

MATERIAL SAFETY DATA SHEET FOR PENETRATING OIL 1

TOTAL Lubricants USA, Inc.
5 N. Stiles Street
Linden NJ 07036

REVISION DATE
03-MAR-06

DATE ISSUED
27-NOV-06

IDENTIFICATION AND EMERGENCY INFORMATION

PRODUCT NAME: PENETRATING OIL 1	PRODUCT #: 200135
CHEMICAL NAME: N/A - Mixture	CAS #'S: Mixture
PRODUCT APPEARANCE AND ODOR: Amber liquid, petroleum solvent odor	CHEMICAL FAMILY: Petroleum hydrocarbon
SYNONYMS: General purpose penetrating oil	EMERGENCY TELEPHONE: 1-908-862-9300

COMPONENTS AND HAZARD INFORMATION

COMPONENTS:	W/W	HAZARD DATA (TLV, LD50, LC50, ETC.):
Aliphatic hydrocarbons CAS Nos. 64742-47-8 8052-41-3		100 ppm ACTIH TWA
1,2,4-Trimethylbenzene CAS No. 95-63-6		25 ppm ACGIH TWA
Petroleum-based lubricating oil CAS No. 64742-52-5		5 mg/m3 ACGIH/OSHA TWA (as an oil mist)
Oleic Acid CAS No. 112-80-1		n/e

For further information see the Toxicity section.

HAZARDOUS MATERIALS IDENTIFICATION SYSTEM (HMIS):

Health	Flammability	Reactivity
1	2	0

TRANSPORTATION INFORMATION

TRANSPORTATION INCIDENT INFORMATION:

DOT:

Flammable Liquid, n.o.s. (Petroleum Distillates)
Class 3, UN1993, PG III

Note - Per 49 CFR 173.150(f)(1) a flammable liquid with a flashpoint at or above 100°F that does not meet the definition of any other hazard class may be reclassified as a combustible liquid (except for transportation by vessel or aircraft, unless other means of transportation is impracticable).

Note - Per 49 CFR 173.150(f)(2) combustible liquids in non-bulk containers

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are not regulated by the DOT.
This material when shipped by truck, may be reclassified as a combustible liquid which in non-bulk containers is not regulated by the DOT.

EMERGENCY FIRST AID

EYE CONTACT:

If splashed into the eyes, flush with clear water for 15 minutes or until irritation subsides. If irritation persists, call a physician.

SKIN CONTACT:

In case of skin contact, remove contaminated clothing and wash skin thoroughly with soap and water.

INHALATION:

If overcome by vapor, remove from exposure and call a physician immediately. If breathing is irregular or has stopped, start resuscitation, administer oxygen, if available.

INGESTION:

If ingested, DO NOT induce vomiting; call a physician immediately. Possible aspiration hazard.

FIRE AND EXPLOSION HAZARD INFORMATION

FLASH POINT (MINIMUM)

COMBUSTIBLE - Per DOT 49 CFR 173.115
104°F

ASTM D 56, Tag Closed Cup

AUTOIGNITION TEMPERATURE

Approximately 254°C (490°F)

ASTM D 2155

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) - HAZARD IDENTIFICATION

Health	Flammability	Reactivity
2	2	0

HANDLING PRECAUTIONS

Keep product away from heat, sparks, pilot lights, static electricity, and open flame.

FLAMMABLE OR EXPLOSIVE LIMITS (APPROXIMATE PERCENT BY VOLUME IN AIR)

Estimated values: Lower Flammable Limit N/E Upper Flammable Limit N/E

EXTINGUISHING MEDIA AND FIRE FIGHTING PROCEDURES

Foam, water spray (fog), dry chemical, carbon dioxide and vaporizing liquid type extinguishing agents may all be suitable for extinguishing fires involving this type of product, depending on size or potential size of fire and circumstances related to the situation. Plan fire protection and response strategy through consultation with local fire protection authorities or appropriate specialists. Water may be ineffective, but water should be used to keep fire-exposed containers cool. If a leak or spill has ignited, use water spray to disperse the vapors and to protect men attempting

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FIRE AND EXPLOSION HAZARD INFORMATION

to stop a leak. Water spray may be used to flush spills away from exposures. Minimize breathing gases, vapor, fumes or decomposition products. Use supplied-air breathing equipment for enclosed or confined spaces or as otherwise needed.

Note: The inclusion of the phrase "water may be ineffective" is to indicate that although water can be used to cool and protect exposed material, water may not extinguish the fire unless used under favorable conditions by experienced fire fighters trained in fighting all types of flammable liquid fires.

DECOMPOSITION PRODUCTS UNDER FIRE CONDITIONS

Fumes, smoke, carbon monoxide, aldehydes and other decomposition products, in the case of incomplete combustion.

"EMPTY" CONTAINER WARNING

"Empty" containers retain residue (liquid and/or vapor) and can be dangerous. DO NOT PRESSURIZE, CUT, WELD, 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. Do not attempt to clean since residue is difficult to remove. "Empty" drums should be completely drained, properly bunged and promptly returned to a drum reconditioner. All other containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations.

HEALTH AND HAZARD INFORMATION

VARIABILITY AMONG INDIVIDUALS:

Health studies have shown that many petroleum hydrocarbons and synthetic lubricants pose potential human health risks which may vary from person to person. As a precaution, exposure to liquids, vapors, mists or fumes should be minimized.

POTENTIAL HEALTH EFFECTS

EYE CONTACT: May cause slight eye irritation.

SKIN CONTACT: Occasional brief contact with the liquid will not result in significant irritation unless evaporation is impeded. May aggravate an existing dermatitis condition. Prolonged or repeated contact tends to remove skin oils possibly leading to irritation and dermatitis.

INHALATION: High vapor/aerosol concentrations (greater than approximately 1000 ppm) are irritating to the eyes and respiratory tract, may cause headaches, dizziness, anesthesia, drowsiness, unconsciousness, and other central nervous system effects, including death. Low order of toxicity.

INGESTION: Small amounts of this product aspirated into the respiratory system during ingestion or vomiting may cause mild to severe pulmonary injury, possibly progressing to death. Minimal toxicity.

PHYSICAL DATA

The following data are approximate or typical values and should not be used

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PHYSICAL DATA

for precise design purposes.

BOILING RANGE:

Approximately 152-202°C (305-396°F)

VAPOR PRESSURE:

Less than 10 mm Hg @ 25°C

ASTM D 2879

SPECIFIC GRAVITY (15.6°C/15.6°C):

Approximately 0.79

VAPOR DENSITY (AIR = 1):

Approximately 4.8

MOLECULAR WEIGHT:

n/e

PERCENT VOLATILE BY VOLUME:

Approximately 90 @ 1 ATM. AND 25°C
(77°F)

pH:

Essentially neutral

EVAPORATION RATE @ 1 ATM. AND 25°C

(77°F):

(n-BUTYL ACETATE = 1)

0.1

POUR, CONGEALING OR MELTING POINT:

Less than -18°C (0°F)

Pour Point by ASTM D 97

SOLUBILITY IN WATER @ 1 ATM. AND

25°C (77°F):

Negligible; less than 0.1%

VISCOSITY:

0.95 cP @ 25°C ASTM D 445

REACTIVITY

This product is stable and will NOT react violently with water. Hazardous polymerization will not occur. Avoid contact with strong oxidants such as liquid chlorine, concentrated oxygen, sodium hypochlorite or calcium hypochlorite.

DECOMPOSITION PRODUCTS UNDER FIRE CONDITIONS

Fumes, smoke, carbon monoxide, and other decomposition products, in the case of incomplete combustion.

CONDITIONS TO AVOID

Keep product away from ignition sources, such as heat, sparks, pilot lights, static electricity, and open flames.

TOXICITY

ORAL (Acute)	N/E
DERMAL (Acute)	N/E
EYE	N/E
INHALATION (Acute)	N/E
CHRONIC, SUBCHRONIC, ETC.	N/E

Medical Conditions Aggravated by Exposure: Unknown

This product does NOT contain any ingredients identified as carcinogenic by IARC, NTP, or OSHA.

SARA Section 313 Status:

This product contains the following
Section 313 reportable ingredients:

Component	CAS#	%
1,2,4-Trimethylbenzene	95-63-6	2 max

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TOXICITY

SPILL OR LEAK PROCEDURES

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

Shut off and eliminate all ignition sources. Keep people away. Recover free product. Add sand, earth or other suitable absorbent to spill area. Minimize breathing vapors. Minimize skin contact. Ventilate confined spaces. Open all windows and doors. Keep product out of sewers and watercourses by diking or impounding. Advise authorities if product has entered or may enter sewers, watercourses or extensive land areas. Assure conformity with local regulations. Continue to observe precautions for volatile, combustible vapors from absorbed material.

WASTE DISPOSAL METHOD: (Consult federal, state, or local authorities for proper disposal procedures.)

Assure conformity with applicable disposal regulations. Dispose of absorbed material at an approved waste site or facility.

PROTECTION AND PRECAUTIONS

VENTILATION:

Use only with ventilation sufficient to prevent exceeding recommended exposure limit or buildup of explosive concentrations of vapors in air. No smoking, flame or other ignition sources.

RESPIRATORY PROTECTION: (Use only NIOSH/MSHA approved equipment.)

Use supplied air respiratory protection in confined or enclosed spaces, if needed.

PROTECTIVE GLOVES:

Use chemical-resistant gloves, if needed, to avoid prolonged or repeated skin contact.

EYE PROTECTION:

Use splash goggles or face shield when eye contact may occur.

OTHER PROTECTIVE EQUIPMENT:

Use chemical-resistant apron or other impervious clothing, if needed, to avoid contaminating regular clothing which could result in prolonged or repeated skin contact.

WORK PRACTICES/ENGINEERING CONTROLS:

Keep containers closed when not in use. Do not handle near heat, sparks, flame or strong oxidants. To prevent fire or explosion risk from static accumulation and discharge, effectively ground product transfer system in accordance with the National Fire Protection Association standard for petroleum products.

PERSONAL HYGIENE:

Minimize breathing vapor, mist, or fumes. Avoid prolonged or repeated contact with skin. Remove contaminated clothing; launder or dry-clean before reuse. Remove contaminated shoes and thoroughly clean before reuse; discard if oil-

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PROTECTION AND PRECAUTIONS

soaked. Cleanse skin thoroughly after contact, before breaks and meals, and at end of work period. Product is readily removed from skin by waterless hand cleaners followed by washing thoroughly with soap and water.

PREPARED BY: Steve Smith

REGULATORY MANAGER

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