Dear Customer:

Enclosed in the REVISED Material Safety Data Sheet for our product:

**TL-4 DME THINNER LUBRICATOR**

The products we distribute are not normally hazardous in their natural state. However, steel does contain elements deemed by OSHA to be hazardous when released by manufacturing, such as brazing, burning, grinding, sawing or welding, etc. Failure to control dust and fumes can result in chronic health problems.

We believe the information, supplied by the Manufacturer, on the enclosed MSDS to be accurate; however, D-M-E makes no warranty with respect to the accuracy of the information or the suitability of the recommendations, and assumes no liability for the information so presented.

Should you require additional information, please call or write the Manufacturer listed on the MSDS.

Sincerely yours,

D-M-E Company
Director of Operations
Ken Jasina

Revised: December, 1999
MATERIAL SAFETY DATA SHEET

SECTION I - MATERIAL IDENTIFICATION AND USE

PRODUCT NAME/IDENTIFIER
#TL4 Thinner & Lubricator

MANUFACTURER
D-M-E Company
29111 Stephenson Highway
Madison Heights, Michigan

EMERGENCY TELEPHONE NO.
EXXON Chemical Americas
Chemtrec
1-800-726-2015
1-800-424-9300

TRADE NAME
#TL4 Thinner & Lubricator

CHEMICAL NAME
Mixture

PRODUCT USE
Thinner & Lubricator

SECTION II - HAZARDOUS INGREDIENTS OF PRODUCT

HAZARDOUS INGREDIENT
Naphtha

SYNONYMS
Mineral Spirits

CONCENTRATION %
66.6

CAS/RTECS NUMBERS
64742-48-9

EXPOSURE LIMITS
ACGIH TLV-TWA = None Given
OSHA PEL = None Given
None Given

LD50/LC50/SPECIES/ROUTE

HAZARDOUS INGREDIENT
Refined Petroleum Oil

SYNONYMS
Lubricating Oil

CONCENTRATION %
33.3

CAS/RTECS NUMBERS
64741-88-4
64742-65-0
64741-89-5

EXPOSURE LIMITS
ACGIH TLV-TWA = 5 mg/m³
OSHA PEL = 5 mg/m³
LD50:>5g/Kg (rat/oral)

LD50/LC50/SPECIES/ROUTE

HAZARDOUS INGREDIENT
Solvent Yellow #3

SYNONYMS
None Given

CONCENTRATION %
Negligible

CAS/RTECS NUMBERS
97-56-3

EXPOSURE LIMITS
Not Established

LD50/LC50/SPECIES/ROUTE

N/A
SECTION III - PHYSICAL DATA

PHYSICAL STATE (gas, liquid, or solid) LIQUID
APPEARANCE and ODOR Red, Slight Sulfurized Odor
BOILING POINT Not Established
MELTING POINT (deg. C) Not Established
VAPOR PRESSURE Not Established
WATER SOLUBILITY NONE
VAPOR DENSITY (air=1) Not Established
EVAPORATION RATE Not Established

SECTION IV - FIRE AND EXPLOSION HAZARD OF MATERIAL

FLAMMABILITY Aspirated Liquid May Ignite When In Contact With A Flame
MEANS OF EXTINCTION Dry Chemical, Sand, Or Flood With Water From A Distance
NA

FLASH POINT (deg C) AND METHOD NA
UEL (% by vol.) NA
LEL (% by vol.) NA
AUTO IGN. TEMP. NA
HAZARDOUS COMBUSTION PRODUCTS Possible unburned vapors
EXPLOSION SENSITIVITY TO IMPACT NA
EXPLOSION SENSITIVITY TO STATIC NA

SECTION V - TOXICOLOGICAL PROPERTIES OF MATERIAL

SUBSTANCE Naphtha
PRIMARY ROUTES OF ENTRY INHALATION
INGESTION
CONTACT
LUNGS
PARANASAL SINUS
CENTRAL NERVOUS SYSTEM

TARGET ORGANS

SYMPTOMS/HEALTH EFFECTS Frequent or prolonged use may irritate and cause dermatitis. Skin contact may aggravate an existing dermatitis condition. High vapor/aerosol concentrations (>1,000 ppm) are irritating to the eyes and the respiratory tract. May cause headaches, dizziness, anesthesia, drowsiness, unconsciousness, and other central nervous system effects, including death.
Small amounts aspirated into the respiratory system during ingestion or vomiting may cause mild to severe pulmonary injury.

CARCINOGENICITY IARC: Not listed.
MAK: Not listed.
NIOSH: Not listed.
NTP: Not listed.
### Thinner Lubricator

**Substance**

**Primary Routes of Entry**

**Target Organs**

**Symptoms/Health Effects**

**Carcinogenicity**

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### Refined Petroleum Oil

**Inhalation**

Contact: None given

Low risk of inhalation at ambient temperatures. Mists or fumes may cause drowsiness, dizziness, headache, nausea, lung irritation, or chemical pneumonitis. Prolonged and/or frequent contact may cause drying, cracking (dermatitis) or folliculitis.

- **IARC:** Not listed.
- **MAK:** Not listed.
- **NIOSH:** Not listed.
- **NTP:** Not listed.
- **ACGIH:** Not listed.
- **OSHA:** Not listed.

### Solvent Yellow #3

**Inhalation**

Ingestion: Contact

Contact with eyes may result in severe irritation. Contact with skin may result in irritation. Ingestion may result in gastric disturbances.

- **IARC:** Listed as an animal carcinogen. Possible mutagenic hazard based on positive Ames test.
- **MAK:** Not listed.
- **NIOSH:** Not listed.
- **NTP:** Not listed.
- **ACGIH:** Not listed.
- **OSHA:** Not listed.

### Section VI - First Aid Measures

**Skin Contact**

Immediately flush the contaminated skin with soap and water. If product is beneath clothing, immediately remove the clothing and flush the skin with water. If any irritation persists after washing, get medical attention.

**Inhalation**

If a person breaths large amounts of this product, move the exposed person to fresh air at once. If breathing has stopped, perform CPR. Keep the affected person warm and at rest. Get medical attention as soon as possible.

**Ingestion**

If this product has been swallowed, get medical attention immediately.
SECTION VII - REACTIVITY DATA

CHEMICAL STABILITY  YES
CONDITIONS OF REACTIVITY  N/A
INCOMPATIBILITIES  Strong oxidants.
HAZARDOUS DECOMPOSITION PRODUCTS  CO, CO2, Traces of oxides of sulfur, phosphorus, zinc, calcium, magnesium.

SECTION VIII - PROTECTIVE MEASURES

RESPIRATORY  Use NIOSH/MSHA approved particulate respirators to prevent overexposure by inhalation.

EYES  Wear safety glasses or chemical splash goggles during handling.

GLOVES  Wear impervious gloves during routine handling.

FOOTWEAR  Wear safety footwear.

CLOTHING  Wear body covering work clothing at all times. Change clothing daily if it is contaminated with product or its by-products.

WORK/HYGIENIC PRACTICES  Wash hands thoroughly and often after handling powder or its by-products. Keep work area clean. Do not eat or drink in work areas. Launder protective clothing and gloves as required.

OTHER PROTECTIVE EQUIPMENT  Safety showers and eye wash stations should be present in the work area.

ENGINEERING CONTROLS  Use an adequate local exhaust ventilation system for any operations likely to produce mist, or fume in order to maintain airborne concentrations below occupational exposure limits as specified in Section II.

LEAK AND SPILL PROCEDURES  Approved respiratory equipment, protective clothing, gloves, and safety glasses should be worn to prevent contact or inhalation during the cleanup of product spills. Collect material by wet sweeping, dry sweeping with a sweeping compound, or by vacuum cleaning with an explosion proof apparatus equipped with a high efficiency particulate air (HEPA) filter. Salvage material for on-site reuse or recycling, or contact the appropriate local government authority for guidance on acceptable waste storage and disposal methods.

STORAGE REQUIREMENTS  Keep product dry and in closed containers. Do not store near mineral acids.
SECTION IX - TRANSPORTATION DATA

PRODUCT NAME/IDENTIFIER #TL4 Thinner - Lubricator
TRADE/SHIPPING NAME
DOT ID/EMERGENCY RESPONSE NUMBER NOT SPECIFIED/32

TRANSPORTATION

Less than 100 pounds or 45.4 kilograms:
Can be shipped as a nonhazardous (nonregulated) material in quantities less than 100 pounds or 45.4 kilograms (the RQ of Nickel Metal limited to those pieces of the metal having a diameter smaller 100 micrometers or 0.004 inches).

Greater than 100 pounds or 45.4 kilograms:
If shipped in quantities greater than 100 pounds or 45.4 kilograms the product must be shipped and handled in the following manner:

PROPER SHIPPING NAME Petroleum Lubricating Oil
HAZARD CLASS Non-Hazardous
IDENTIFICATION NUMBER None Assigned
LABELS REQUIRED NONE
PACKAGING EXCEPTIONS NONE
PACKAGING REQUIREMENTS 49CFR Part 173.1300
(MAXIMUM NET QUAN./PACKAGE) (General safe shipping and transferring protocol).
WATER SHIPMENT REQUIREMENTS NO LIMIT

CARGO VESSEL
The material must be stowed either "on deck" or "under deck," however, "under deck" should be used if available.

PASSenger VESSEL
The material must be stowed either "on deck" or "under deck," however, "under deck" should be used if available.

SECTION X - PREPARATION DATE OF MATERIAL SAFETY DATA SHEET

PREPARED BY: Toxico Corporation
PHONE NUMBER (810)559-7800
DATE: Revised November 25, 1994
D-M-E Company - Reviewed/Revised: March 22, 2000

The buyer assumes all risk in connection with use of the product. D-M-E Company assumes no responsibility or liability in connection with the information supplied on this sheet or for any damage or injury caused by the product if reasonable safety procedures are not followed as stipulated. D-M-E Company assumes no responsibility for injury or damage caused by abnormal use of the material even if reasonable safety procedures are followed. The information contained in this sheet is developed from what are believed to be accurate and reliable sources and is based on the best opinions and authoritative facts available at the time of issue.