

DILUENT 400
MATERIAL SAFETY DATA SHEET FOR USA AND CANADA



SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: DILUENT 400

SYNONYMS: Petroleum oil; Lube oil; Petroleum hydrocarbon; Lubricant.

PRODUCT CODE: Prefix 33

PRODUCT USE: For formulating lubricant products.
If this product is used in combination with other products, refer to the Material Safety Data Sheet for those products.

This number is for emergency use only. If you desire non-emergency product information, please call a phone number listed below.

**24-HOUR EMERGENCY PHONE NUMBER
MEDICAL AND TRANSPORTATION (SPILL):**

1-800-468-1760

SUPPLIER: Safety-Kleen Systems, Inc.
5360 Legacy Drive
Building 2, Suite 100
Plano, Texas 75024
USA
1-800-669-5740
www.Safety-Kleen.com

TECHNICAL INFORMATION: 1-800-669-5740 Press 1 then 1, then Extension 7500

MSDS FORM NUMBER: 82553

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SUPERSEDES: September 12, 2006

PREPARED BY: Product MSDS Coordinator

APPROVED BY: MSDS Task Force

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SECTION 2: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

APPEARANCE
Liquid, amber, petroleum odor.

CAUTION!

HEALTH HAZARDS
May irritate eyes and skin.
May be harmful if swallowed.

OSHA Regulated Chemicals
No information is available.

POTENTIAL HEALTH EFFECTS

INHALATION (BREATHING): This product is not likely to present an inhalation hazard at normal temperatures and pressures. However, when aerosolizing, misting, or heating this product, high concentrations of generated vapor or mist may irritate the respiratory tract (nose, throat, and lungs).

EYES: May cause irritation.

SKIN: May cause irritation. Not likely to be absorbed through the skin in harmful amounts.

INGESTION (SWALLOWING): May be harmful if swallowed. May cause throat irritation, nausea, vomiting, and diarrhea. Aspiration hazard: Breathing product into the lungs during ingestion or vomiting may cause lung injury and possible death.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Individuals with pre-existing respiratory tract (nose, throat, and lungs), eye, and/or skin disorders may have increased susceptibility to the effects of exposure.

CHRONIC: Prolonged or repeated inhalation of oil mist may cause oil pneumonia, lung tissue inflammation, and/or fibrous tissue formation. Prolonged or repeated eye contact may cause inflammation of the membrane lining the eyelids and covering the eyeball (conjunctivitis). Prolonged or repeated skin contact may cause drying, cracking, redness, itching, and/or swelling (dermatitis).

CANCER INFORMATION: No known carcinogenicity. For more information, see **SECTION 11: CARCINOGENICITY**.

POTENTIAL ENVIRONMENTAL EFFECTS
Not available. Also see **SECTION 12: ECOLOGICAL INFORMATION**.

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SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

CAS #	Component	Synonym	Wt. Percent
64742-58-1	Lubricating oils, petroleum, hydrotreated spent	Hydrotreated paraffinic base oil	40-50
64742-57-0	Residual oils (petroleum), hydrotreated	Bright Stock	0-60*
64741-88-4	Petroleum distillates, solvent-refined heavy paraffinic	Bright Stock	0-60*
64742-62-7	Residual oils (petroleum), solvent dewaxed	Bright Stock	0-60*
72623-83-7	Lubricating oils (petroleum), C>25, hydrotreated bright stock	Bright Stock	0-60*
64742-01-4	Residual oils (petroleum), solvent refined	Bright Stock	0-60*

Component Related Regulatory Information

This product may be regulated, have exposure limits or other information identified as the following: Oil mist, mineral (8012-95-1).

*Only one of the listed Bright stocks will be present in the mixture.

* Even though the concentration range does not fall under the ranges prescribed by WHMIS, this is the actual range which varies with each batch of the product.

SECTION 4: FIRST AID MEASURES

INHALATION (BREATHING):

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Oxygen should only be administered by qualified personnel. Someone should stay with victim. Get medical attention if breathing difficulty persists.

EYES:

If irritation or redness from exposure to vapor develops, move away from exposure into fresh air. Upon contact, immediately flush eyes with plenty of lukewarm water, holding eyelids apart, for 15 minutes. Get medical attention.

SKIN:

Remove affected clothing and shoes. Wash skin thoroughly with soap and water. Get medical attention if irritation or pain develops or persists. If product is injected under pressure into or under the skin, or into any part of the body, regardless of the appearance of the wound or its size, a physician should immediately evaluate the individual as a medical emergency.

INGESTION (SWALLOWING):

Do NOT induce vomiting. Immediately get medical attention. Call 1-800-468-1760 for additional information. If spontaneous vomiting occurs, keep head below hips to avoid breathing the product into the lungs. Never give anything by mouth to an unconscious person.

NOTE TO PHYSICIANS:

Treat symptomatically and supportively. Treatment may vary with condition of victim and specifics of incident. Call 1-800-468-1760 for additional information.

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SECTION 5: FIRE FIGHTING MEASURES

HAZARDOUS COMBUSTION PRODUCTS:

Decomposition and combustion materials may be toxic. Burning may produce sulfur oxides, aldehydes, carbon monoxide and unidentified organic compounds.

CONDITIONS OF FLAMMABILITY:

Sparks or flame. Product may burn, but does not ignite readily.

PROTECTIVE EQUIPMENT FOR FIREFIGHTERS:

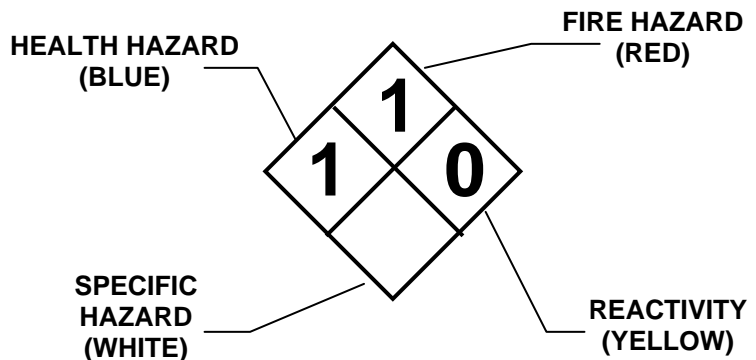
A positive-pressure, self-contained breathing apparatus (SCBA) and full-body protective equipment are required for fire emergencies.

EXTINGUISHING MEDIA:

Carbon dioxide, regular foam, dry chemical, water spray, or water fog. Water or foam may cause frothing.

NFPA 704 HAZARD IDENTIFICATION:

This information is intended solely for the use by individuals trained in this system.



FIRE FIGHTING INSTRUCTIONS:

Keep storage containers cool with water spray.

FIRE AND EXPLOSION HAZARDS:

Heated containers may rupture. "Empty" containers may retain residue and can be dangerous. Product is not sensitive to mechanical impact or static discharge.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Remove all ignition sources. Do not touch or walk through spilled product. Stop leak if you can do it without risk. Wear protective equipment and provide engineering controls as specified in **SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Ventilate area and avoid breathing vapor or mist. Contain spill away from surface water and sewers. Contain spill as a liquid for possible recovery, or absorb with compatible sorbent material and shovel with a clean, sparkproof tool into a sealable container for disposal.

Additionally, for large spills: Dike far ahead of liquid spill for collection and later disposal.

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SECTION 7: HANDLING AND STORAGE

HANDLING: Keep away from sparks or flame. Where flammable mixtures may be present, equipment safe for such locations should be used. Use clean tools and explosion-proof equipment. When transferring large volumes of product, metal containers, including trucks and tank cars, should be grounded and bonded. This product has a low vapor pressure and is not expected to present an inhalation hazard under normal temperatures and pressures. However, when aerosolizing, misting, or heating this product, do not breathe vapor or mist. Use in a well ventilated area. Avoid contact with eyes, skin, clothing, and shoes.

SHIPPING AND STORING: Keep container tightly closed when not in use and during transport. Store containers in a cool, dry place. Do not pressurize, cut, weld, braze, solder, drill, or grind containers. Keep containers away from flame, sparks, static electricity, or other sources of ignition. Empty product containers may retain product residue and can be dangerous.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE GUIDELINES:

Component Exposure Limits

Lubricating oils, petroleum, hydrotreated spent (64742-58-1)

ACGIH: 5 mg/m³ TWA (sampled by method that does not collect vapor) (related to Oil mist, mineral)
10 mg/m³ STEL (sampled by method that does not collect vapor) (related to Oil mist, mineral)

OSHA Final: 5 mg/m³ TWA (related to Oil mist, mineral)

OSHA Vacated: 5 mg/m³ TWA (related to Oil mist, mineral)

NIOSH: 5 mg/m³ TWA (related to Oil mist, mineral)
10 mg/m³ STEL (related to Oil mist, mineral)

Residual oils (petroleum), hydrotreated (64742-57-0)

ACGIH: 5 mg/m³ TWA (sampled by method that does not collect vapor) (related to Oil mist, mineral)
10 mg/m³ STEL (sampled by method that does not collect vapor) (related to Oil mist, mineral)

OSHA Final: 5 mg/m³ TWA (related to Oil mist, mineral)

OSHA Vacated: 5 mg/m³ TWA (related to Oil mist, mineral)

NIOSH: 5 mg/m³ TWA (related to Oil mist, mineral)
10 mg/m³ STEL (related to Oil mist, mineral)

Petroleum distillates, solvent-refined heavy paraffinic (64741-88-4)

ACGIH: 5 mg/m³ TWA (sampled by method that does not collect vapor) (related to Oil mist, mineral)
10 mg/m³ STEL (sampled by method that does not collect vapor) (related to Oil mist, mineral)

OSHA Final: 5 mg/m³ TWA (related to Oil mist, mineral)

OSHA Vacated: 5 mg/m³ TWA (related to Oil mist, mineral)

NIOSH: 5 mg/m³ TWA (related to Oil mist, mineral)
10 mg/m³ STEL (related to Oil mist, mineral)

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Residual oils (petroleum), solvent refined (64742-01-4)

ACGIH: 5 mg/m³ TWA (sampled by method that does not collect vapor) (related to Oil mist, mineral)
10 mg/m³ STEL (sampled by method that does not collect vapor) (related to Oil mist, mineral)

OSHA Final: 5 mg/m³ TWA (related to Oil mist, mineral)

OSHA Vacated: 5 mg/m³ TWA (related to Oil mist, mineral)

NIOSH: 5 mg/m³ TWA (related to Oil mist, mineral)
10 mg/m³ STEL (related to Oil mist, mineral)

Residual oils (petroleum), solvent dewaxed (64742-62-7)

ACGIH: 5 mg/m³ TWA (sampled by method that does not collect vapor) (related to Oil mist, mineral)
10 mg/m³ STEL (sampled by method that does not collect vapor) (related to Oil mist, mineral)

OSHA Final: 5 mg/m³ TWA (related to Oil mist, mineral)

OSHA Vacated: 5 mg/m³ TWA (related to Oil mist, mineral)

NIOSH: 5 mg/m³ TWA (related to Oil mist, mineral)
10 mg/m³ STEL (related to Oil mist, mineral)

Lubricating oils (petroleum), C>25, hydrotreated bright stock (72623-83-7)

ACGIH: 5 mg/m³ TWA (sampled by method that does not collect vapor) (related to Oil mist, mineral)
10 mg/m³ STEL (sampled by method that does not collect vapor) (related to Oil mist, mineral)

OSHA Final: 5 mg/m³ TWA (related to Oil mist, mineral)

OSHA Vacated: 5 mg/m³ TWA (related to Oil mist, mineral)

NIOSH: 5 mg/m³ TWA (related to Oil mist, mineral)
10 mg/m³ STEL (related to Oil mist, mineral)

ENGINEERING CONTROLS: Provide general ventilation needed to maintain concentration of vapor or mist below applicable exposure limits. Where adequate general ventilation is unavailable, use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below applicable exposure limits.

PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY PROTECTION: No respiratory protection is normally required. Use NIOSH-certified P- or R- series particulate filter and organic vapor cartridges when concentration of vapor or mist exceeds applicable exposure limits. Protection provided by air purifying respirators is limited. Do not use N-rated respirators. Selection and use of respiratory protective equipment should be in accordance in the USA with OSHA General Industry Standard 29 CFR 1910.134; or in Canada with CSA Standard Z94.4.

EYE PROTECTION: Where eye contact is likely, wear chemical goggles; contact lens use is not recommended.

SKIN PROTECTION: Where skin contact is likely, wear chemical impervious protective gloves; use of natural rubber or equivalent gloves is not recommended.

When product is heated and skin contact is likely, wear heat-resistant gloves, boots, and other protective clothing.

To avoid prolonged or repeated contact where spills and splashes are likely, wear appropriate chemical-resistant faceshield, boots, apron, coveralls, long sleeve shirts, or other protective clothing.

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PERSONAL HYGIENE:

Use good personal hygiene. Wash thoroughly with soap and water after handling product and before eating, drinking, or using tobacco products. Clean affected clothing, shoes, and protective equipment before reuse. Discard leather articles, such as shoes, saturated with this product.

OTHER PROTECTIVE EQUIPMENT:

Where spills and splashes are likely, facilities storing or using this product should be equipped with an emergency eyewash and shower, both equipped with clean water, in the immediate work area.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE, APPEARANCE, AND ODOR:

Liquid, amber, petroleum odor.

ODOR THRESHOLD:

Not available

MOLECULAR WEIGHT:

Not applicable

SPECIFIC GRAVITY:

0.88 (water = 1) (approximately)

DENSITY:

7.3 LB/US gal (880 g/L) (approximately)

VAPOR DENSITY:

Not available

VAPOR PRESSURE:

less than 0.1 mm Hg at 68°F (20°C)

BOILING POINT:

475°F (246°C) (minimum)

FREEZING/MELTING POINT:

Not available [pour point -22°F (-30°C) (maximum)]

pH:

Not applicable

EVAPORATION RATE:

Not available

SOLUBILITY IN WATER:

Insoluble

FLASH POINT:

374°F (190°C) (minimum) Cleveland Open Cup

FLAMMABLE LIMITS IN AIR:

LOWER: Not available.
UPPER: Not available.

AUTOIGNITION TEMPERATURE:

Not available.

SECTION 10: STABILITY AND REACTIVITY

STABILITY:

Stable under normal temperatures and pressures.

CONDITIONS TO AVOID:

Avoid sparks or flame and incompatible materials.

INCOMPATIBILITY:

Avoid oxidizing agents.

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REACTIVITY: Polymerization is not known to occur under normal temperature and pressures. Not reactive with water.

HAZARDOUS DECOMPOSITION PRODUCTS: None under normal temperatures and pressures. See also **SECTION 5: HAZARDOUS COMBUSTION PRODUCTS.**

SECTION 11: TOXICOLOGICAL INFORMATION

TOXICITY DATA:

Component Analysis - LD50/LC50

Lubricating oils, petroleum, hydrotreated spent (64742-58-1)

Oral LD50 Rat >2000 mg/kg

Dermal LD50 Rat >2000 mg/kg

Dermal LD50 Rabbit >4480 mg/kg

Residual oils (petroleum), hydrotreated (64742-57-0)

Oral LD50 Mouse 22 g/kg (related to Oil mist, mineral)

Petroleum distillates, solvent-refined heavy paraffinic (64741-88-4)

Inhalation LC50 Rat 2.18 mg/L 4 h

Oral LD50 Rat >5000 mg/kg

Dermal LD50 Rabbit >2000 mg/kg

Residual oils (petroleum), solvent refined (64742-01-4)

Inhalation LC50 Rat 2.18 mg/L 4 h

Oral LD50 Rat >5000 mg/kg

Dermal LD50 Rabbit >2000 mg/kg

Residual oils (petroleum), solvent dewaxed (64742-62-7)

Inhalation LC50 Rat 2.18 mg/L 4 h

Oral LD50 Rat >5000 mg/kg

Dermal LD50 Rabbit >2000 mg/kg

Lubricating oils (petroleum), C>25, hydrotreated bright stock (72623-83-7)

Oral LD50 Rat >5000 mg/kg

ACUTE EFFECTS:

May irritate the respiratory tract (nose, throat, and lungs), eyes, and skin. When aerosolizing, misting, or heating this product, high concentrations of generated vapor or mist may irritate the respiratory tract (nose, throat, and lungs). May be harmful if swallowed. May cause nausea, vomiting, and diarrhea. Aspiration hazard: Breathing product into the lungs during ingestion or vomiting may cause lung injury and possible death.

REPEATED DOSE EFFECTS:

Prolonged or repeated inhalation of oil mist may cause oil pneumonia, lung tissue inflammation, and/or fibrous tissue formation. Prolonged or repeated eye contact may cause inflammation of the membrane lining the eyelids and covering the eyeball (conjunctivitis). Prolonged or repeated skin contact may cause drying, cracking, redness, itching, and/or swelling (dermatitis).

Based on best current information, there is no known human sensitization associated with these products.

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Experimental evidence suggests that this product does not cause mutagenesis.

Based on best current information, there is no known reproductive toxicity associated with these products.

Based on best current information, there is no known teratogenicity associated with this product.

CARCINOGENICITY:

Based on best current information for the components in **Section 3**, there is no known carcinogenicity as categorized by ACGIH A1 or A2 substances; as categorized by IARC Group 1, Group 2A, or Group 2B agents; or as listed by NTP as either known carcinogens or substances for which there is limited evidence of carcinogenicity in humans or sufficient evidence of carcinogenicity in experimental animals.

TARGET ORGAN EFFECTS:

Prolonged or repeated inhalation of oil mist may cause oil pneumonia, lung tissue inflammation, and/or fibrous tissue formation.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICITY:

No information available for the product.

Component Analysis - Ecotoxicity - Aquatic Toxicity

Lubricating oils, petroleum, hydrotreated spent (64742-58-1)

Test & Species	Results	Conditions
96 Hr LC50 Brachydanio rerio	79.6 mg/L	semi-static
96 Hr LC50 Pimephales promelas	3.2 mg/L	semi-static

Petroleum distillates, solvent-refined heavy paraffinic (64741-88-4)

Test & Species	Results	Conditions
96 Hr LC50 Oncorhynchus mykiss	>5000 mg/L	

Residual oils (petroleum), solvent refined (64742-01-4)

Test & Species	Results	Conditions
96 Hr LC50 Oncorhynchus mykiss	>5000 mg/L	

Residual oils (petroleum), solvent dewaxed (64742-62-7)

Test & Species	Results	Conditions
96 Hr LC50 Oncorhynchus mykiss	>5000 mg/L	

Lubricating oils (petroleum), C>25, hydrotreated bright stock (72623-83-7)

Test & Species	Results	Conditions
96 Hr LC50 Lepomis macrochirus	>10000 mg/L	

PERSISTENCE/ DEGRADABILITY:

No information available for the product.

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**BIOACCUMULATION/
ACCUMULATION:** No information available for the product.

**MOBILITY IN
ENVIRONMENTAL MEDIA:** No information available for the product.

**OTHER ADVERSE
EFFECTS:** Not available.

**OCTANOL/WATER
PARTITION COEFFICIENT:** Not available

**VOLATILE ORGANIC
COMPOUNDS:** 100 WT%; 7.2 LB/US gal; 860 g/L (approximately)
As per 40 CFR Part 51.100(s).

SECTION 13: DISPOSAL CONSIDERATIONS

DISPOSAL: Dispose in accordance with federal, state, provincial, and local regulations. Regulations may also apply to empty containers. The responsibility for proper waste disposal lies with the owner of the waste. Contact Safety-Kleen regarding proper recycling or disposal.

**USEPA WASTE
CODE(S):** This product, if discarded, is not expected to be a characteristic or listed hazardous waste. If recycled in the USA, it must be managed in accordance with 40 CFR Part 279. Processing, use, or contamination by the user may change the waste code(s) applicable to the disposal of this product.

SECTION 14: TRANSPORT INFORMATION

DOT: **Shipping Name:** Not regulated as a hazardous material.

TDG: **Shipping Name:** Not regulated as a dangerous good.

**EMERGENCY RESPONSE GUIDE
NUMBER:** Not applicable
Reference *North American Emergency Response Guidebook*

SECTION 15: REGULATORY INFORMATION

USA REGULATIONS

OSHA **OSHA Regulated Chemicals**
No information is available.

**SARA SECTIONS 302
AND 304:** Based on the ingredients listed in **SECTION 3**, this product does not contain any "extremely hazardous substances" listed pursuant to Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) Section 302 or Section 304 as identified in 40 CFR Part 355, Appendix A and B.

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SARA SECTIONS 311 AND 312: This product poses the following health hazards as defined in 40 CFR Part 370 and is subject to the requirements of sections 311 and 312 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA):
Immediate (Acute) Health Hazard
Delayed (Chronic) Health Hazard

SARA SECTION 313: This product does not contain "toxic" chemicals subject to the requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) and 40 CFR Part 372.

CERCLA: Based on the ingredients listed in SECTION 3, this product does not contain any "hazardous substances" listed pursuant to the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) in 40 CFR Part 302, Table 302.4.

TSCA: All the components of this product are listed on, or are exempted from the requirement to be listed on, the TSCA Inventory.

CALIFORNIA: This product is not for sale or use in the State of California.

CANADIAN REGULATIONS

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all information required by the CPR.

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA): All the components of this product are listed on, or are automatically included as "substance occurring in nature" on, or are exempted from the requirements to be listed on, the Canadian Domestic Substances List (DSL).

SECTION 16. OTHER INFORMATION

REVISION INFORMATION: This MSDS has been revised in the following sections: Section 1 (Dates/Address), Section 3 (Emergency Overview), Section 5 (Fire Fields), Section 8 (Exposure Limits added), Section 11 (Toxicology fields updated), Section 16 (Revision Information).

LABEL/OTHER INFORMATION: Not available.

User assumes all risks incident to the use of this (these) product(s). To the best of our knowledge, the information contained herein is accurate. However, Safety-Kleen assumes no liability whatsoever for the accuracy or completeness of the information contained herein. No representations or warranties, either express or implied, or merchantability, fitness for a particular purpose or of any other nature are made hereunder with respect to information or the product to which information refers. The data contained on this sheet apply to the product(s) as supplied to the user.

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