

# MATERIAL SAFETY DATA SHEET

## THERMOLENE #888

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### SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

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#### CHEMICAL PRODUCT IDENTIFICATION:

PRODUCT CLASS: URETHANE COATING  
TRADE NAME: THERMOLENE #888  
PRODUCT USE:  
FORMULA ID:  
FORMULA VERSION NUMBER:  
MSDS PREPARATION DATE: 07/14/2004  
MANUFACTURER IDENTIFICATION:  
NAME: Thermo Manufacturing Systems, LLC  
ADDRESS: 301 Walnut Springs Road  
PO Box 218  
Lindale, TX 75771  
TELEPHONE: 903-881-8771  
EMERGENCY CONTACT: Chemtrec Center  
EMERGENCY TELEPHONE: (800) 424-9300

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### SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS

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1

CAS# 5989-27-5  
Citrus Terpenes (menthadiene)  
PCT BY WT: < 5.0 VAPOR PRESSURE: 2.000 MMHG @ 68F LEL .70  
EXPOSURE LIMIT:  
ACGIH TLV/TWA: NA  
OSHA PEL/TWA: NA  
LD50: 5000mg/Kg (rat, oral)

2

CAS# 26471-62-5  
Toluene Diisocyanate  
PCT BY WT: .3870 VAPOR PRESSURE: .030 MMHG @ 68F  
EXPOSURE LIMIT:  
ACGIH TLV/TWA: .005 PPM  
ACGIH TLV/STEL: .02 PPM  
OSHA PEL/TWA: .005 PPM  
LC50: 85 PPM (rat-inh, 1-hr)  
LD50: 5100mg/kg (rat-oral)

3

CAS# 124-17-4  
2-(2-Butoxyethoxy) ethyl acetate  
PCT BY WT: 5-15 VAPOR PRESSURE: .040 MMHG @ 68F LEL .80  
EXPOSURE LIMIT:  
ACGIH TLV/TWA: NA  
OSHA PEL/TWA: NA  
LC50: NA  
LD50: 6,470mg/kg (Mouse, Oral)

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4

CAS# 8052-41-3

Mineral Spirits Odorless

PCT BY WT: 5-15 VAPOR PRESSURE: .500 MMHG @ 68F LEL 1.00

EXPOSURE LIMIT:

ACGIH TLV/TWA: 100 ppm

OSHA PEL/TWA: 100 ppm

LD50: >25ml/Kg (rat-oral)

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5

CAS# 64742-95-6

Aromatic Petroleum Distillates

PCT BY WT: < 5.0 VAPOR PRESSURE: .500 MMHG @ 68F LEL 1.00

EXPOSURE LIMIT:

ACGIH TLV/TWA: NA

OSHA PEL/TWA: NA

LC50: 6700 PPM (4Hr-Rat, inh)

LD50: 4790 mg/Kg (Rat-oral)

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### SECTION 3 - HAZARDS IDENTIFICATION

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#### EMERGENCY OVERVIEW:

Primary routes of exposure- inhalation, eye contact and skin contact.

#### POTENTIAL HEALTH EFFECTS:

**EYE:** Liquid and aerosols of this product are irritating and can cause tearing, reddening, swelling and stinging of the eyes.

**SKIN:** Excessive skin contact may cause irritation and redness. Can cause irritation of the skin as evidenced by reddening, swelling, rash scaling or blistering. Some persons may develop skin sensitization.

**INHALATION:** Excess inhalation may result in headaches, nausea, lung irritation, and narcosis. Isocyanate vapors or mist at concentrations above the TLV can irritate the mucous membranes in the respiratory tract causing runny nose, sore throat, coughing, chest discomfort, shortness of breath and reduced lung function. Exposure well above the TLV may lead to generally reversible bronchitis, bronchial spasm and pulmonary edema. Repeated overexposure causes sensitization in some individuals resulting in asthma-like symptoms on subsequent exposures below the TLV. Persons with preexisting bronchial hyperactivity can respond to concentrations below the TLV with similar symptoms as well as an asthma attack.

**INGESTION:** Moderately toxic by ingestion (unless noted below).

**CHRONIC EFFECTS:** Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage.

**CARCINOGENICITY:** No Carcinogenic properties known unless noted below. (Note: Items may not appear in Section 2 above if present in trace amounts only).

Contains a small amount of Toluene Diisocyanate (TDI). NTP and IARC have listed TDI as an animal carcinogen based on Gavage testing. Inadequate evidence for human carcinogenesis was noted and inhalation testing failed to show carcinogenic activity.

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### TARGET ORGANS:

No Specific data available unless noted below.

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### SECTION 4 - FIRST AID MEASURES

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EYE CONTACT: Flush eyes with water for 15 minutes. If irritation persists, consult a physician.

SKIN CONTACT: Wipe area off and wash affected skin areas thoroughly with soap and water. Promptly remove contaminated clothing and wash before reuse.

INHALATION: Move subject to fresh air.

INGESTION: If ingested, do not induce vomiting. Consult a physician immediately.

NOTE TO PHYSICIAN:

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### SECTION 5 - FIRE FIGHTING MEASURES

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#### FIRE AND EXPLOSIVE PROPERTIES OF THE CHEMICAL:

Containers may rupture due to very high temperature induced pressure.

Flashpoint 109.0  
Explosion Level Low - .7  
High - 10.7

#### EXTINGUISHING MEDIA:

Foam, CO<sub>2</sub>, dry chemical, or sand

#### FIRE-FIGHTING PROCEDURES AND EQUIPMENTS:

General procedures recommended. Avoid the use of water.

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### SECTION 6 - ACCIDENTAL RELEASE MEASURES

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CLEAN-UP: Eliminate any ignition sources. Evacuate nonessential personnel. Ventilate the area of spill. Put on required personal protective equipment (see section 8). Dike or impound spilled material and cover with inert absorbent material. Shovel or sweep into a disposable container. See section 13. See section 15 for SARA information.

CONTAINMENT: Dike with inert absorbent material.

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### SECTION 7 - HANDLING AND STORAGE

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HANDLING: Keep containers tightly closed.

STORAGE: Store in protected area.

SPECIAL COMMENTS: Ideal storage temperature range for ease of handling is 50°F to 85°F. Wash hands thoroughly with soap and water after handling as a standard hygienic practice.

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### SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

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EYE PROTECTION: Face shield or goggles. Do not wear contact lenses.

RESPIRATORY PROTECTION: Provide adequate ventilation (see below). For confined areas or when using spray application, wear appropriate, properly fitted respirator (NIOSH/MESA approved) during and after application unless air monitoring demonstrates vapor/mist levels below applicable limits. Follow respirator manufacture's directions for respirator use. Use an organic vapor respirator recommended (NIOSH approved) for use in isocyanate containing air (air purifying or supplied-air). Observe OSHA regulations for respirator use (29CFR 1910.134). When monomeric isocyanate concentrations are below 10Mg/m<sup>3</sup>, a combination organic vapor and particulate respirator recommended for isocyanate vapor by the supplier may be used. When airborne isocyanate concentrations are not known, or if either guideline above is exceeded, or when spraying in confined or limited ventilation areas, use a supplied-air respirator.

SKIN PROTECTION: Wear solvent resistant gloves.

ENGINEERING CONTROLS: Adequate ventilation in volume and pattern should be provided to keep vapor concentration below LEL and TLV limits. If spray applied, respiratory protection is mandatory.

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### SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

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Boiling Range: Lower - 308.0; Higher - 490.0  
Evaporation Rate: 100 (n-Butyl Acetate = 1)  
Melting Point: N/A  
Mechanical Impact Explosion: N/A  
Odor: N/A  
Odor Threshold: N/A  
pH: N/A  
Vapor Density: 7.00  
Vapor Pressure: 2.00  
VOC (lbs/gal): 1.790  
Volatile by Volume: 24.9520%  
Volatile by Weight: 16.7958%  
Water Solubility: N/A  
Wt/Gl: 10.6588 LB/GL

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### SECTION 10 - STABILITY AND REACTIVITY

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INCOMPATIBILITIES: Strong oxidizing materials. Water, amines, strong bases, alcohols.

DECOMPOSITION: When heated, vapors given off are primarily organic acids and thermal decomposition products including carbon dioxide, carbon monoxide and mixed hydrocarbons. Also, vapors of oxides of nitrogen are given off.

CONDITIONS TO AVOID: Heat, sparks and open flames.

POLYMERIZATION: Will not occur (unless noted below). May occur due to contact with reactive materials (alcohols or amines) or due to exposure to temperatures over 400F.

STABILITY: This material is stable.

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### SECTION 11 - TOXICOLOGICAL INFORMATION

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EYE EFFECTS: Vapors and mists of this product are irritating to the eyes.

SKIN EFFECTS: Excessive skin contact may cause irritation and redness.

ORAL EFFECTS: Toxic by ingestion.

INHALATION EFFECTS: Excess inhalation may result in headaches, nausea, lung irritation, and narcois. Isocyanate vapors or mist at concentrations above the TLV can irritate the mucous membranes in the respiratory tract causing runny nose, sore throat, coughing, chest discomfort, shortness of breath and reduced lung function. Exposure well above the TLV may lead to generally reversible bronchitis, bronchial spasm and pulmonary edema. Repeated overexposure causes sensitization in some individuals resulting in asthma-like symptoms on subsequent exposures below the TLV. Persons with preexisting bronchial hyperactivity can respond to concentrations below the TLV with similar symptoms as well as an asthma attack.

OTHER:

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### SECTION 12 - ECOLOGICAL INFORMATION

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ECOTOXICOLOGICAL INFORMATION:

ENVIRONMENTAL FATE:

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### SECTION 13 - DISPOSAL CONSIDERATIONS

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WASTE DISPOSAL: Waste must be disposed of in accordance with federal, state, and local environmental control regulations. Incineration is the preferred method. Do not heat or cut empty containers with electric or gas torch.

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### SECTION 14 - TRANSPORT INFORMATION

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DOT information is based upon the requirements of 49CFR171-180. (Exceptions per 173.150 may be applicable.)

DOT HAZARD CLASS: Three (3)

DOT LABEL:

DOT SHIPPING NAME: Paint

DOT PLACARD: Combustible liquid

UN/NA NUMBER: UN 1263

DOT PACKAGING GROUP: III

OTHER: International Shipment or Air DOT: Flammable Liquid, Class 3. , Packing group III, Guide Book - 26, ID # UN1263 Shipping Name – Paint

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### SECTION 15 - REGULATORY INFORMATION

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FEDERAL REGULATIONS: This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and of 40 CFR 372:

Toluene Diisocyanate CAS# 26471-62-5 PCT BY WT: .3870

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2-(2-Butoxyethoxy) ethyl acetate  
CAS# 124-17-4 PCT BY WT: 5-15

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This product is not a marine pollutant. This product is not manufactured with and does not contain ozone depleting substances (unless noted below).

All ingredients used to manufacture this product are TSCA listed. Based on the presence of components (03,05) which is/are the subject of a TSCA section 4 test rule, a section 5 SNUR or a section 6 Risk Management Rule. Export of such subject materials requires that a section 12(b) notice be given to EPA by the exporter. (See 40 CFR Chapter 1, Part 707, subpart D, Sections 707.60, 707.65 and 707.67).

Based on the presence of components (03,\*\*) contains reportable HAPS

#### STATE REGULATIONS:

Based on the presence of components (05,\*\*)

Subject to the reporting requirements under California's Proposition 65 in that this product contains a trace of benzene which appears on the California Safe Drinking Water and Toxics Enforcement Act List of Cancer causing and reproductive toxicity agents.

Based on the presence of components (02)

Subject to the reporting requirements under California's Proposition 65 in that this product contains traces of tolunediisocyanate which appears on the California Safe Drinking Water and Toxics Enforcement Act List of cancer causing agents.

#### INTERNATIONAL REGULATIONS:

All ingredients in this product comply with the New Substances Notification Requirements under the Canadian Environmental Protection Act (CEPA).

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### SECTION 16 - OTHER INFORMATION

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Prepared by: Thermo Technical Department  
Date of issue: 07/14/2004  
Last Revision Date: 07/14/2004  
MSDS Prepared for:  
MSDS Last Prepared: