF THE STORE SHAPPED & MATERICAL IS CONTAN INATED TOTAL CONTENT OF THE STORE SHAPPED & MATERICAL IS CONTAN INATED TOTAL CONTENT OF THE STORE SHAPPED & MATERICAL IS CONTAN INATED TOTAL CONTENT OF THE STORE SHAPPED & MATERICAL IS CONTAN INATED TOTAL CONTANT OF THE STORE SHAPPED & MATERICAL IS CONTAN INATED TOTAL CONTANT OF THE STORE SHAPPED & MATERICAL IS CONTANT INATED TOTAL CONTANT OF THE STORE SHAPPED & MATERICAL IS CONTANT OF THE STORE SHAPPED & MATERICAL IS CONTANT OF THE STORE SHAPPED & MATERICAL IS CONTANT OF THE STORE SHAPPED & MATERICAL IS CONTANT OF THE STORE SHAPPED & MATERICAL IS CONTANT OF THE STORE SHAPPED & MATERICAL IS CONTANT OF THE STORE SHAPPED & MATERICAL IS CONTANT OF THE STORE SHAPPED & MATERICAL IS CONTANT OF THE STORE SHAPPED & MATERICAL IS CONTANT OF THE STORE SHAPPED & MATERICAL IS CONTANT OF THE STORE SHAPPED & MATERICAL IS CONTANT OF THE STORE SHAPPED & MATERICAL IS CONTANT OF THE STORE SHAPPED & MATERICAL IS CONTANT OF THE STORE SHAPPED & MATERICAL IS CONTANT OF THE STORE SHAPPED & MATERICAL IS CONTANT OF THE STORE SHA	Facility EPA ID 7 OT 3 21 OU 1 000 2	
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OC LIASES (LASTIC) PAPER TYVECK SUITS LOBERT GLOUS, MASON RANGE SHAPPED K ARSON RANGE SHAPPED K ARTHUR RANGE SHAPPED K WARTER SHAPPED K WA	NU The MATERIAL COALS OF 100 and	Rate of Generation ONE PER TIME
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Total Solids (M. %) OO Suspended Solids (M. %) CO		
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INORGANICS (mg/1 or ppm) Ilash Point (f) Z140 Type	Mercury (Hg)	
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Total Alkalinity/Acidity (%) Bisulfine Odor None Color Co	Free CN Ashesios	Vapur Pressure (mm Hg @ 24°C)
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HAZARDOUS MOPERTIES NONE Phosphate Phosphate Fluorine Fluorine Fluorine Fluorine Waler Reactive Reactive Explosive Shuck Sensitive Pyrophonic Polymerizable Radioactive Pestickle Residuals	Bisulfite	Odor Ne√E
Phosphate HAZARDOUS PLOPERTIES	Sulfite	Color VARIED
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CERTIFICATION: I hereby certify that the above and attached description is complete and accurate to the best of my knowledge and ability to determine, that no deliberate or willful omission of composition or properties exists, and that all known or suspected hazards have been disclosed.	determine, that no deliberate or willful contents of composition or consort	on is complicin and accurate to the best of my knowledge and ability to less wists, and that all known or suspected hazards have been disclosed.
Certify that the materials tested are representative of all the materials subject to the context.	I certify that the materials tested are representative of all the materials subjective	et to the contract
Q Viellande		O NEMADO
DATE 1-9-89 GENERATOR'S SIGNATURE: Tymon Work 9	DATE 1-9-87 GENERATOR'S SIGNATURE.	Lyman Wow T

MAJERIALS CHARACTERIZATION DATA SHEET

1-9-89

Marine Shale 110 James Dr. West Suite 120 St. Rose, La. 70087

Attn: Liz Harney

Dear Liz.,

Please change our Profile #8900417 to show the BTU/LB to be

4-5000 and the ash content to be 30%.

Thank you

Lyman Thorpe Env.Coordinator

Tooele Army Depot South Area/CAMDS Tooele ,Utah 84074 NOTICE: if the film image is less clear than this notice, it is due to the quality of the document being filmed

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8309746 MARINE SHALE F	ROCESSORS, INC.
MAIFRIAIS/HADA/TE	RIZATION DATA SHEET
MCDS Document # DC 01 9 1000 QOX 1698 •	KENNER, LA 70063
DEC12 1988 OX 1698 · SALES (504	1) 465-3310 MSP CODE:
Generator Name TOOKLE ARMY DEPOT	BILL TO: PSC ENVIRONMENTAL
Facility Address South For .	
City, State, Zip TOOELE, UT. 84074	Address: 6348 Guinn DR. City, State, Zip: BATON & ROUGE, LA
Technical Contact 1 YMAN Thorfe	
Title ENV. COORD,	Telephone #: (SO4) 291-2765 Company Contact: Philip BALCER /SLC
Telephone NO. (601) 833-4413 EXT:	Container Size: 55 G ac Dr
Facility EPA ID # UT 5210090002	EPA Waste No. 2001 (2211) (1226)
The contact contact of the contact o	Generating Process OUT OF DATE Chericals
CHEMICAL COMPOSITION (No Trade Name)	Common Name of Waste WASTE SOCIENT MIXTURE
(Totals must add up to 100%)	Rate of Generation PER TIME
CARBON TETRACHLORIPE 5 %	Quani (Units) (Time Interval)
III TRICKLORDETHANE 29 %	Volume in Storage 27 DRUMSIN 556AC.
DIMETRYL - METHYLPhoFPhonATE %	(Quani (Units) (Container Size and Type)
Mayor 1 - 20 %	Is Waste DOT Hazardous AY! YES I I NO
MONO CHLORO BENZENE 10 %	Proper DOT Shipping Name HAZARDOUS (UASTELIQUID NO
26 %	Hazard Class CRM-E ID No. NAG 189
- 1 - 1 - 1 - 1 - 2 - 2 - 2 - 2 - 2 - 2	Transportation Equipment Deum S
METALS (EP Toxicity Test, mg/1)	Placarding
Arsenic (As) None Suspected Silver (Ag) None Suspected	PHYSICAL DESCRIPTION
Barium (Ba) Copper (Cu)	
Cadmium (Cd) Nickel (Ni)	Standard Francisco
Chromium (cr) Zinc (Zn)	4
Lead (Pb)	Viscosity Medium Now Type of Solids Organic Inorganic Mixed
Mercury (Hg)	Total Solids (wt. %) 2 Suspended Solids (wt. %)
Selenium (Se)	BTU/lb % Ash Content % Water (by weight)
INORGANICS (mg/1 or ppm)	Flash Point (°F) Type
	Specific Gravity
TOULEN NOW SUSPECTED LOGINE MONE SUSPECTED	Boiling Point, (*C) N/A Freezing Point, (*C) N/A
Free CN Asbestos	Vapor Pressure (mm Hg @ 24°C) N/A
Sulfide	pH (Avg) 7 (Range) 6 to 8
Chloride Bisulfite	Total Alkalinity/Acidity (%)
Sulfite	Odor CARBON TETRACHLERIDE
Sulfate	Color DARK
Phosphate	HAZARDONG PROPERTY
Fluorine	HAZARDOUS PROPERTIES 1 NONE
Bromine	Water Reactive Reactive Explosive
Chlorine	Shock Sensitive Pyrophoric Polymerizable
	The Ignition
ORGANICS (mg/1 or ppm)	[] Corrosive [] Toxic Vapor [] Pathogen [] Biological [] Etiological
Endrin NONE SUSPECTEDORGANOHAlide NOU SUSPECTED	Other
Methoxychlor Mercaptans	Note that the second of the state of the second of the second
Toxaphene	REQUIRED PERSONNEL PROTECTIVE
2, 4·D	EQUIPMENT AND PROCEDURES:
2,4,5-T	
Phenol(ics)	
PCBs	
Dioxin	
TOC	PLEASE ATTACH ALL MATERIAL SAFETY DATA SHEETS, LOGISTIC
	SKETCHES, ANALYSIS REPORTS, HANDLING PRECAUTIONS, ADDI- TIONAL HAZARD SUPPORT INFORMATION, DATA & COMMENTS.
CERTIFICATION: I hereby certify that the above and attached description	n is complete and accurate to the best of my knowledge and ability to
determine, that no deliberate or willful omission of composition or properties	s exists, and that all known or suspected hazards have been disclosed
I certify that the materials tested are representative of all the materials subject	to the contract.

7 Dec 88

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	ALE PROCESSORS, INC. BASING
MATERIALS CHARAC	TERIZATION DATA SHEET
A COS DOCUMENTA P.O. BOX 1698	• KENNER, LA 700619746
Rev #1	(504) 465-3310 MSP CODE:
Generator Name TOOELE HRMY KAOT	Bill To: PSC ENVIRONMENTAL
Facility Address SOUTH AREA	Address: 6348 QUINN DRIVE
City, State, Zip TOOELE, UT. 8674	City, State, Zip: BATON ROUGE, LA 70817
Technical Contact LYMAN TheRPE	Telephone #: (801) 486-9100
TIME ENV. GORDINATER	Company Contact: PHIL BALCER / SLC
Telephone NO. (801) 833-4413 EXT:	Contanier Size: 55 GAL METAL DR.
Facility EPA 10 # UT 5 210090002	EPA Waste No. (DOOI) FOOZ)
And the second s	Generating Process OUT OF DATE CHEMICALS
CHEMICAL COMPOSITION (No Trade Name)	Common Name of Waste WASTE SOLVENT MIXTURE
(Totals must add up to 100%)	Rate of Generation ONE PER TIME
CARBON TETRACHLORIDE 10 &	(Cuan) (Unit) (Imp Internal)
TIT TRICHLORDETHANE 10 x	Volume in Storage 27 120M5 IN 55GAL
DIMETHYL METHYLPHOSPHONATE 5 x	Chan then Kontanto are and types
MONO CHLOROBENZENE 1 %	Is Waste DOT Hazardous 1241 YES 1 1 NO
fort Oic 74 x	Proper DOI Shipping Name WASTE FLAMMABLE LIQUID NOS
	HAVENICUS UN1993-10 NO. FLAMMABLE LIQUID
*	Transportation Equipment TRUCK
METALS (EP Toxicity Test, mg/1)	Placarding FLANNABLE
Arsenic (As) Nove Suspected Silver (Ag) No NE SUSPECTED	PHYSICAL DESCRIPTION
Barium (Ba) Copper (Cu)	Physical State + Liquid Semi-solid Solid
Cadmium (Cd) Nickel (Ni)	Phases/Layering PM Uni-Layer Bilayer Multilayer
Chromium (cr) Zinc (Zn)	Viscosity [] High] Medium + 1 Low
Lead (Pb)	Type of Solids [] Organic [] Inorganic [] Mixed
Mercury (Hg)	Total Solids (wt. %) 2 Suspended Solids (wt. %) 0
Selenium (Se)	BTU/Ib 12,900 % Ash Content 4 % Water (by weight)
INORGANICS (mg/1 or ppm)	Flash Point (°F) 34 Type
	Specific Gravity, 99
TOURT CN NOWE SUSPECTED LOGINE NEW SUSPECTED	Boiling Point, (°C) Freezing Point, (°C)
Free CN Asbestos	Vapor Pressure (mm Hg @ 24°C)
Sulfide	pH (Avg) (Range) 6 to 8
Chloride	Total Alkalinity/Acidity (%)
Bisulfite	Odor CARBON TETRACHLORIDE
Sulfite	Color DARK
e van	

HAZARDOUS PROPERTIES

| | Water Reactive

1 | 1 Shock Sensitive

| | Radioactive

1 | Corrosive

1 | Biological

1 1 Other _

Phosphate Fluorine Bromine Chlorine ORGANICS (mg/1 or ppm) Endrin NOWE SUSPECTED Organuhalide WONE SUSPECTED Methoxychlor Mercaptans Toxaphene 2, 4-D 2.4,5-T Phenol(ics) PC8s Dioxin TOC

REQUIRED PERSONNEL PROTECTIVE **EQUIPMENT AND PROCEDURES:**

1 1 Pyrooboric

1 | Toxic Vapor

1 | Etiological

| | Pesticide Residuals

I I NONE

| | Explosive

ha Ignitable [| Pathogen

1 | Polymerizable

PLEASE ATTACH ALL MATERIAL SAFETY DATA SHEETS, LOGISTIC SKETCHES, ANALYSIS REPORTS, HANDLING PRECAUTIONS, ADDITIONAL HAZARD SUPPORT INFORMATION, DATA & COMMENTS.

CERTIFICATION: 1 hereby certify that the above and attached description is complete and accurate to the best of my knowledge and ability to determine, that no deliberate or willful omission of composition or properties exists, and that all known or suspected hazards have been disclosed. I certify that the materials tested are representative of all the materials subject to the contract.

DATE 12-29-88

Sulfate

MSP FORM 1848 (REV. FEB/88)

ENVIRONMENTAL MANAGEMENT, INC.

2230 South Main Street, Salt Lake City, Utah 84115, 801-486-9100

DATE: 12-30-88	
PLEASE DELIVER THE FOLLOWING PAGE(S) TO:	
NAME: LIZ HARNEY	
FIRM: MSP	
FAX NUMBER:	
FROM: PSC/TECREP SLC	
COMMENTS: HERE ARE THE REVISED BYU(2) AND	DRIGINALS
TOOLLE ARMY DEPOT (1) PROFICES. I WOULD LIKE	ORIGINAL C WILL BE IN REGULAR
TO PICK UP THIS MATERIAL NEXT WEEK FOR	MAIL TODAY
A DELIVERT TO YOU FOLKS IN (2) WEEKS.	- P
PLEASE ADVISE ASAP OF APPROVAL STATUS	
TOTAL NUMBER OF PAGES: 5 + THIS COVER LETTER	773

TOTAL NUMBER OF PAGES: 5 + THIS COVER LETTER

IF YOU DO NOT RECEIVE ALL THE PAGE(S), PLEASE CALL US AS

SOON AS POSSIBLE.

PARTY SENDING: Philbalcer TELEPHONE: (801)486-9100

FAX NUMBER: (801)486-9115

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STATE OF LOUISIANA PARAMETER AND THE PROPERTY OF THE PROPERTY DEPARTMENT OF ENURONMENTAL QUALITY

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THE DEPARTMENT OF THE MANIFEST Nº 902941 UNIFORM HAZARDOUS

UNIFORM HAZARDOUS

I. Generator's US EPAID No.

WASTE MANIFEST

Generator's Name and Making Addresss Information in the shaded areas is inoth required by Federal law. USDA APHIS
4125 EAST BROADWAY
PHOENIX, ARIZONA 85040
Generator's Phone (602)621-4828 Transporter 1 Company Name HAZCHEM ENVIRONMENTAL SERVICES

7. Transporter 2 Company Name
CHEMICAL DISPOSAL (CTI)

9. Designated Facility Name and Site Address | A| Z| D| 9| 8| 2|4|8 | 3|2 | 2|5 8 US EPAID NUMBER | A| Z| T|0| 5| 0|0|1 | 0|0| 0|8 MARINE SHALE PROCESSORS, INC. HIGHWAY 90 EAST MORGAN CITY, LOUISIANA 70380 LAD 9 8 1 10 5 7 7 7 0 6 11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number) No. METHYL BROMIDE, LIQUID POISON B, UN-1062 0 | 0 | 1 | C | F | 0 | 0 | 0 | 0 | 5 N/A e dan sakirala Kabara Sto fall in region to the second N/A Add to the State of the WEAR: APPROPRIATE PROTECTIVE; CLOTHING; GLOVES; EYE WEAR; RESPIRATORY PROTECTION; ETC. LAND. DISPOSAL RESTRICTION INFORMATION ATTACHED FUNDABLE TO DELIVER, RETURN TO GENERATOR 16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am's large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which have threat to human health and the environment; OR, If I am a small quantity generator, I have made a good faith effort to minimize my with the best waste management method that is available to me and that I capation; groups and additionable of the printed/Typed Name

Printed/Typed Name

Signature

Signature

All Lang Methods (1997) 10 | 1 | 2 | 3 | 8 | 9 Month Day Printed/Typed Name Year [0] 1]2[3] 8]9 20. Facility Owner or Operator: Certification of Solid of hazardous materials covered by this manifest except purified in Item 19.

Application of the control of the contr CHILIT. OF IN Tanadan Paid Month Day YES

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8900451 JAN 1	1988165-3310 MSP CODE:
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ALZS E. BROADWAY	BILL TO HAZ HEM ENVIRONMENTIAL SERVICES, INC.
State 70 PHOENIX AZ 85040	City, State, Zip: TUCSYN 1. 142 85714
med Contact FRED STEWART	Telephone #: 602-741-0100
FACILITY DIRECTOR	
HUNGE ST. 602 . 621-4828 IN 14A	Company Contact: TOHN GUNDLACH
A HAID . AZOIZO090055	Container Size: 5-651-POLY CONTRAINER WARSORD
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EMICAL COMPOSITION (No Trade Name)	Generating Process SOIL FUMICATION
Is must add up to IMP at	Rate of Constation 38 204 PR DNE TIME
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B GLASS AMAULS CONTAIN	Volume in Storage NA IN NA
NG ZOU METHYL GROMIDE	them the straight the straight the straight to
ACKAGED IN A PLASTIC BAG 100 -	
	NVaste DOI Hazardon (X) 115 (1 NO)
	Proper DOI Shipping Name METHYL BROMIDE, LIQUIL Hazard Class AUSON BID No. UN 1062
	Transportation Equipment FLATISED TRUCK
and officially and formula particles of the	Placarding POISON
ALS (EP loxicity lest, mg/1)	-
1. (No MS) Sherry MS !	PHYSICAL DESCRIPTION
midtar CoppertCob	
mani Cdi Nickel (No	
nam an Zm, iZm	PhaseAlayering LM Uni-Layer 1 Bilayer 1 Multilayer
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avel by	Type of Solids Organic I Inorganic Mixed
ann eye	Total Solids (wt. %) O Suspended Solids (wt. %) O
All the state of t	BTU/lh 5000 = Ash Content 50 = Water the weight) 0
RGANICS (mg/1 or ppm)	Flash Point (*1) NONE Type NA
NS 1 testine NS 1	Specific Gravity 107
	Builing Point, (*C) 3.6 Treezing Point, (*C) - 94°
Adeston MS (Vapor Pressure Intri Fig (ii) 24°C) 1970 mm
de	pH (Avg) NA (Range) NA to NA
	Total Alkalinity/Acidity (**)
11.	Oxfor _CHLOROFORM LIKE
	Color_COLDRUESS
	Company of the state of the sta
hate	HAZARDOUS PROPERTIES 1 I NONE
D40 000	Water Reactive Reactive
* 840,000	1 Shock Sensitive Pyrophoric Polymerizable
- <u>NS</u>	1 1 Rodioactive
ANUCC .	1 Corrosive DQ foxic Vapor Pathogen
ANICS (mg/1 or ppm)	1 1 Biological 1 1 Etiological
	1 Other
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H-1310	REQUIRED PERSONNEL PROTECTIVE
	EQUIPMENT AND PROCEDURES: WEAR
	APPROPRIATE SAFETY EQUIPMENT
HA.	INLLUDING TYVEK SAFETY GOGGLSFAGE
	SHIELD GLOVES AND RESPIRATOR
	Suren Character Hill Metalling
130,000	DIFACE ATTACLIAND AND APPROVED THE PROPERTY OF
	PLEASE ATTACH ALL MATERIAL SAFETY DATA SHEETS, LOGISTIC SKETCHES, ANALYSIS REPORTS, HANDLING PRECAUTIONS, ADDI-
	TIONAL HAZAKI) SUPPORT INFORMATION, DATA & COMMENTS.
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BATON R. UG.; LOUISIANA 70804 Properties and the parties and t	la lumber nervien.	# 1 % 1 %.	MANIFEST	NTO OOIAA
WASTE MANIFEST OF THE WITCH THE WITC		lenifest 2	Form Approved, Okt. Page 1 Information of Contact Is not the Island	on in the shaded areas
U.S. COast Guard- Support Center Building 902 Governors Taland N		<i></i> ;	garden anderson en Ostalis Successives	
4. Generator's Phone (212)668-3417 5. Transporter 1 Company Name Applied Technology Trans. Inc. N I. 7. Transporter 2 Company Name C	US EPA ID Number	. (0	SAME.	
9. Designated Facility Name and Site Address 10.	US EPA ID Number US EPA ID Number			
MARINE SHALE PROCESSORS; INC. 11.10.10.10.10.10.10.10.10.10.10.10.10.1		T.	The state of the	(2)
11. US DOT Description (Including Proper Shipping Name, Hazard Class, and	A D 9 8 1 1 0 5 7	12. Contains	ra 13. Total	14. (F. S. O.). Unit
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IF UNABLE TO DELIVER, RETURN TO GENERATOR 18. GENERATOR'S CERTIFICATION: I hereby declare that the contents of the proper shipping name and are despited, packed, marked, and labeled, and according to applicable triemational and national government regulations.	are in all respects in proper co	ndition for trans	sport by highway	
8.1 am a large quantity generator, I certify that I have a program in place economically practicable and that I have selected the practicable method future threat to human health and the environment; OR, if I am a small or the best waste management method that is available to me and post I can at	to reduce the volume and to: of treatment, storage; or disp	xicity of waste losal currently a good faith	ellort to minimize my wa	a. I have determined to be ninimizes the present and iste generation and select
Printed Typed Name & Williams & CR. 1 CK (137.1. 011)	Signature Signature	1. A.L.	int Ji	27. 1007 80389
Printed Typed Name WILLIAM HAROROVE 18. Transporter 2 Acknowledgement of Receipt of Materials	Willian	n Aa	ranque	Month Day Year 101105189
Printed/Typed Name	Signature		0	Month Day Year
19. Discrepancy Indication Space				
Facility Owner or Operator: Certification of receipt of hazardous materials of		as noted in the	m 19,	
EPA Form \$700-22 (Petr. 918) Original-DEO! Green-Generator's 2nd. Yellow-D.	Signature Clary	AT Obnerator I	si jolel	Month Day Year DI D 5 8 DEO FORM HIK 3 (R 578)

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MARINE SHALE PROCESSORS, INC. MATERIALS CHARACTERIZATION DATA SHEET MCDs _ cument # SALES (504) 465-3310 MSP CODE: NOV 231988 enerator Name US COAST GUARD Support Centil 16 Bill to Aptec Inc P.O.Box 1726 Toms River Company Contact: Joseph Birmingham Contactive Size SS gallow IPA Wade No _ DOST Con. State. Zop Governors Is lund NY 10064 Technical Contact CWO John Criuc Title CWO Common Name of Waste Waste Paint SSCALPER YEAR Rate of Generation 20 Telephone NO. 1 212 1 668-3417 EXT: Facility EPA ID # NY5690319889 Is Waste DOT Hazardous | | YES | | INO Wask PAin CHEMICAL COMPOSITION (No Trade Name) Proper DOT Shipping Name Wask Market Class Transportation Equipment BOX VAA Placarding Flammable (Totals must add up to 100%) ONE gallon Cans in 55 gallon 17-11 drass PAINT (XYUNE metal can PHYSICAL DESCRIPTION IXI Liquid Physical State [] Semi-solid | | Solid 1 | Bilayer | | Multi [Unitayer 1 | Multilaver Viscosity 1 1 High METALS (EP Toxicity Test, mg/1) Type of Solids IXI Organic IXI Inorganic [] Mixed Total Solids (wt. %) 25 Suspended Solids (wt. %) 15 Silver (Ag) BTU/16 10,165 % Ash Content 5 % Water (by weight) 4/ Copper (Cu) Barrum (Ba) flash Point (°F) <u>≈ 80</u> _Type _ Cadmium (Cd) Nickel (Ni) Zinc (Zn) Chromium (cr) Boiling Point, (°C1 ____ Freezing Point, (°C) _ cead (Pb) Vapor Pressure (mm Hg @ 24°C) Mercury (Hg) pH (Avg) preter (Range) Selenium (Se) Total Alkalinity/Acidity (%) ____O Odor PAINT Solvent # 4 INORGANICS (mg/1 or ppm) Varies Color ____ und Total CN lodine NOW free Cti Asbestos HAZARDOUS PROPERTIES I I NONE Sulfide | | Water Reactive [] Explosive Chloride I | 1 Shock Sensitive 1 Pyrophoric | | Polymerzoble Bisulfite] Radioactive [] Pesticide Residuals [X] Ignitable Sulfine 1 1 Toxic Vapor [] Pathogen Sulfate 1 Biological Phosphate I I Other _ Fluorine Bromine REQUIRED PERSONNEL PROTECTIVE Chlorine **EQUIPMENT AND PROCEDURES:** § 5 ORGANICS (mg/1 or ppm) upl MM Endin Organuhalide _ Methoxychlor Mercaptans Toyaphene 2.4·D 2 4.5-7 Phenology PLEASE ATTACH ALL MATERIAL SAFETY DATA SHEETS, PCB₅ LOGISTIC SKETCHES, ANALYSIS REPORTS, HANDLING Dioxin PRECAUTIONS, ADDITIONAL HAZARD SUPPORT TOC INFORMATION, DATA & COMMENTS. CERTIFICATION: I hereby certify that the above and attached description is complete and accurate to the best of my knowledge and ability to determine, that no deliberate or willful omission of composition or properties exists, and that all known or suspected hazards have been disclosed I certify that the materials tested are representative of all the materials subject to the contract. DATE 11/15/189

GENERATOR'S SIGNATURE:

MSP FORM 1648 (REV. PUNE 187)

satistica (Ta





Subsidiary of American Technological Industries, Inc.

25 South Shore Drive P.O. Box 1726 Toms River, NJ 08754-0597 (201) 255-5900

November 16, 1988

Ms. Tammie Matanic Marine Shale Processors, Inc. P.O. Box 1698 Kenner, LA 70063

Dear Tammie:

Enclosed please find generator waste analysis form coded MSP-68 for waste generated by U. S. Coast Guard Support Center, Governors Island, NY.

Please review this data and inform me if this material will be acceptable for incineration at Marine Shale.

If you have any questions, please do not hesitate to call.

Very truly yours, APTEC, INC.

seph Birmingham

Technical Sales and Service Director

JB:ds Enclosures

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COMPLETTELE LIQUID MASSES NA1263 enie ersty 10,1 149740 aktoriaty i 211 25 1507 ::t, , COMPLETELE LIQUIDO NASION NA 1263 WASTE FLAMABLE SOLID NOS: (ROO2, ROO3; ROO5) 19 13364 - 13).
FLAMABLE SOLID UNI325 or country of 0 |0| 3 DM |0| 1 |8 0 |0 |P े द्वार श्रीविद्धार शिक्ष HAZARDOUS WASTE SOLID, MOS (CA RESULATED) Dus - 4 14 0 7 2 0 0 D | 0 | 3 D M | 0 | 1 | 5 0 | 10 | Per 15. Special Handling Instructions and Additional Information of the Michigan State of the State of Traffic Tra Planton of the Common of the South of the So 18. [raneporter-2] Acknowledgement of Receipt of Materials used and Tucture and State (State 18. Discrepancy Indication Space

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	•	MATERIAL			TERIZATION DATA SHEET	
	MCDS Document #	MINTERNA			04) 465-3310	
		- NOV.	Transmitten Augus	, (50	MSP CODE:	
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	8809127E17	ORO	· C		The state of the s	
11	Ceneralor Name MAIZ	NE CORPS HITE	witate s	#6	BILL TO: ENVIRONMENTAL DYNAMICS IN	ار
• -	Facility Address _DIOA	<u></u>			Contract: JEFF & Bowm DN	_
	617	oro ((ICA)		.:	Container Size: 20 gol , 30 gol , \$5 gol over pac	<u>r</u>
		AND CD 97	27072700		(PA Wasie No. NO.	
	Cats, State, Zap	5 6 1 6 10			Generating Process OF SOSC	
	Technical Contact Shi	Jacobal Mad	A012		Common Name of Waste PAINT Straps (ROAD)	
	Tale ENVIRON Telephone NO. 1714	" GS Lack Ob			Rate of Generation DM PER Per Mount	
	facility EPA ID # CA	1700737	03		Volume in Storage 8 Drids IN 20, 30 00	<u></u>
	12(IIII) (LV 10 % 75-17)	TRANSPORT TO	· · · · · · · · · · · · · · · · · · ·		Is Waste DOT Hazardous X YES [_ NO]	
12	CHEMICAL COMPO	SITION (No Trade N	lame)		Proper DOT Shipping Name DOINT PAIDTSO MOTSE	40
	11 of the from state (1))%}			Hazard Class Comb ID No. NA 1263	
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	OIT SPOOT	<i>P1</i> 31		• 1	Placarding	
	Oil Boss	Ropo Strip	\$ 100 :	- •	A CONTRACTOR OF THE STATE OF TH	
	Powt	- 		. 17	PHYSICAL DESCRIPTION	
			*	:	Physical State Liquid IXI Semi-solid IXI Solid Physical State	
			<u> </u>		Viscosity Milligh Michigan 1 tox	-
13	METALS (EP Toxicity	r Test, mg/1)	•		Type of Solids IX Organic Inciganic Atoms	1
13		-	^		Total Solids (wt. %) 50-90 Suspended Solids (wt. %) 15	
	Arenic (As) O	Silver (Ag) .	<u> </u>		BIU/Ib 3000 * Ash Content 5 * Water thy weights &	
		Copper (Cu) . Nickel (Ni) .	<u> </u>		Flash Point (f) >150 Type	
	Carlossum (Cd) O	Zinc (Zn) .	5		Specific Gravity 48	
-	(codulo) 3				Builing Point, (*C) O Furring Point, (*C) O	
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	INORCANICS (Contract of			Odor Mils	
# 4	INORGANICS (mg/	or phini	10		Cutor yellow / wt	_
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	Inech Q	Asbestos .		48	HAZARDOUS PROPERTIES I NONE	
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	Bisulite (3)	 		,	1 Radioactive Pesticide Residuals	
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	Fluorine	:			- Lower Committee State Committee Co	
	Brumine 0				REQUIRED PERSONNEL PROTECTIVE	
	Chlorine 0				EQUIPMENT AND PROCEDURES:	
# 5	ORGANICS (mg/1 o	r oom)			Glares + Capples - May Control	<u></u>
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	Aseshory chlor	Organohalide _	- %			
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نهي	Dinvin	 .			PRECAUTIONS, ADDITIONAL HAZARD SUPPORT	•
•	100				INFORMATION, DATA & COMMENTS.	
					on is complete and accurate to the best of my knowledge and ability exercises, and that all known or suspected hazards have been disclinated.) 10

DEC131988



ENVIRONMENTAL DYNAMICS, INC.

1931 N. GAFFEY SUITE A • SAN PEDRO, CALIFORNIA • 90731 • (213) 833-6021

December 9. 1988

Marine Shale Processors 110 James Drive West Suite 120 St. Rose LA 70087

Attn: Liz Harney

Dear Ms. Harney:

The following Profiles have been amended as follows;

8809430 - BTU value = 8000

EPA waste code = Non regulated/State regulated
Physical state = Solid

8809425 - EPA waste codes - F002, F003, F005

8809427 - Hetals concentration

Lead = 19.0 mg/kg

Zinc = 10.0 mg/kg

Chrome = 1.5 mg/kg

Cadmium = 2.8 mg/kg

EPA waste codes = D006, D007, D008

If you require further information or clarification please let me know.

Thank ou.

Jeff R. Bownan, REA Project Manager 3130

December 13, 1988

Marine Shale Processors 110 James Drive West Suite 120 St. Rose LA 70087

Attn: Liz Harney

Dear Ms. Harney:

The following Profiles have been amended as follows;

8809430 - BTU value = 8000

EPA waste code = Non regulated/State regulated
Physical state = Solid

8808425 - EPA waste codes - F002, F003, F005

88094272- Hetals concentration

Lead = 19.0 mg/kg

Zinc = 10.0 mg/kg

Chrone = 1.5 mg/kg

Cadmium = 2.8 mg/kg

EPA waste codes = D006, D007, D008

8809774 - EPA Waste codes - F002, F003, F005
Waste contains Acetone, HEK, Methylene Chloride,
Tolune, and Xylene.
Ash = 70% - 90%
BTU = 500 - 1000

8809773 - EPA Waste codes - F002, F003, F005
Waste contains Acetone, MEK, Methylene Chloride,
Tolune, and Xylene.

If you require further information or clarification please let me know.

Thank you,

Sharon Lien ENVIRON MENTAL PROTECTION SPECIALIST

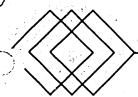
Environmental Director

El Toro Harine Corps Air Station

BTU = 6500 - 8000



DEC097955



ENVIRONMENTAL DYNAMICS, INC.

1931 N. GAFFEY SUITE A • SAN PEDRO, CALIFORNIA • 90731 • (213) 833-6021

December 5. 1988

Marine Shale Processors 110 James Drive West Suite 120 St. Rose LA 70087

Attn: Liz Harney

Dear Ms. Harney:

The following Profiles have been amended as follows;

8809430 - BTU value = 8000

EPA waste code = Non regulated/State regulated
Physical state = Solid

8809425 - EPA waste codes - F002, F003, F005

8809427 - Metals concentration
Lead = 19.0 ng/kg
Zinc = 10.0 ng/kg
Chrone = 1.5 ng/kg
Cadmium = 2.8 ng/kg

EPA waste codes = F006, F007, F008

If you require further information or clarification please let me know.

Thank you

Jeff R. Bowman, REA Project Manager





proposition (C

FEB 08 1999 UNITED STATES MARINE CORPS MARINE CORPS AIR STATION EL YORO (SANTA ANA), CALIFORNIA 92709-5001

6280 1JG FEB 2 1984

Ms. Liz Harney Marine Shale Processors, Inc. Highway 90 East Morgan City, LA 70380

Dear Ms Harney:

As requested, the following profiles are clarified for manifest #905802:

- 1. Profile No. 8809427 on line item b, EPA waste code DOO1 should be included.
- 2. Profile No. 8809428 on line c, EPA waste code F005 should be included.

If there are any questions, please contact me at (714) 726-2821.

Sincerely,

Michael W. Rehon MICHAEL W. REHOR, ENS, CEC, USN Director, Environmental Division

Copy to: Environmental Dynamics

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RECERTIFICATION OF MATERIAL CHARACTERIZATION DATA SHEET RECEIVED NOV 1 3 1989 MSP Approval Code EDY /MRN /8809427/ Instructions: A copy of the M.C.D.S. to be recertified is attached to this Recertification Form. We ask that you complete the remainder of this form and have it signed by an authorized technical contact. Return this form with any attachments to: MARINE SHALE PROCESSORS, INC. Post Office Box 1698 Kenner, LA 70063 Attention: Technical Review A. GENERAL INFORMATION Generator Name: MARINE CORPS AIR STATION EL TU Telephone: (714) 651-6606 x.0000 Facility Address: 1 J 6 2200 POCTIP A 4TWO FACILITIES SANTA ANA, CA 92709-5001 Name of Waste: PAINT STRIPE Generating Process:_ Technical Contact: Mr. SHARON LEEN MINE REHOZ DANGY HOTES Title: ENV. MCR. B. CHANGES OR ADDITIONS SINCE LAST MCDS PREPARATION Have you obtained any laboratory analysis of this waste? (If yes, attach results) Have you changed the raw materials used in the waste generating process? Have you changed the waste generating process itself? 4. Are you aware of any facts or circumstances which have, or reasonably could have, altered Are you aware of any human health effects of exposure to the waste not previously described? ges Dono 6. If you answered "yes" to questions 2, 3, 4, or 5, please provide details below: IF THERE HAVE BEEN ANY SUBSTANTIAL CHANGES, A NEW MCDS MUST BE SUBMITTED. SHIPPING INFORMATION Method of Shipment: Bulk Liquid Bulk Solid Drum (type/size) 17-11 55,30 Anticipated Volume: Gals. Cubic Yds. Other_ ■ Week Month | Per: One Time Quarter ☐ Year RECERTIFICATION I am an employee of the generator authorized to sign this Recertification. The information provided in the recertified waste profile sheet attached hereto, and the information supplied above, are complete, true and correct. Signature:

November 6, 1989 El Toro Marine Corps Air Station Job number Environmental Dynamics. Inc. has been contracted by the above named firm and is authorized to complete and sign disposal site profiles and related materials. by Manus Jutes NANCY YATES TITLE ENVIRONMENTAL PROTECTION SPECIALIST besed on my inquiries or those monvious responsible for obtaining information. ENVIRONMENTAL PROTECTION SPECIALIST

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	140000 - 1-14		ERIZATION DATA SHEET
	MCD3 Document # SALI	LS (SO	4) 465-3310 MSP CODE:
:	8809425 EI TORONOV 29:1988		(213) 833.6021
#1	Concession Name MARZINE CORPS HIR Station	#6	Bill To: ENVIRONMENTAL DYNAMICS INC Company Contact: DEFF R BOWMEN
	Cas. State. Zap Schart SHARON Lin Technical Contag. SHARON Lin)I	Container Size: 30 901, 55 90 (PA Waste No
	Telephone NO. 1714, 651-606 (X):		Rate of Generation 15 DHS PIR 90 DO 15 When the strength of t
12	CHEMICAL COMPOSITION (No Trade Name) (Itals must add up to 100%)		Is Waste DOT Shipping Name Paint Relate Material
	Latex Point 25	% %	Hazard Class Flom ID No. NAT263 Transportation Equipment Flot Baso Placarding Flommobils
	Oil Base Paint 40 Itaa Chrome Zinc 1	± 17	PHYSICAL DESCRIPTION
	MEK IS METH CHIMIDS 4	~ % %	Physical State *
13	METALS (EP Toxicity Test, mg/1) Avenic (A)) Silver (Ag)		Type of Solids IXI Organic IXI froiganic 1 Atout Total Solids (w. %) 15-85 Superided Solids (w. %) 70-90
	Barrum (Ba) Q Copper (Cu) SS Carlosum (Cd) S Nickel (Ni) S		BIU/II3200-S000 x Ash Content /5 x Water thy weight 5 Hash Point (Fr. 75-100 Type
	Christian (cr) 420 Zinc (2n) 416 Lead (Ph) 420 Alexeury (Hg) 3		Poiling Point, (°C) N/A Freezing Point, (°C) N/A Value Pressure (min Fig & 24°C) N/A
:	Selenium (Se) INORGANICS (mg/1 or ppm)		1011 (Arg) 7 (Range) 10 - 10 10121 Alkalinity/Acidity (%) No Codor Strong - Solvent
"	Total CN Q lodine	80	Color Mixeo
•	Sulfide Q Chloride	#8	HAZARDOUS PROPERTIES 1 NONE 1 Water Reactive 1 Reactive 1 Explanate 1 Polymortople
	Brothite Sulfate Sulfate		1 Radioactive 1 Pesticide Residuals XI Ignitable 1 Concolve 1 Toxic Vajger 1 Pathagen
	Plusphate Plusine Q		Biological I tridegical Other
	Chlorine OPSCANICS (1993)		REQUIRED PERSONNEL PROTECTIVE TO EQUIPMENT AND PROCEDURES: Colons, Company Services
‡ 5	ORGANICS (mg/1 or ppm) Enom Organohalide Aleihosychlor Mercapians	*	MATERIAL MAY RE SLUDGE AND NON PUMPOBLE
	Insuperior Q		
)	2.4.5-1 Phenokicsi ICBs Dinxin TOC		PLEASE ATTACH ALL MATERIAL SAFETY DATA SHEETS, LOGISTIC SKETCHES, ANALYSIS REPORTS, HANDLING PRECAUTIONS, ADDITIONAL HAZARD SUPPORT
		scription openies	INFORMATION, DATA & COMMENTS. is complete and accurate to the best of my knowledge and ability to exists, and that all known or suspected hazards have been disclosed.
	11-9-88		When an De
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MARINE SHALE PROCESSORS, INC.



DEC1 31988



ENVIRONMENTAL DYNAMICS, INC.

1931 N. GAFFEY SUITE A • SAN PEDRO, CALIFORNIA • 90731 • (213) 833-6021

December 9. 1988

Marine Shale Processors 110 James Drive West Suite 120 St. Rose LA 70087

Attn: Liz Harney

Dear Ms. Harney:

The following Profiles have been amended as follows;

8809430 - BTU value = 8000 EPA waste code = Non regulated/State regulated Physical state = Solid

8809425 - EPA waste codes - F002, F003, F005

8809427 - Metals concentration

Lead = 19.0 ng/kg

Zinc = 10.0 ng/kg

Chrone = 1.5 ng/kg

Cadmiun = 2.8 ng/kg

EPA waste codes = D006, D007, D008

If you require further information or clarification please let me know.

Jeff R. Bowman, REA Project Ranager

December 13. 1988

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Marine Shale Processors 110 James Drive West Suite 120 St. Rose LA 70087

Attn: Liz Harney

Dear Ms. Harney:

The following Profiles have been amended as follows;

8809430 - BTU value = 8000

EPA waste code = Non regulated/State regulated
Physical state = Solid

8809425, - EPA waste codes - F002, F003, F005

8809427 - Metals concentration

Lead = 19.0 mg/kg

Zinc = 10.0 mg/kg

Chrone = 1.5 mg/kg

Cadnium = 2.8 mg/kg

EPA waste codes = D006, D007, D008

8809774 - EPA Waste codes - F002, F003, F005
Waste contains Acetone, MEK, Methylene Chloride,
Tolune, and Xylene.
Ash = 70% - 90%
BTU = 500 - 1000

8809773 - EPA Waste codes - F002, F003, F005
Waste contains Acetone, MEK, Methylene Chloride,
Tolune, and Xylene.
BTU = 6500 - 8000

If you require further information or clarification please let me know.

Thank you,

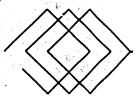
Sharon Lien ENVIRON MENTAL PROTECTION SECIALIST

Environmental Director

El Toro Harine Corps Air Station



DEC097966



ENVIRONMENTAL DYNAMICS, INC.

1931 N. GAFFEY SUITE A • SAN PEDRO, CALIFORNIA • 90731 • (213) 833-6021

December 5. 1988

Marine Shale Processors 110 James Drive West Suite 120 St. Rose LA 70087

Attn: Liz Harney

Dear Ms. Harney:

The following Profiles have been amended as follows;

8809430 - BTU value = 8000

EPA waste code = Non regulated/State regulated
Physical state = Solid

8809425 - EPA waste codes - F002, F003, F005

8809427 - Metals concentration
Lead = 19.0 ng/kg
Zinc = 10.0 ng/kg
Chrone = 1.5 ng/kg
Cadnium = 2.8 ng/kg

EPA waste codes = F006, F007, F008

If you require further information or clarification please let me know.

Thank you.

Jeff R. Bownan, REA Project Manager

RECERTIFICATION DE CEIVED NOV 1 3 1989 **MSP Approval Code** EDY /MRN /8809425/ / Instructions: A copy of the M.C.D.S. to be recertified is attached to this Recertification Form. We ask that you complete the remainder of this form and have it signed by an authorized technical contact. Return this form with any attachments to: MARINE SHALE PROCESSORS, INC. Post Office Box 1698 Kenner, LA 70063 Attention: Technical Review A. GENERAL INFORMATION Generator Name: HARINE CORPS AIR STATION EL TU Telephone: (714) 651-6606 x.0000 Facility Address: __1 J S USEPA ID: CA6170023203 CA9170090022 BLDG. 168 SANTA ANA, CA 92709-8001 + TWO Facilities Name of Waste: PAINT AND PAINT THINKERS Generating Process:_ Technical Contact: No. SHAREN LESH Mike Roller Noncy Yests Title: ENV. HER. B. CHANGES OR ADDITIONS SINCE LAST MCDS PREPARATION Are you aware of any human health effects of exposure to the waste not previously 6. If you answered "yes" to questions 2, 3, 4, or 5, please provide details below:

IF THERE HAVE BEEN ANY SUBSTANTIAL CHANGES, A NEW MCDS MUST BE SUBMITTED.

		SHIP	PING INFORM	ATION		_
Method	of Shipment: Bulk Lie	quid 🔲 Bulk S	Solid 🔀 Drum (lype/size) 17-H	55,30	85
Anticipa	ited Volume:	Gals	Cubic	Yds.	Other	-
Per:	One Time	☐ Week	Month	Quarter	☐ Year	
		Di	OFFICATIONS			·· · · · · · · · · · · · · · · · · · ·

RECERTIFICATION

I am an employee of the generator authorized to sign this Recertification. The information provided in the recertified waste profile sheet attached hereto, and the information supplied above, are complete true and correct.

Name: JEPER BOWMON	Signature:
Tille: Operations Manage	Date:11/7/85

NOTICE: If the film image is less clear than this notice, it is due to the quality of the document being filmed

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MSDOO!

El Toro Marine Corps Air Station Job number Environmental Dynamics, Inc. has been contracted by the above named firm and is authorized to complete and sion disposal site profiles and related materials. er Manus Jutes NANCY YATES ENVIRONMENTAL PROTECTION SPECIALIST Title on my inquiries or thuse individuals responsible for obtaining the

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MARINE SHALE PROCESSORS, INC.

MATERIALS CHARACTERIZATION DATA SHEET MCD3 Document # NOV 29 1988 (504) 465-3310 MSP CODE: 1809428 EI TORO (Z13) 833.6021 Concession Name MARZINE CORPS AIR Station 16 mil to ENVIRONMENTAL DYNAMICS INC Controlly Confact: SEFF R Bown DN Container Size: 2000 | 3000 | 5500 | 17-H Facility Address Bldg 368 ELTORO MCAS SONTO AND CA 97709-5001 CKAN-UP Generating Process Soil TIShnical Contact SHARON Lin SPIN CLEAN-UP THE ENVIRONMENTAL MONAGER Telephone NO. 1714 1 651-6606 [X1: Lacility (PAID . CA6170023203 Is Waste DOT Hazardous IX YIS I INCOMPENDED STREET TO SHipping Name Flammods Hazard Class Flam So ID No. UN 1325 Transportation Equipment Flat Bad Trails Placarding Flam So ID CHEMICAL COMPOSITION (No Traile Name) (Trans) most add up to 100%) speedy Dry (Absorban PHYSICAL DESCRIPTION HYD Oi Physical State | | Liquid DC Semi-solid DC Solid Phases/Layering KI Unitager 1 1 Bilayer 1 | Abililayee 1301 100 Viscosity 1 | Methom 1 Llus IXI Organic METALS (EP Toxicity Test, mg/1) DO Inciganic IXI About Total Solids (wt. %) BS-100 Suspended Solids (wt. %) Silver (Ag) BIU/lis - Soo * Ash Content 25 % Water thy weight. Arrenic (As) Copper (Cu) Barrom (Ba) flash Point (f) 75-100 Type Nickel (Ni) Carlonom (Cd) NIP Specific Gravity_ Zinc (Zn) Boiling Point, PCI N/P Freezing Point, CCL tead (fb) Vapor Pressure tom Hg @ 24°C1_NO Assecuty thigh Ø Sclenium (Se) Total Alkalipity/Acidity (%) Odor Strong So INORGANICS (mg/1 or ppm) Color Mixed Total CN lice CN Ashestos **48** HAZARDOUS PROPERTIES I I NONE Sullide | | Water Reactive I | Reactive 1 | Explosive Chloride 1 | Shock Sensitive 1 | Pyrophoric | | Polymerzobie Bisuline [] Radioactive 1 | 1 Pesticide Residuals | 🂢 Ignitable Sulfite 1 | Toroc Vapov 1 Pathygen Sullate 1 | Biological [] I trological Phosphate Fluorine Brumine REQUIRED PERSONNEL PROTECTIVE Chlorine 15 ORGANICS (mg/1 or ppm) frath Organohalide Aseihouschlo Mercaptans Invanhend 210,000 14141 240 <u>< 10,000</u> 2.4.5-1 ACETONE PLEASE ATTACH ALL MATERIAL SAFETY DATA SHEETS, Phinokiest PCB. LOGISTIC SKETCHES, ANALYSIS REPORTS, HANDLING Dinvin PRECAUTIONS, ADDITIONAL HAZARD SUPPORT 100

INFORMATION, DATA & COMMENTS.

ION: I hereby certify that the above and attached description is complete and accurate to the best of my knowledge and ability to hat no deliberate or willful omission of composition or properties exists, and that all known or suspected hazards have been disclinish

the materials tested are representative of all the materials subject to the contract. 1-15-88

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FEB 0.8 1989 INITED STATES MARINE CORPS MARINE CORPS AIR STATION EL TORO (SANTA ANA), CALIFORNIA 92709-3001

6280 1JG FEB 2 1984

Ms. Liz Harney Marine Shale Processors, Inc. Highway 90 East Morgan City, LA 70380

Dear Ms Harney:

As requested, the following profiles are clarified for manifest #905802:

- 1. Profile No. 8809427 on line item b, EPA waste code DO01 should be included.
- 2. Profile No. 8809428 on line c, EPA waste code F005 should be included.

If there are any questions, please contact me at (714) 726-2821.

Sincerely,

Michael W. Rehon MICHAEL W. REHOR, ENS, CEC, USN Director, Environmental Division

Copy to: Environmental Dynamics

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RECERTIFICATION OF MATERIAL CHARACTERIZATION DATA SHEET	MSP Approval Code
RECEIVED NOV 1 3 1989	EDY /HRM /8809428/ /
Instructions: A copy of the M.C.D.S. to be recertified is attached to this complete the remainder of this form and have it signed by Return this form with any attachments to: MARINE SHALE PROCIPOST Office Box 1698 Kenner, LA 70063 Attention: Technical Rev	y an authorized technical contact. ÉSSORS, INC.
A. GENERAL INFORMA	ITION
Generator Name: HARINE CORPS AIR STATION EL TU Facility Address: 1 J C BLDC. 368	USEPA ID: CA6170029203
SANTA ANA, CA 92709-5001	CA917009002Z Two Facilities
B. CHANGES OR ADDITIONS SINCE LAST Have you obtained any laboratory analysis of this waste? (If yes, att	T MCDS PREPARATION lach resulls)⊠ yes □ no
B. CHANGES OR ADDITIONS SINCE LAST	T MCDS PREPARATION tach results)
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B. CHANGES OR ADDITIONS SINCE LAST I. Have you obtained any laboratory analysis of this waste? (If yes, att.) I. Have you changed the raw materials used in the waste generating process itself? I. Have you changed the waste generating process itself? I. Are you aware of any facts or circumstances which have, or reasonathe physical or hazardous characteristics, or chemical composition of the physical or hazardous characteristics, or chemical composition of the physical or hazardous characteristics, or chemical composition of the physical or hazardous characteristics, or chemical composition of the physical or hazardous characteristics, or chemical composition of the physical or hazardous characteristics, or chemical composition of the physical or hazardous characteristics, or chemical composition of the physical or hazardous characteristics, or chemical composition of the physical or hazardous characteristics, or chemical composition of the physical or hazardous characteristics, or chemical composition of the physical or hazardous characteristics, or chemical composition of the physical or hazardous characteristics, or chemical composition of the physical or hazardous characteristics, or chemical composition of the physical or hazardous characteristics, or chemical composition of the physical or hazardous characteristics, or chemical composition of the physical or hazardous characteristics, or chemical composition of the physical or hazardous characteristics, or chemical composition of the physical or hazardous characteristics, or chemical composition of the physical or hazardous characteristics, or chemical composition of the physical or hazardous characteristics, or chemical composition of the physical or hazardous characteristics, or chemical composition of the physical or hazardous characteristics, or chemical composition of the physical or hazardous characteristics, or chemical composition or characteristics.	T MCDS PREPARATION

Date:

Title:_

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November El Toro Merine Corps Air Station C101-14 Job number Environmental Dynamics. Inc. has been contracted by the above named firm and is authorized to complete and zion disposal site profiles and related materials. Manay Jutes NANCY YATES TITLE ENVIRONMENTAL PROTECTION SPECIALIST or is beside information. on my inquiries or thuse individuals responsible for obtaining the ENVIRONMENTAL PROTECTION SPECIALIST

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