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U.S. DEPARTMENT OF LABOR

Form No. OSHA-20
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81108

MATERIAL SAFETY DATA SHEET

SECTION I

MANUFACTURER'S NAME: MONSANTO COMPANY
EMERGENCY TELEPHONE NO.: (314) 694-1000
ADDRESS (Number, Street, City, State, and ZIP Code): 800 North Lindbergh Boulevard, St. Louis, Missouri 63166
CHEMICAL NAME AND SYNONYMS:
TRADE NAME AND SYNONYMS: Therminol FR low temp
CHEMICAL FAMILY: chlorinated aromatic
FORMULA: Mixture

SECTION II HAZARDOUS INGREDIENTS

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		
OTHERS					

HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES	%	TLV (Units)

SECTION III PHYSICAL DATA

BOILING POINT (°F.)	760 mm 210-360°C	SPECIFIC GRAVITY (H_2O=1) (25/15.5°C)	1.440
VAPOR PRESSURE (mm Hg.)	Not Avail	PERCENT VOLATILE BY VOLUME (%)	N.A.
VAPOR DENSITY (AIR=1)	Not Avail	EVAPORATION RATE (BuAc = 1)	<1
SOLUBILITY IN WATER	20°C negligible <0.01%		
APPEARANCE AND ODOR	colorless liquid aromatic odor		

SECTION IV FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used): None
FLAMMABLE LIMITS: Lel N.A. Uel N.A.
EXTINGUISHING MEDIA: N.A.
SPECIAL FIRE FIGHTING PROCEDURES: Respiratory protection when fighting fires where exposure to vapors or gases is possible.
UNUSUAL FIRE AND EXPLOSION HAZARDS: Highly toxic gases (chlorides and chlorine) can be evolved in fires of this product.

FR - LowTemp. SECTION V HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE: Not Available.

EFFECTS OF OVEREXPOSURE: Skin irritation in the form of chloracne, systematic intoxication leads to nausea, vomiting, loss of weight, edema and abdominal pain.

EMERGENCY AND FIRST AID PROCEDURES: Remove from exposure. Remove contaminated clothing. Wash contacted area with large amounts of water and soap. Refer to physician.

SECTION VI REACTIVITY DATA

STABILITY			CONDITIONS TO AVOID
	UNSTABLE		
	STABLE	X	

INCOMPATABILITY (Materials to avoid):

HAZARDOUS DECOMPOSITION PRODUCTS: CO, CO_2, smoke, soot, chlorides and chlorine

HAZARDOUS POLYMERIZATION			CONDITIONS TO AVOID
	MAY OCCUR		
	WILL NOT OCCUR	X	

SECTION VII SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Absorb on clay, sawdust or other absorbant material. Place in drums. Bury in approved chemical landfill in accordance with local and state regulations.

WASTE DISPOSAL METHOD: Burn in an approved incinerator in accordance with local and state regulations.

SECTION VIII SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (Specify type): Bureau of Mines approved respirator for organic vapors.

VENTILATION			
	LOCAL EXHAUST: Yes - for vapors	SPECIAL	
	MECHANICAL (General)	OTHER	

PROTECTIVE GLOVES	rubber	EYE PROTECTION	chemical goggles

OTHER PROTECTIVE EQUIPMENT:

SECTION IX SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Avoid skin and eye contact. Avoid inhalatinn of vapors.

OTHER PRECAUTIONS:

While the information and recommendations set forth herein are believed to be accurate as of the date hereof, MONSANTO COMPANY MAKES NO WARRANTY WITH RESPECT THERETO AND DISCLAIMS ALL LIABILITY FROM RELIANCE THEREON.

JAG:HOH:JTG:WBP

1/26/72