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U.S. DEPARTMENT OF LABOR

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81108-259

MATERIAL SAFETY DATA SHEET

1- S.D. File  
1- R. McCutchan

| SECTION I                                                                                                       |   |                  |                                                   |                                                     |                |
|-----------------------------------------------------------------------------------------------------------------|---|------------------|---------------------------------------------------|-----------------------------------------------------|----------------|
| MANUFACTURER'S NAME<br>MONSANTO COMPANY                                                                         |   |                  | EMERGENCY TELEPHONE NO.<br>(314) 694-1000         |                                                     |                |
| ADDRESS (Number, Street, City, State, and ZIP Code)<br>800 North Lindbergh Boulevard, St. Louis, Missouri 63166 |   |                  |                                                   |                                                     |                |
| CHEMICAL NAME AND SYNONYMS                                                                                      |   |                  | TRADE NAME AND SYNONYMS<br>Therminol ER low temp. |                                                     |                |
| CHEMICAL FAMILY<br>chlorinated aromatic                                                                         |   |                  | FORMULA<br>Mixture                                |                                                     |                |
| SECTION II HAZARDOUS INGREDIENTS                                                                                |   |                  |                                                   |                                                     |                |
| PAINTS, PRESERVATIVES, & SOLVENTS                                                                               | % | TLV<br>(Units)   | ALLOYS AND METALLIC COATINGS                      | %                                                   | TLV<br>(Units) |
| PIGMENTS                                                                                                        |   |                  | BASE METAL                                        |                                                     |                |
| CATALYST                                                                                                        |   |                  | ALLOYS                                            |                                                     |                |
| VEHICLE                                                                                                         |   |                  | METALLIC COATINGS                                 |                                                     |                |
| SOLVENTS                                                                                                        |   |                  | FILLER METAL<br>PLUS COATING OR CORE FLUX         |                                                     |                |
| ADDITIVES                                                                                                       |   |                  | OTHERS                                            |                                                     |                |
| OTHERS                                                                                                          |   |                  |                                                   |                                                     |                |
| HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES                                                           |   |                  |                                                   | %                                                   | TLV<br>(Units) |
|                                                                                                                 |   |                  |                                                   |                                                     |                |
|                                                                                                                 |   |                  |                                                   |                                                     |                |
|                                                                                                                 |   |                  |                                                   |                                                     |                |
|                                                                                                                 |   |                  |                                                   |                                                     |                |
| SECTION III PHYSICAL DATA                                                                                       |   |                  |                                                   |                                                     |                |
| BOILING POINT (°F.)                                                                                             |   | 760 mm           | 210-360°C                                         | SPECIFIC GRAVITY (H <sub>2</sub> O = 1) (25/15.5°C) |                |
|                                                                                                                 |   |                  |                                                   | 1.440                                               |                |
| VAPOR PRESSURE (mm Hg.)                                                                                         |   | Not Avail        |                                                   | PERCENT VOLATILE<br>BY VOLUME (%)                   |                |
|                                                                                                                 |   |                  |                                                   | N.A.                                                |                |
| VAPOR DENSITY (AIR = 1)                                                                                         |   | Not Avail        |                                                   | EVAPORATION RATE<br>(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                                                 |                |
|                                                                                                                 |   |                  |                                                   | Uel                                                 |                |
|                                                                                                                 |   |                  |                                                   | N.A.                                                |                |
|                                                                                                                 |   |                  |                                                   | N.A.                                                |                |
| EXTINGUISHING MEDIA N.A.                                                                                        |   |                  |                                                   |                                                     |                |
| SPECIAL FIRE FIGHTING PROCEDURES                                                                                |   |                  |                                                   |                                                     |                |
| Respiratory protection when fighting fires where<br>exposure to vapors or gases is possible.                    |   |                  |                                                   |                                                     |                |
| UNUSUAL FIRE AND EXPLOSION HAZARDS                                                                              |   |                  |                                                   |                                                     |                |
| Highly toxic gases (chlorides and chlorine) can be evolved in<br>fires of this product.                         |   |                  |                                                   |                                                     |                |

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## FR - LowTemp. SECTION V HEALTH HAZARD DATA

|                                                                                                                                                                                                                      |                      |                                 |                     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|---------------------------------|---------------------|
| THRESHOLD LIMIT VALUE                                                                                                                                                                                                |                      | Not Available.                  |                     |
| EFFECTS OF OVEREXPOSURE<br>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<br>Remove from exposure. Remove contaminated clothing. Wash contacted area with large amounts of water and soap. Refer to physician.                                              |                      |                                 |                     |
| <b>SECTION VI REACTIVITY DATA</b>                                                                                                                                                                                    |                      |                                 |                     |
| STABILITY                                                                                                                                                                                                            | UNSTABLE             |                                 | CONDITIONS TO AVOID |
|                                                                                                                                                                                                                      | STABLE               | X                               |                     |
| INCOMPATIBILITY (Materials to avoid)                                                                                                                                                                                 |                      |                                 |                     |
| HAZARDOUS DECOMPOSITION PRODUCTS CO, CO <sub>2</sub> , smoke, soot, chlorides and chlorine                                                                                                                           |                      |                                 |                     |
| HAZARDOUS POLYMERIZATION                                                                                                                                                                                             | MAY OCCUR            |                                 | CONDITIONS TO AVOID |
|                                                                                                                                                                                                                      | WILL NOT OCCUR       | X                               |                     |
| <b>SECTION VII SPILL OR LEAK PROCEDURES</b>                                                                                                                                                                          |                      |                                 |                     |
| STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED<br>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<br>Burn in an approved incinerator in accordance with local and state regulations.                                                                                                             |                      |                                 |                     |
| <b>SECTION VIII SPECIAL PROTECTION INFORMATION</b>                                                                                                                                                                   |                      |                                 |                     |
| RESPIRATORY PROTECTION (Specify type) Bureau of Mines approved respirator for organic                                                                                                                                |                      |                                 |                     |
| VENTILATION                                                                                                                                                                                                          | LOCAL EXHAUST        | Yes - for vapors                | SPECIAL vapors.     |
|                                                                                                                                                                                                                      | MECHANICAL (General) |                                 | OTHER               |
| PROTECTIVE GLOVES rubber                                                                                                                                                                                             |                      | EYE PROTECTION chemical goggles |                     |
| OTHER PROTECTIVE EQUIPMENT                                                                                                                                                                                           |                      |                                 |                     |
| <b>SECTION IX SPECIAL PRECAUTIONS</b>                                                                                                                                                                                |                      |                                 |                     |
| PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING<br>Avoid skin and eye contact. Avoid inhalation of vapors.                                                                                                           |                      |                                 |                     |
| OTHER PRECAUTIONS                                                                                                                                                                                                    |                      |                                 |                     |

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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.

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