Material Safety Data Sheet
PERKINS DFSC PART NO T400012

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

1 Product and Company Identification

The Lubrizol Corporation
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Wickliffe, Ohio 44092
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Product Trade Name	PERKINS DFSC PART NO T400012
CAS Number	Not applicable for mixtures.
Synonyms	None.
Generic/Chemical Name	Confidential.
Product Use	Multipurpose.
Prepared By	Product Safety and Compliance Department (440) 943-4200
Preparation/Revision Date	04 August 2011
Transportation Emergency Phone No.	FOR TRANSPORT EMERGENCY call CHEMTREC: (+1) 703-527-3887 (outside the U.S.), 1-800-424-9300 (in the U.S.)
MSDS No.	11044042-1501218-0011131-102103
WHMIS Hazard Class	B-3 D-2B
HMIRC Registry Number	Not Registered
HMIRC Exemption	Not Registered
HMIRC Filing/Grant Date	Not applicable.

2 Hazards Identification

Principal Hazards

Warning.

- Harmful if inhaled.
- Causes skin irritation.
- Causes respiratory tract irritation.
- Combustible liquid.
- May cause eye irritation.
- May cause chronic health effects.

See Section 11 for complete health hazard information.

3 Composition/Information on Ingredients

Hazardous Ingredients

Comp	CAS No.	Percentage (by wt.)	Exposure Guidelines						Carcinogen
			OSHA		ACGIH		Other		
			TWA	STEL	TWA	STEL	TWA	STEL	
Petroleum naphtha	64742-47-8	From 20 to 29.9 percent	N/E	N/E	N/E	N/E	1200 mg/cu. M (u)	N/E	N/E
2-Ethylhexanol	104-76-7	From 10 to 19.9 percent	N/E	N/E	N/E	N/E	N/E	N/E	N/E

(s) - Skin exposure
(p) - Proposed limit
(c) - Ceiling exposure
(l) - Recommended exposure limit
(u) - Supplier recommended exposure limit
(N/E) - None established
Confidential - See section 1 for HMIRC exemption status

4 First Aid Measures

Ingestion

Do NOT induce vomiting. Never give anything by mouth to a person who is losing consciousness, unconscious or convulsing. Rinse mouth and then drink plenty of water, seek medical attention Call a poison center or doctor if exposed or you feel unwell.

Eyes	Rinse cautiously with water for 20 minutes or until chemical is removed. Remove contact lenses, if present and easy to do. Immediately call a poison center or doctor.
Skin	Immediately remove contaminated clothing and flush with cool water for at least 15 minutes. Get emergency medical help. Immediately remove contaminated clothing. If skin irritation occurs, get medical attention. Launder contaminated clothing before reuse and discard leather articles saturated with the material.
Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If breathing is labored, administer oxygen. If breathing has stopped, apply artificial respiration. Call a poison center or doctor.
Additional Information	Note to physician: Treat symptomatically.

5 Fire Fighting Measures

Flash Point	67 °C, 152.6 °F PMCC (Typical)
Extinguishing Media	CO2, dry chemical, foam, water spray, water fog. Water can be used to cool and protect exposed material
Firefighting Procedures	Wear full protective firegear including self-containing breathing apparatus operated in the positive pressure mode with full facepiece, coat, pants, gloves and boots. Water may cause splattering. Use water to cool containers exposed to fire. A solid stream of water will spread the burning material. Material creates a special hazard because it floats on water. Leaking gas fires: Do not extinguish, unless leak can be stopped safely. If possible, immediately isolate material from fire. Use water with care to avoid possible violent production of steam. In case of fire, evacuate area. Do not release chemically contaminated water into drains, soil or surface water.
Unusual Fire & Explosion Hazards	Explosion risk in case of fire. Toxic fumes, gases or vapors may evolve on burning. Vapors may be heavier than air and may travel along the ground to a distant ignition source and flash back. Container may rupture on heating. Keep material away from from heat, sparks, pilot lights, static electricity and open flame. Vapors may form explosive mixtures with air. If possible, immediately isolate from fire. May explode when heated. Liquid evaporates and forms vapor (fumes) which can catch fire and burn. Prevent static discharge. DO NOT USE a solid stream of water. See section 10 for additional information.

6 Accidental Release Measures

Spill Procedures	Evacuate all non-essential personnel. Only trained personnel should be permitted in area. Personal Protective Equipment must be worn, see Personal Protection Section for PPE recommendations. Eliminate all ignition sources if safe to do so. Ventilate spill area. Prevent entry into sewers and waterways. Small spills: contain spilled material. Transfer to secure containers. Where necessary collect using absorbent media. Larger spills: stop spill and dike area to prevent spreading, pump liquid to salvage tank. remaining liquid may be taken up on sand, clay, earth, floor absorbent or other absorbent material and shoveled into containers. Use non-sparking tools. Check under Transportation and Labeling (DOT/CERCLA) and Other Regulatory Information Section (SARA) for hazardous substances to determine regulatory reporting requirements for spills.

7 Handling and Storage

Pumping Temperature	Ambient
Maximum Handling Temperature	50 °C, 122 °F
Handling Procedures	Keep away from potential sources of ignition. Open container in a well ventilated area. Avoid breathing vapors. Keep containers closed when not in use. Vapors are heavier than air and will tend to accumulate in low areas. Avoid use in confined areas without adequate ventilation. Areas of inadequate ventilation could contain concentrations high enough to cause eye irritation, headaches, respiratory discomfort or nausea. Carefully evaluate processes using this product at elevated temperatures to ensure safe operating conditions. Avoid breathing dust, fume, gas, mist, vapors or spray. Electrostatic buildup may occur when pouring or transferring this product from its container. The spark produced may be sufficient to ignite vapors of flammable liquids. Always transfer product by means which avoid static buildup. Avoid pouring product directly from its container into combustible or flammable solvent. Static ignition hazard can result from handling and use. Electrically bond and ground all containers and equipment before transfer or use of material. Keep container tightly closed. Isolate from sources of heat, sparks, and open flame. No sparking tools should be used. Use grounding and bonding connection when transferring material to prevent static discharge, fire and explosion. Use spark-resistant tools. Do not breathe thermal decomposition products. Use only outdoors or in a well-ventilated area. Wash thoroughly after handling. Empty containers retain material residue. Do not cut, weld, braze, solder, drill, grind or expose containers to heat, flame, spark or other sources of ignition. Dispose of packaging or containers in accordance with local, regional, national and international regulations.
Maximum Storage Temperature	45 °C, 113 °F
Storage Procedures	Keep material away from heat, sparks, pilot lights, static electricity and open flame. Store in a well-ventilated place. Keep cool. Do not store or handle in aluminum equipment at temperatures over 120 deg F (49 deg C). Store at a temperature between 34 deg F and 120 deg F (between 1 deg C and 49 deg C). Store in containers made of same material as original container. Shelf life is two (2) years. Do not store near alkalis. Do not store near acids. See section 10 for incompatible materials.
Loading Temperature	50 °C, 122 °F

8 Exposure Controls/Personal Protection

Other Exposure Limits	Contains mineral oil. Under conditions which may generate mists, observe the OSHA PEL of 5 mg per cubic meter, ACGIH STEL of 10 mg per cubic meter.
Engineering Controls	Use local exhaust ventilation to control mists or vapors. Additional ventilation or exhaust may be required to maintain air concentrations below recommended exposure limits. Use explosion proof equipment.

Gloves Procedures	Natural Rubber. Polyvinyl chloride. Viton. Recommended order of use: 4H, Butyl, Neoprene, Nitrile, PVC-coated. Gloves should always be inspected before each use and discarded if they show tears, pinholes, or signs of wear.
Eye Protection	Chemical goggles or faceshield.
Respiratory Protection	Use full face respirator with a combination organic vapor and dust/mist cartridge if the recommended exposure limit is exceeded. Use self-contained breathing apparatus for entry into confined space, for other poorly ventilated areas and for large spill clean-up sites.
Clothing Recommendation	Long sleeve shirt is recommended. Wear either a chemical protective suit or apron when potential for contact with material exists. Do not wear rings, watches or similar apparel that could entrap the material and cause a skin reaction. Launder contaminated clothing before reuse.

9 Physical and Chemical Properties

Flash Point	67 °C, 152.6 °F PMCC (Typical)
Upper Flammable Limit	Not available.
Lower Flammable Limit	Not available.
Autoignition Point	Not available.
Explosion Data	Material does not have explosive properties.
Vapour Pressure	Not available.
pH	Not available.
Specific Gravity	0.89 (15.6 °C)
Bulk Density	7.44 Lb/gal, 0.89 Kg/L
Water Solubility	Insoluble.
Percent Solid	Not available.
Percent Volatile	Not available.
Volatile Organic Compound	Not available.
Vapour Density	Not available.
Evaporation Rate	Not available.
Odor	Mild
Appearance	Dark red Liquid.
Viscosity	2600 Centistokes (0 °C) 225 Centistokes (40 °C)
Odor Threshold	Not available.
Boiling Point	Not available.
Pour Point Temperature	-54 °C, -65 °F
Melting / Freezing Point	Not available.

The above data are typical values and do not constitute a specification.

10 Stability and Reactivity

Stability	Material is normally stable at moderately elevated temperatures and pressures.
Decomposition Temperature	Not available.
Incompatibility	Strong oxidizing agents.
Polymerization	Will not occur.
Thermal Decomposition	Smoke, carbon monoxide, carbon dioxide, aldehydes and other products of incomplete combustion. Under combustion conditions, oxides of the following elements will be formed: nitrogen.

11 Toxicological Information

-- ACUTE EXPOSURE --

Oral Toxicity	The LD50 in rats is > 2000 mg/Kg. Based on data from components or similar materials. Swallowing material may cause irritation of the gastrointestinal lining, nausea, vomiting, diarrhea, and abdominal pain. Ingestion may cause CNS depression. Material can be aspirated into the lungs during the act of swallowing or vomiting. This could result in pulmonary edema and chemical pneumonitis.
Eye Irritation	Weak to moderate eye irritant. Does not meet EU R36 criteria. Based on data from similar materials.
Skin Irritation	Skin irritant. Based on data from similar materials. Prolonged or repeated skin contact as from clothing wet with material may cause dermatitis. Symptoms may include redness, edema, drying, and cracking of the skin.
Dermal Toxicity	The LD50 in rabbits is > 2000 mg/Kg. Based on data from components or similar materials.
Inhalation Toxicity	The LC50 (4 hr.) in rats for dust or mist of this material is 2.5 - 50 mg/l. Based on data from components or similar materials. High concentrations may cause headaches, dizziness, nausea, behavioral changes, weakness, drowsiness and stupor.
Respiratory Irritation	Nose, throat and lung irritant. Based on data from similar materials. Exposure to a high concentration of vapor or mist may cause severe irritation to the nose and upper respiratory tract. Breathing of vapor or mist may aggravate asthma and inflammatory or fibrotic pulmonary disease.
Dermal Sensitization	No data available to indicate product or components may be a skin sensitizer.

Inhalation Sensitization	No data available to indicate product or components may be respiratory sensitizers.

-- CHRONIC EXPOSURE --

Chronic Toxicity	Repeated overexposure to petroleum naphtha can cause nervous system damage. A 14-day dermal toxicity study of 2-ethylhexanol in rats showed blood effects, decreased spleen weight and decreased triglycerides. Repeated ingestion of 2-ethylhexanol may cause injury to the liver and kidneys.
Carcinogenicity	This product contains mineral oils which are considered to be severely refined and not considered to be carcinogenic under IARC. All of the oils in this product have been demonstrated to contain less than 3% extractables by the IP 346 test.
Reproductive Toxicity	No data available to indicate either product or components present at greater than 0.1% that may cause reproductive toxicity.
Teratogenicity	No evidence of adverse effects were found in a developmental toxicity study of 2-ethylhexanol in rats. Doses up to 3 ml/kg applied to the skin during the most critical part of the gestation period produced evidence of toxicity to mothers, but no evidence of injury in the developing offspring. In a previous study, birth defects were observed by oral administration, an unlikely route of exposure in the workplace.
Mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

-- ADDITIONAL INFORMATION --

Other	No other health hazards known.

12 Ecological Information

-- ENVIRONMENTAL TOXICITY --

Freshwater Fish Toxicity	Not available.
Freshwater Invertebrates Toxicity	Not available.
Algal Inhibition	Not available.
Saltwater Fish Toxicity	Not available.
Saltwater Invertebrates Toxicity	Not available.
Bacteria Toxicity	Not available.
Miscellaneous Toxicity	Not available.

-- ENVIRONMENTAL FATE --

Biodegradation	Adequate data is not available to estimate the biodegradation potential of this material.
Bioaccumulation	Less than 1.0% of the components potentially bioconcentrate, based on octanol/water coefficients.
Soil Mobility	Not available.

13 Disposal Considerations

Waste Disposal	This material, if discarded, is not a hazardous waste under RCRA Regulation 40 CFR 261. Treatment, storage, transportation, and disposal must be in accordance with applicable Federal, State/Provincial, and Local regulations.

14 Transport Information

ICAO/IATA II	Not regulated
IMDG	Not regulated
IMDG EMS Fire	Not applicable.
IMDG EMS Spill	Not applicable.
IMDG MFAG	Not applicable.
MARPOL Annex II	Not determined.
USCG Compatibility	Not available.
Canada	Not regulated
U.S. DOT Bulk	UN1268 Petroleum distillates, n.o.s. Combustible Liquid , III
DOT NAERG	128
U.S. DOT (Intermediate)	UN1268 Petroleum distillates, n.o.s. Combustible Liquid , III
U.S. DOT Intermediate NAERG	128
U.S. DOT Non-Bulk	Not regulated
U.S. DOT Non-Bulk NAERG	Not applicable.
Bulk Quantity	85000 KG, 187391 lbs.
Intermediate Quantity	11000 KG, 24251 lbs.
Non-Bulk Quantity	400 KG, 882 lbs.

Review classification requirements before shipping materials at elevated temperatures

15 Regulatory Information

-- Global Chemical Inventories --

USA	All components of this material are on the US TSCA Inventory or are exempt.
EU	All components are in compliance with the EC Seventh amendment Directive 92 /32/EEC.
Japan	This product requires notification in Japan.
Australia	A component(s) of this product has been notified and assessed under the Industrial Chemicals Act of 1989. This product may be imported only by Lubrizol Australia.
New Zealand	All components are in compliance with chemical notification requirements in New Zealand.
Canada	All components are in compliance with the Canadian Environmental Protection Act and are present on the Domestic Substances List. This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.
Switzerland	All components are in compliance with the Environmentally Hazardous Substances Ordinance in Switzerland.
Korea	All components are in compliance in Korea.
Philippines	All components are in compliance with the Philippines Toxic Substances and Hazardous and Nuclear Wastes Control Act of 1990 (R.A. 6969).
China	This product may be imported to China only by Lubrizol China.
Taiwan	May require notification before sale in Taiwan.

-- Product Registrations --

Finnish Registration Number	Not Registered
Swedish Registration Number	Not Registered
Norwegian Registration Number	Not Registered
Danish Registration Number	Not Registered
Swiss Registration Number	Not Registered
Italian Registration Number	Not Registered

-- Other / International --

Other TSCA Reg.	None known.
SARA Ext. Haz. Subst.	This product does not contain greater than 1.0% of any chemical substance on the SARA Extremely Hazardous Substances list.
SARA Section 313	This product does not contain greater than 1.0% (greater than 0.1% for carcinogenic substance) of any chemical substances listed under SARA Section 313.
CERCLA Hazardous Substances	None known.
Cal. Prop. 65	This product contains the following chemical(s) known to the state of California to cause cancer and/or birth defects based on maximum impurity levels of components: < 0.05 ppm Ethylene oxide, CAS no. 75-21-8 < 0.5 ppm Cumene, CAS no. 98-82-8 2 ppm Ethyl benzene, CAS no. 100-41-4 2 ppm Toluene, CAS no. 108-88-3 2 ppm Naphthalene, CAS no. 91-20-3 0.015% Propylene oxide, CAS no. 75-56-9
Miscellaneous Regulatory Information	Not available.

16	**Other Information**

US NFPA Codes

Health	Fire	Reactivity	Special
2	2	0	N/E

HMIS Codes

Health	Fire	Reactivity
2*	2	0

Precautionary Labels

Warning.

- Harmful if inhaled.
- Causes skin irritation.
- Causes respiratory tract irritation.
- Combustible liquid.
- May cause eye irritation.
- May cause chronic health effects.

Revision Indicators

Section: 2 Principal hazards.	Changed: 4 August 2011
Section: 4 Eyes first aid.	Changed: 29 July 2011
Section: 4 Inhalation first aid.	Changed: 4 August 2011
Section: 4 Oral first aid.	Changed: 29 July 2011
Section: 4 Skin first aid.	Changed: 29 July 2011
Section: 5 Extinguishing media.	Changed: 29 July 2011
Section: 5 Special firefighting procedures.	Changed: 29 July 2011
Section: 5 Unusual fire& explosion hazards.	Changed: 1 August 2011

Section: 6 Spill procedures.	Changed: 29 July 2011
Section: 7 Handling procedures.	Changed: 29 July 2011
Section: 7 Storage procedures.	Changed: 4 August 2011
Section: 8 Eye protection.	Changed: 29 July 2011
Section: 8 Glove protection.	Changed: 29 July 2011
Section: 8 Ventilation procedures.	Changed: 29 July 2011
Section: 11 Dermal toxicity.	Changed: 29 July 2011
Section: 11 Eye irritation.	Changed: 29 July 2011
Section: 11 Inhalation toxicity.	Changed: 29 July 2011
Section: 11 Respiratory irritation.	Changed: 4 August 2011
Section: 11 Skin irritation.	Changed: 29 July 2011
Section: 12 Bioconcentration	Changed: 29 July 2011
Section: 15 EU EINECS.	Changed: 3 December 2010
Section: 16 HMIS codes.	Changed: 1 August 2011
Section: 16 NFPA Codes.	Changed: 1 August 2011
Section: 16 Principal hazards.	Changed: 4 August 2011