



Material Safety Data Sheet

Material Name: Safety-Kleen Professional Orange Hand Cleaner

ID: 820005

*** Section 1 - Chemical Product and Company Identification ***

Product Name: Safety-Kleen Professional Orange Hand Cleaner

Product Code: 32636

Product Use: Citrus (d-limonene) containing hand cleaner. Product is designed to remove grease, oil, and other hard to remove grime.

Synonyms: None

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Emergency # 1-800-468-1760
www.safety-kleen.com

PREPARED BY: Product MSDS Coordinator

APPROVED BY: MSDS Task Force

*** Section 2 - Hazardous Identification ***

EMERGENCY OVERVIEW

Appearance

Opaque orange liquid with orange odor.

Signal Word

CAUTION!

Physical Hazards

Combustible liquid.

Health Hazards

May be harmful if swallowed.

May irritate the eyes, nose, throat, and lungs.

POTENTIAL HEALTH EFFECTS

Inhalation (Breathing)

Vapor generation is unlikely. However, high concentrations of vapor or mist may irritate the respiratory tract (nose, throat, and lungs) and may cause nausea, vomiting, headaches, dizziness, loss of coordination, numbness, and other central nervous system effects. In rare individuals, D-Limonene may cause respiratory sensitization.

Eyes

This product may be irritating to the eyes. Symptoms may include tearing, stinging, and redness.

Skin

Not likely to be absorbed through the skin in harmful amounts. In rare individuals, D-Limonene may cause skin sensitization.

Ingestion (Swallowing)

May be harmful if swallowed. May cause throat irritation, nausea, vomiting, and central nervous system effects as noted under INHALATION (breathing). Breathing product into the lungs during ingestion or vomiting may cause lung injury.

Medical Conditions Aggravated by Exposure

Individuals with pre-existing skin and respiratory problems may be aggravated by prolonged or repeated contact.

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Chronic

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**.

Environmental Hazards

Product not expected to be toxic to aquatic life. Also see **SECTION 12: ECOLOGICAL INFORMATION**.

*** Section 3 - Composition / Information on Ingredients ***

CAS	Component	Percent
64742-47-8	Petroleum distillates, hydrotreated light	5-20
5989-27-5	D-Limonene	5-20
68439-46-3	Alcohols, C9-11, ethoxylated	5-20

*** Section 4 - First Aid Measures ***

Inhalation (Breathing)

Remove to fresh air. If symptoms are experienced, remove source of contamination or move victim to fresh air. Call a physician if symptoms develop or persist.

Eyes

Upon contact, immediately flush eyes with plenty of lukewarm water, holding eyelids apart, for 15 minutes. Get medical attention if irritation develops.

Skin

For acute or dangerous contact: Remove affected clothing and shoes. Wash skin thoroughly with soap and water. Get medical attention if irritation develops or persists. Wash contaminated clothing before reuse.

Ingestion (Swallowing)

Do NOT induce vomiting. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Call 1-800-468-1760 for additional information. Never give anything by mouth to an unconscious person. If irritation persists or develops seek medical attention.

Notes to Physicians

Treat symptomatically and supportively. Administration of gastric lavage, if warranted, should be performed by qualified medical personnel. Treatment may vary with condition of victim and specifics of incident. Call 1-800-468-1760 for additional information.

*** Section 5 - Fire Fighting Measures ***

Hazardous Combustion Products

Decomposition and combustion materials may be toxic. Upon decomposition, this product emits carbon monoxide, carbon dioxide, nitrogen oxides, and/or low molecular weight hydrocarbons and irritating fumes..

Conditions of Flammability

Heat, sparks, or flame.

Extinguishing Media

Carbon dioxide, regular foam, alcohol foam, dry chemical, water spray, or water fog.

Protective Equipment For Firefighting

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

Fire Fighting Equipment/Instructions

Keep storage containers cool with water spray.

NFPA Ratings: Health: 1 Fire: 2 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

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Fire and Explosion Hazards

Vapor explosion hazard indoors, outdoors, or in sewers. Vapor may travel back to ignition source and flashback. Vapors will spread along the ground and collect in low or confined areas. Run-off to sewer may create a fire or explosion hazard. Heated containers may rupture, explode, or be thrown into the air. "Empty" containers may retain residue and can be dangerous. Product is not sensitive to mechanical impact. Product may be sensitive to static discharge, which could result in fire or explosion.

*** 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. A vapor suppressing foam may be used to reduce vapors. Contain spill away from surface water and sewers. Contain spill as a liquid for possible recovery, or sorb with compatible sorbent material and shovel with a clean, sparkproof tool into a sealable container for disposal.

Additionally, for large spills: Water spray may reduce vapor, but may not prevent ignition in closed spaces. Dike far ahead of liquid spill for collection and later disposal.

There may be specific regulatory reporting requirements associated with spills, leaks, or releases of this product. Also see **SECTION 15: REGULATORY INFORMATION**.

*** Section 7 - Handling and Storage ***

Handling Procedures

Do not get this material in your eyes. Avoid spills of this material on your clothing. Do not breathe vapor or mist. Keep away from heat, sparks, or flame. Avoid prolonged or repeated skin contact with this material. Do not smoke while using this product. Do not mix with other materials. Keep out of reach of children.

Shipping and Storing

Keep container tightly closed when not in use and during transport. Store containers in a cool, dry, well-ventilated place. Prevent product from freezing. Keep containers away from heat, flame, sparks, static electricity, or other sources of ignition. Empty product containers may retain product residue and can be dangerous. Keep product out of reach of children. Traces of free ethylene oxide may be present in this product and could accumulate in the headspace of storage and transport vessels. See **SECTION 14: TRANSPORTATION INFORMATION** for Packing Group information.

*** Section 8 - Exposure Controls / Personal Protection ***

Exposure Guidelines

Component Exposure Limits

ACGIH, OSHA, and NIOSH have not developed exposure limits for any of this product's components.

Engineering Controls

Provide general ventilation. Where adequate general ventilation is unavailable, use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below applicable exposure limits. Where explosive mixtures may be present, equipment safe for such locations should be used.

Personal Protective Equipment: Respiratory

If ventilation is not sufficient to effectively prevent buildup of aerosols or mists, appropriate NIOSH approved respiratory protection must be provided.

Personal Protective Equipment: Eyes/Face

Wear safety glasses, chemical goggles (if splashing is possible).

Personal Protective Equipment: Skin

Where prolonged skin contact is likely, wear chemical resistant gloves.

Personal Protective Equipment: Personal Hygiene

Use good personal hygiene.

Other Personal 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.

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*** Section 9 - Physical & Chemical Properties ***

Appearance/Odor :	Opaque orange liquid with orange odor.	pH:	7.5-8.5
Boiling Point:	>338°F (>170°C)	Melting Point:	Not available
Solubility (H2O):	Soluble	Specific Gravity:	0.96-0.97 (water = 1)
Density:	Not available	Octanol/H2O Coeff.:	Not available
Evaporation Rate:	Not available	Molecular Weight:	Not available
Odor Threshold:	Not available	Auto Ignition:	Not available
LFL:	Not available	Flash Point:	>167°F (75°C)
UFL:	Not available	Flash Point Method:	Setaflash
Vapor Pressure:	Less than 0.1 mm Hg @ 68°F (20°C)	Vapor Pressure:	17.5 mm Hg

*** Section 10 - Chemical Stability & Reactivity Information ***

Stability

Stable under normal temperatures and pressures.

Incompatibility

Strong oxidizing agents such as chlorine bleach and concentrated hydrogen peroxide; strong acids.

Reactivity

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

Hazardous Decomposition Products

Decomposition and combustion materials may be toxic. Upon decomposition, this product emits carbon monoxide, carbon dioxide, nitrogen oxides, and/or low molecular weight hydrocarbons and irritating fumes.. See also **SECTION 5: HAZARDOUS COMBUSTION PRODUCTS.**

Conditions To Avoid

Heat, hot surfaces, sparks, and open flames.

*** Section 11 - Toxicological Information ***

Toxicity Data

Component Analysis - LD50/LC50

D-Limonene (5989-27-5)

Oral LD50 Rat 4400 mg/kg; Dermal LD50 Rabbit >2000 mg/kg

Alcohols, C9-11, ethoxylated (68439-46-3)

Oral LD50 Rat 1378 mg/kg; Dermal LD50 Rabbit >2 g/kg

Petroleum distillates, hydrotreated light (64742-47-8)

Oral LD50 Rat >5000 mg/kg; Dermal LD50 Rabbit >2000 mg/kg

Acute Effects

This product can irritate the eyes. Ingestion may cause gastrointestinal disturbances, including nausea, vomiting, and diarrhea. Small amounts of this product, if aspirated into the lungs, may cause mild to severe pulmonary injury.

Repeated Dose Effects

In rare individuals, D-Limonene may cause skin and respiratory sensitization.

Carcinogenicity

Component Carcinogenicity

D-Limonene (5989-27-5)

IARC: Monograph 73 [1999] (overall evaluation downgraded from 2B to 3 with supporting evidence from other relevant data) (Group 3 (not classifiable))

Target Organ Effects

None identified.

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Sensitization

Repeated or prolonged exposure may cause sensitization of the skin and respiratory system in rare individuals.

Mutagenicity

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

Reproductive Toxicity

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

Also see **SECTION 15: CALIFORNIA**.

Teratogenicity

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

Toxicologically Synergistic Products

Based on best current information, there are no known toxicologically synergistic products associated with this product.

*** Section 12 - Ecological Information ***

Ecotoxicity

Product is not expected to be harmful to aquatic life based upon an analysis of its components.

Component Analysis - Ecotoxicity - Aquatic Toxicity

Petroleum distillates, hydrotreated light (64742-47-8)

Duration/Test/Species

96 Hr LC50 Pimephales promelas

96 Hr LC50 Lepomis macrochirus

Concentration/Conditions/Notes

45 mg/L [flow-through]

1740 mg/L

D-Limonene (5989-27-5)

Duration/Test/Species

96 Hr LC50 Pimephales promelas

96 Hr LC50 Oncorhynchus mykiss

Concentration/Conditions/Notes

0.619-0.796 mg/L [flow-through]

35 mg/L

Persistence/Degradability

Not expected to cause long-term adverse effects in the aquatic environment.

Bioaccumulation/Accumulation

Product is not expected to bioaccumulate.

Mobility in Environmental Media

No information available.

Other Adverse Effects

No additional information available.

*** Section 13 - Disposal Considerations ***

Disposal Instructions

Dispose in accordance with federal, state, provincial, and local regulations. Regulations may also apply to empty containers. Contact Safety-Kleen regarding proper recycling or disposal.

US EPA Waste Number & Descriptions

Material, if discarded, is not expected to be a characteristic hazardous waste under RCRA. Based on available data, this information applies to the product as supplied to the user. Processing, use, or contamination by the user may change the waste code applicable to the disposal of this product.

*** Section 14 - Transportation Information ***

Emergency Response Guide Number

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DOT Shipping Name: Combustible liquid, n.o.s. (Petroleum distillates, hydrotreated light)
UN/NA #: NA1993 **Hazard Class:** Combustible liquid **Packing Group:** III
Required Label(s): None

TDG Not regulated as a dangerous good for transportation.

IATA Information

No Classification Assigned.

IMDG Information

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*** Section 15 - Regulatory Information ***

Volatile Organic Compounds (As regulated)

CARB/OTC VOC: 5.0 WT%; 0.40 LB/US gal; 48 g/L
SCAQMD VOC: 6.2 WT%; 0.50 LB/US gal; 60 g/L
Contains photochemically reactive solvent (d-limonene)
Product Vapor Pressure @ 20°C = approx. 17.5 mm Hg

SARA Sections 311/312

This product poses the following health hazard(s) 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 302/304

Component Analysis

Based on the ingredients listed in **SECTION 2**, 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.

SARA Section 313

This product does not contain "toxic" chemical(s) 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

Component Analysis

Based on the ingredients listed in **SECTION 2**, this product does not contain any "hazardous substance" listed under 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 automatically included as "naturally occurring chemical substances" on, or are exempted from the requirement to be listed on, the TSCA Inventory.

Component Analysis

Component	CAS #	TSCA
Petroleum distillates, hydrotreated light	64742-47-8	Yes
D-Limonene	5989-27-5	Yes
Alcohols, C9-11, ethoxylated	68439-46-3	Yes

State Regulations

This product does not contain detectable amounts of any chemical known to the State of California to cause cancer, birth defects, or other reproductive harm.

U.S. State Regulations

None of this product's components are listed on the state lists from CA, MA, MN, NJ or PA.

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.

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Component Analysis

Component	CAS #	CAN
Petroleum distillates, hydrotreated light	64742-47-8	DSL
D-Limonene	5989-27-5	DSL
Alcohols, C9-11, ethoxylated	68439-46-3	DSL

Canadian WHMIS Information

Not controlled

Component Analysis - WHMIS IDL

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

D-Limonene (5989-27-5) 1 %

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 * * *

Label/Other Information

Not available.

Revision Information

Modification of MSDS to new format.

Disclaimer

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.

End of Sheet 820005