MATERIAL SAFETY DATA SHEET

SECTION 1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

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SUBSTANCE: LUBRIPLATE Gear Shield Extra Heavy (Aerosol) MSDS No. - 0892150152063

TRADE NAMES/SYNONYMS:

PRODUCT USE: Petroleum lubricating grease

CREATION DATE: 11/05/2007 **REVISION DATE:** 10/11/2012

SECTION 2 COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENT: Heptane CAS NUMBER: 142-82-5 EC NUMBER (EINECS): 205-563-8 PERCENTAGE: 20-25

COMPONENT: Liquefied petroleum gas CAS NUMBER: 68476-86-8 EC NUMBER (EINECS): 270-704-2 PERCENTAGE: 15-20

COMPONENT: Light petroleum distillates CAS NUMBER: 64742-47-8 EC NUMBER (EINECS): 265-149-8 PERCENTAGE: 15-20

COMPONENT: Heavy hydrotreated naphthenic distillates (petroleum) CAS NUMBER: 64742-52-5 EC NUMBER (EINECS): 265-155-0 PERCENTAGE: 10-15

COMPONENT: Residual oils (petroleum), solvent dewaxed CAS NUMBER: 64742-62-7 EC NUMBER (EINECS): 265-166-0 PERCENTAGE: 5-10

COMPONENT: Petroleum asphalt **CAS NUMBER:** 8052-42-4 COMPONENT: Petroleum hydrocarbon CAS NUMBER: NA EC NUMBER (EINECS): NA PERCENTAGE: 2-5

COMPONENT: Zinc oxide CAS NUMBER: 1314-13-2 EC NUMBER (EINECS): 215-222-5 PERCENTAGE: 2-5

COMPONENT: 12 hydroxystearic acid CAS NUMBER: 106-14-9 EC NUMBER (EINECS): 203-366-1 PERCENTAGE: 2-5

COMPONENT: Carbon black CAS NUMBER: 1333-86-4 EC NUMBER (EINECS): 215-609-9 PERCENTAGE: 0-2

COMPONENT: Inedible animal grease CAS NUMBER: 68153-81-1 EC NUMBER (EINECS): 268-896-8 PERCENTAGE: 0-1

COMPONENT: Lithium hydroxide monohydrate CAS NUMBER: 1310-66-3 EC NUMBER (EINECS): not assigned PERCENTAGE: 0-1

COMPONENT: Petroleum hydrocarbon CAS NUMBER: 64742-58-1 EC NUMBER (EINECS): 265-161-3 PERCENTAGE: 0-1

NOTE: The IP 346 value of the mineral oil is less than 3%

SECTION 3 HAZARDS IDENTIFICATION

POTENTIAL HEALTH EFFECTS: INHALATION: SHORT TERM EXPOSURE: Irritation LONG TERM EXPOSURE: Lung damage SKIN CONTACT: SHORT TERM EXPOSURE: Irritation LONG TERM EXPOSURE: Irritation, skin disorders EYE CONTACT: SHORT TERM EXPOSURE: Irritation LONG TERM EXPOSURE: No information available INGESTION: SHORT TERM EXPOSURE: Diarrhea, difficulty breathing LONG TERM EXPOSURE: no information on significant adverse effects

Effects of overexposure: Inhalation is the most likely method of exposure. Minimal effects are expected at levels below the TLV of components. Dizziness, drowsiness, coughing, nasal or throat irritations at higher levels. LPG may act as a simple asphyxiant without other significant physiologic effects if the oxygen content is low. It is reported that overexposure can cause liver abnormalities, kidney, lung and spleen damage in test animals.

HAZARDOUS MATERIAL IDENTIFICATION SYSTEM (HMIS):

Health – 1 Flammability – 4 Reactivity – 0

Not a Controlled Product under (WHMIS) – Canada

Special Protection: See Section 8

SECTION 4 FIRST AID MEASURES

INHALATION: Remove to fresh air. If breathing has stopped, administer artificial respiration. Get medical help immediately.

SKIN CONTACT: Remove any contaminated clothing and wash with soap and warm water.

EYE CONTACT: Flush with clear water for 15 minutes or until irritation subsides. If irritation persists, consult a physician.

INGESTION: If ingested, call a physician immediately. Do not induce vomiting.

SECTION 5 FIRE FIGHTING MEASURES

FIRE AND EXPLOSION HAZARDS: Fire hazard

EXTINGUISHING MEDIA: Foam, Dry Chemical, Carbon Dioxide or Water Spray (Fog)

SPECIAL FIRE FIGHTING PROCEDURES: Keep containers cool. Use air-supplied breathing equipment for enclosed or confined spaces. Use shielding to protect personnel against bursting containers.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Do not spray near open flame. At elevated temperatures (over 54 C), aerosol containers may vent, burst, or rupture.

SECTION 6 ACCIDENTAL RELEASE MEASURES

OCCUPATIONAL RELEASE: Remove sources of ignition, ventilate area. Use appropriate safety equipment to enter area. Allow time for vapors to be below their TLV. Add oil absorbent and clean area. Keep petroleum products our of sewers and water courses.

SECTION 7 HANDLING AND STORAGE

STORAGE: Store in cool, dry area out of direct sunlight. Do not puncture or incinerate, or heat full or empty containers above 54 C.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE LIMITS: OIL MIST IN AIR (Not Encountered in Normal Usage): 5 mg/m³ UK OES TWA 10mg/m³ UK OES STEL

HEPTANE:

400 ppm PEL

LIQUEFIED PETROLEUM GAS: 1,800 ppm PEL

LIGHT PETROLEUM DISTILLATES: 500 ppm PEL

VENTILATION: Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

EYE PROTECTION: Wear splash resistant safety goggles. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

CLOTHING: Wear appropriate chemical resistant clothing.

GLOVES: Wear appropriate chemical resistant (nitrile) gloves.

RESPIRATOR: Need approved organic vapor mask if TLV is exceeded.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: aerosol APPEARANCE: smooth COLOUR: black/gray PHYSICAL FORM: aerosol mist **ODOR:** solvent odor **BOILING POINT:** not available FREEZING POINT: not available FLASH POINT: propellant - <-18 C LOWER FLAMMABLE LIMIT: not determined **UPPER FLAMMABLE LIMIT:** not determined **AUTO IGNITION:** not available VAPOUR PRESSURE: aerosol at 54 C - 115 psig VAPOR DENSITY (air=1): >1 **SPECIFIC GRAVITY (water=1):** 0.98 (of product) **DENSITY:** not available WATER SOLUBILITY: insoluble **pH:** not available **VOLATILITY:** not available **ODOR THRESHOLD:** not available **EVAPORATION RATE (Butyl acetate = 1):** faster **VISCOSITY:** not available **COEFFICIENT OF WATER/OIL DISTRIBUTION:** not available

SECTION 10 STABILITY AND REACTIVITY

REACTIVITY: Stable at normal temperatures and pressures

CONDITIONS TO AVOID: Avoid spraying into open flame or onto red-hot surfaces.

INCOMPATIBLES: Strong oxidants

HAZARDOUS DECOMPOSITION:

Thermal decomposition products or combustion: may form carbon monoxide

POLYMERISATION: Will not polymerise.

SECTION 11 TOXICOLOGICAL INFORMATION

Heptane: TOXICITY DATA: No data available

Liquefied petroleum gas: TOXICITY DATA: No data available

Light petroleum distillates: TOXICITY DATA: No data available Heavy hydrotreated naphthenic distillates (petroleum): TOXICITY DATA: Low order of dermal and oral toxicity

Petroleum hydrocarbons: TOXICITY DATA: Greater than 2,000 mg/kg oral-rat LD50

Petroleum asphalt: TOXICITY DATA: No data available

Residual oils (petroleum), solvent dewaxed: TOXICITY DATA: No data available

Zinc oxide: TOXICITY DATA: No data available

12 hydroxystearic acid: TOXICITY DATA: Greater than 5 g/kg oral-rat LD50

Carbon black: TOXICITY DATA: Greater than 8,000 mg/kg oral-rat LD50

Inedible animal grease: TOXICITY DATA: No data available

Lithium hydroxide monohydrate: TOXICITY DATA: 210 mg/kg oral-rat LD50

Petroleum hydrocarbon: TOXICITY DATA: No data available

SECTION 12 ECOLOGICAL INFORMATION

Not available

SECTION 13 DISPOSAL CONSIDERATIONS

Dispose in accordance with all applicable regulations

SECTION 14 TRANSPORT INFORMATION

LAND TRANSPORT ADR: No classification assigned.

LAND TRANSPORT RID: No classification assigned.

AIR TRANSPORT IATA: ID 8000, CONSUMER COMMODITY, CLASS 9, PACKING INSTRUCTIONS – Y963

AIR TRANSPORT ICAO: ID 8000, CONSUMER COMMODITY, CLASS 9, PACKING INSTRUCTIONS – Y963

MARITIME TRANSPORT IMDG: UN 1950, AEROSOLS (LTD. QTY.), CLASS 2.1, EmS NO. F-D, S-U, ERG NO. 126

SECTION 15 REGULATORY INFORMATION

EUROPEAN REGULATIONS: EC CLASSIFICATION (CALCULATED): N Risk Phrases: R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

SARA/TITLE III, Section 313 Status – Zinc Compounds <3%

SECTION 16 OTHER INFORMATION

The above information is furnished without warranty, expressed or implied, except that it is accurate to the best knowledge of LUBRIPLATE Lubricants Company. The data on these sheets relates only to the specific material designated herein. LUBRIPLATE Lubricants Company assumes no legal responsibility for use or reliance upon this data.