MATERIAL SAFETY DATA SHEET

SECTION 1: Identification of the Substance/Mixture and of the Company/Undertaking

1.1 Product identifier

Product Name:	**LUBREX REFROL PS-2 VG-32**
Product Code:	00609
SDS No.:	LU00609
Product Type:	Liquid

1.2 Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

Use of the Substance / Mixture:	REFRIGERATION OIL For specific application advice see appropriate Technical Data Sheet or consult our company representative.

1.3 Details of the Supplier of the Safety Data Sheet

Supplier:	Lubrex FZC, P.O 42438, Hamriyah Free Zone, Sharjah United Arab Emirates
Supplier Phone & Email Address:	Phone: +971 6 526 1200 Email: info@lubrex.net
Date of Issue	01-Jan-2023
Date of Revision	01-Jan-2025
Prepared by:	Lubrex FZC

1.4 Emergency Telephone Number

Emergency Telephone Number:	United Arab Emirates, Government of Sharjah, Hamriyah Free Zone Authority, SAFETY PH NO. +971 6 526 1666 (24x7) EMERGENCY PH NO. +971 6 526 2111 (24x7)

SECTION 2: Hazard Identification

2.1 Classification of the Substance / Mixture

Substance / Mixture:	Mixture
	Highly refined base oil (IP 346 DMSO extract < 3%).
	This product does not contain any hazardous ingredients at or above regulated thresholds.

2.2 Label Elements

Signal Word:	No signal word.
Hazard Statements:	No known significant effects or critical hazards.
Precautionary Statements:	
Prevention	Not applicable.
Response	Not applicable.
Storage	Not applicable.
Disposal	Not applicable.
Supplemental Label Elements:	Not applicable.
Special Packaging Requirements:	
Containers to be fitted with child-resistant fastenings	Not applicable.
Tactile Warning of Danger:	Not applicable.

2.3 Other Hazards

Other Hazards which do not Result in Classification:	Defatting to the skin. USED REFRIGERATION OIL Used oil may contain hazardous components, which have the potential to cause skin cancer. See Toxicological Information, section 11 of this Safety Data Sheet.

SECTION 3: Composition/Information on Ingredients

COMPONENTS	*CAS NUMBER*	*AMOUNT*

Base Oil	*64742-65-0* *64742-54-7* *68037-01-4*	*70 % - 90 %*
Performance Additives	*Mixture*	*10% - 30%*

SECTION 4: First Aid Measures

4.1 Description of First Aid Measures

Eye Contact:

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes.
Eyelids should be held away from the eyeball to ensure thorough rinsing. Check for and remove any contact lenses. Get medical attention.

Skin Contact:

Wash skin thoroughly with soap and water or use recognized skin cleanser. Remove contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention if irritation develops.

Ingestion:

Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if Symptoms occur.

Inhalation:

If inhaled, remove to fresh air. Get medical attention if symptoms appear. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Protection of First Aiders:

No action shall be taken involving any personal risk or without suitable training.

4.2 Most Important Symptoms and Effects, Both Acute and Delayed

See Section 11 for more detailed information on health effects and symptoms.

4.3 Indication of Immediate Medical Attention and Special Treatment Needed

Notes to Physician:	See Section 11 for more detailed information on health effects and symptoms.

SECTION 5: Fire Fighting Measures

5.1 Extinguishing Media

Suitable Extinguishing Media	In case of fire, use foam, dry chemical or carbon dioxide extinguisher or spray.
Unsuitable Extinguishing Media	Do not use water jet.

5.2 Special Hazards Arising from Substance / Mixture

Hazards from the Substance or Mixture	In a fire or if heated, a pressure increase will occur and the container may burst.
Hazardous Combustion Products	Combustion products may include the following: Carbon Oxides (CO, CO2) (carbon monoxide, carbon dioxide)

5.3 Advice for Fire Fighters

Special precautions for fire-fighters	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Special protective equipment for fire-fighters	Fire fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for firefighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Floors may be slippery; use care to avoid falling. Put on appropriate personal protective equipment.
For emergency responders	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For nonemergency personnel".

6.2 Environmental Precautions

Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 Methods and Material for Containment and Cleaning Up

Small Spill	Stop leak if without risk. Move containers from spill area. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Large Spill	Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, watercourses, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor.

6.4 Reference to Other Sections

See Section 1 for emergency contact information.
See Section 5 for firefighting measures.
See Section 8 for information on appropriate personal protective

equipment.
See Section 12 for environmental precautions.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and Storage

7.1 Precautions for safe handling

Protective measures	Put on appropriate personal protective equipment.
Advice on general occupational hygiene	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Wash thoroughly after handling. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for Safe Storage, Including Any Incompatibilities

Store in accordance with local regulations. Store in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10). Keep away from heat and direct sunlight. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Store and use only in equipment/containers designed for use with this product. Do not store in unlabeled containers.

7.3 Specific and End Use(s) Recommendations

See section 1.2 and Exposure scenarios in annex, if applicable.

SECTION 8: Exposure Controls / Personal Protection

8.1 Control Parameters

Occupational Exposure Limits	No exposure limit value known measures. Whilst specific OELs for certain components may be shown in this section, other components may be present in any mist, vapor or dust produced. Therefore, the specific OELs may not be applicable to the product as a whole and are provided for guidance only.
Recommended Monitoring Procedures	If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.
Derived No Effect Level	No DNELs/DMELs available
Predicted No Effect Concentration	No PNECs available.

8.2 Exposure Controls

Appropriate Engineering Controls	Provide exhaust ventilation or other engineering controls to keep the relevant airborne concentrations below their respective occupational exposure limits. All activities involving chemicals should be assessed for their risks to health, to ensure exposures are adequately controlled. Personal protective equipment should only be considered after other forms of control measures (e.g. engineering controls) have been suitably evaluated.

Individual protection measures	Personal protective equipment should conform to appropriate standards, be suitable for use, be kept in good condition and properly maintained. Your supplier of personal protective equipment should be consulted for advice on selection and appropriate standards. For further information contact your national organization for standards. The final choice of protective equipment will depend upon a risk assessment. It is important to ensure that all items of personal protective equipment are compatible.
Hygiene measures	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Ensure that eyewash stations and safety showers are close to the workstation location.
Respiratory Measures	Respiratory protective equipment is not normally required where there is adequate natural or local exhaust ventilation to control exposure. In case of insufficient ventilation, wear suitable respiratory equipment. The correct choice of respiratory protection depends upon the chemicals being handled, the conditions of work and use, and the condition of the respiratory equipment. Safety procedures should be developed for each intended application. Respiratory protection equipment should therefore be chosen in consultation with the supplier/manufacturer and with a full assessment of the working conditions.
Eye / Self Protection	Safety glasses with side shades
Skin Protection	
Hand Protection	General Information: Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. The correct choice of protective gloves depends upon the chemicals being handled, and the conditions of work and use. Most gloves provide protection for only a limited time before they must be discarded and replaced (even the best chemically resistant gloves will break down after repeated chemical exposures). Gloves should be chosen in consultation with the supplier / manufacturer and taking account of a full assessment of the working conditions.

Recommended: Nitrile Gloves

Breakthrough time:
Breakthrough time data are generated by glove manufacturers under laboratory test conditions and represent how long a glove can be expected to provide effective permeation resistance. It is important when following breakthrough time recommendations that actual workplace conditions are taken into account. Always consult with your glove supplier for up-to-date technical information on breakthrough times for the recommended glove type. Our recommendations on the selection of gloves are as follows:

Continuous contact:
Gloves with a minimum breakthrough time of 240 minutes, or >480 minutes if suitable gloves can be obtained. If suitable gloves are not available to offer that level of protection, gloves with shorter breakthrough times may be acceptable as long as appropriate glove maintenance and replacement regimes must be determined and rigorously followed.

Note: Depending on the activity being conducted, gloves of varying thickness may be required for specific tasks.

For Example:

- Thinner gloves (down to 0.1 mm or less) may be required where a high degree of manual dexterity is needed. However, these gloves are only likely to give short duration protection and would normally be just for single use applications, then disposed of.

- Thicker gloves (up to 3 mm or more) may be required where there is a mechanical (as well as a chemical) risk i.e. where there is abrasion or puncture potential.

Skin and Body:

Use of protective clothing is good industrial practice. Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Cotton or polyester/cotton overalls will only provide protection against light superficial contamination that will not soak through to the skin.

	Overalls should be laundered on a regular basis. When the risk of skin exposure is high (e.g. when cleaning up spillages or if there is a risk of splashing) then chemical resistant aprons and/or impervious chemical suits and boots will be required.
Refer to Standards	Respiratory protection: EN529 Gloves: EN420, EN374 Eye protection: EN166
Environmental Exposure Controls	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and Chemical Properties

9.1 Information on Basic Physical and Chemical Properties

Appearance	
Physical State	Liquid
Color	Light Amber
Odour	Typical Petroleum
Odour threshold	Not Available
pH	Not Available
Melting point/freezing point	Not Available
Initial boiling point and boiling range	Not Available
Pour point	Max -9°C
Flash point	>180°C
Evaporation rate	Not Available
Flammability (solid, gas)	Not Available
Upper/lower flammability or	

explosive limits	Not Available
Vapor pressure	Not Available
Vapor density	Not Available
Relative density	0.835 – 0.90 g/cm3
SP. Gravity @15°C/ 60°F	Insoluble in water.
Solubility	Not Available
Partition coefficient:	Not Available
Auto-ignition temperature	Not Available
Decomposition temperature	Kinematic Viscosity 32.0 cSt @ 40°C/104°F
Viscosity	Not Available
Explosive properties	Not Available
Oxidizing properties	

9.2 Other Information

No Additional Information

SECTION 10: Stability and Reactivity

10.1 Reactivity

No specific test data available for this product. Refer to Conditions to avoid and Incompatible materials for additional information.

10.2 Chemical Stability

This product is stable.

10.3 Possibility of Hazardous Reactions

Under normal conditions of storage and use, hazardous reactions will not occur.
Under normal conditions of storage and use, hazardous polymerization will not occur.

10.4 Conditions to Avoid

Avoid all possible sources of ignition (spark or flame).

10.5 Incompatible Materials

Reactive or incompatible with Oxidizing Materials

10.6 Hazardous Decomposition Products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological Information

11.2 Information on Toxicological Effects

Acute Toxicity Estimates	**Route**	**ATE Value**
Petroleum derived calcium salt 61789-86-4	Oral	> 5000mg/kg
	Dermal	> 4000 mg/kg
	Inhalation (dusts and mists)	418.6 mg/l

Information on the likely routes of exposure	Routes of entry anticipated: Dermal, Inhalation.

Potential Acute Health Effects

Inhalation	Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
Ingestion	No known significant effects or critical hazards.
Skin Contact	Defatting to the skin. May cause skin dryness and irritation.
Eye Contact	No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation	No specific data

Ingestion	No specific data
Skin Contact	Adverse symptoms may include irritation, dryness, cracking
Eye Contact	No specific data

Delayed and immediate effects and also chronic effects from short and long term exposure	Over exposure to the inhalation of airborne droplets or aerosols may cause irritation of the respiratory tract.
Inhalation/Ingestion	Ingestion of large quantities may cause nausea and diarrhea.
Skin Contact	Prolonged or repeated contact can defat the skin and lead to irritation and/or dermatitis.
Potential Chronic Health Effects	Potential risk of transient stinging or redness if accidental eye contact occurs.
Carcinogenicity	No know significant effects or critical hazards.
Mutagenicity	No know significant effects or critical hazards.
Developmental Effects	No know significant effects or critical hazards.
Fertility Effects	No know significant effects or critical hazards.

SECTION 12: Ecological Information

12.1 Toxicity

Environmental Hazard	Not classified as dangerous.

12.2 Persistence and Degradability

Partially biodegradable.

12.3 Bio Accumulative Potential

This product is not expected to bio accumulate through food chains in the environment.

12.4 Mobility in Soil

Soil / Water partition coefficient (KOC)	Not available
Mobility	Spillages may penetrate the soil causing ground water contamination

12.5 Result of PBT and vPVB Assessment

PBT	Not applicable
vPVB	Not applicable

12.6 Other Adverse Effects

Other ecological information	Spills may form a film on water surfaces causing physical damage to organisms. Oxygen transfer could also be impaired.

SECTION 13: Disposal Considerations

13.1 Waste Treatment Methods

Methods of Disposal: Where possible, arrange for product to be recycled. Dispose of via an authorized person/ licensed waste disposal contractor in accordance with local regulations.

Waste Code	Waste Designation
13 02 08*	Other engine, gear, and lubricating oils

	However, deviation from the intended use and/or the presence of an potential contaminants may require an alternative waste disposal code to be assigned by the end user.
Packing Methods of Disposal	Where possible, arrange for product to be recycled. Dispose of via an authorized person/ licensed waste disposal contractor in accordance with local regulations.
Special Precautions	This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport Information

	ADR/RID	ADN	IMDG	IATA
14.1 UN Number	Not regulated	Not regulated	Not regulated	Not regulated
14.2 UN Proper Shipping Name	-	-	-	-
14.3 Transport Hazard Class	-	-	-	-
14.4 Packing Group	-	-	-	-
14.5 Environmental Hazards	No	No	No	No
Additional Information	-	-	-	-
14.6 Special Precautions for User	Not available			

SECTION 15: Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorization	None of the components are listed
Substances of very high concern	Not applicable

Annex XVII - Restrictions on the manufacturer, placing on the market and use of certain dangerous substances, mixtures and articles.

Other Regulations	
REACH Status	The company, as identified in Section 1, sells this product in the EU in compliance with the current requirements of REACH.
United States Inventory (TSCA 8b)	
Australia Inventory (AICS)	All components are listed or exempted.
Canada Inventory	At least one component is not listed.
China Inventory (IECSC)	At least one component is not listed.
Japan Inventory (ENCS)	At least one component is not listed.
Korea Inventory (KECI)	At least one component is not listed.
Philippines Inventory (PICCS)	At least one component is not listed.
	At least one component is not listed.

15.2 Chemical Safety Assessment

This product contains substances for which Chemical Safety Assessments are still required.

SECTION 16: Other Information

Abbreviations and Acronyms

ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE = Acute Toxicity Estimate
BCF = Bio Concentration Factor
CAS = Chemical Abstracts Service
CLP = Classification, Labeling and Packaging Regulation [Regulation (EC) No. 1272/2008]
CSA = Chemical Safety Assessment
CSR = Chemical Safety Report
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
DPD = Dangerous Preparations Directive [1999/45/EC]
DSD = Dangerous Substances Directive [67/548/EEC]
EINECS = European Inventory of Existing Commercial chemical Substances
ES = Exposure Scenario
EUH statement = CLP-specific Hazard statement
EWC = European Waste Catalogue
GHS = Globally Harmonized System of Classification and Labeling of Chemicals
IATA = International Air Transport Association

IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
OECD = Organization for Economic Co-operation and Development
PBT = Persistent, Bio Accumulative and Toxic
PNEC = Predicted No Effect Concentration
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
RRN = REACH Registration Number
SADT = Self-Accelerating Decomposition Temperature
SVHC = Substances of Very High Concern
STOT-RE = Specific Target Organ Toxicity - Repeated Exposure
STOT-SE = Specific Target Organ Toxicity - Single Exposure
TWA = Time weighted average
UN = United Nations
UVCB = Complex hydrocarbon substance
VOC = Volatile Organic Compound
vPvB = Very Persistent and Very Bio Accumulative

Full text of abbreviated H statements	H 304	May be fatal if swallowed and enters airways.
	H 413	May cause long lasting harmful effects to aquatic life.
Full text of classifications [CLP/GHS]	Aquatic Chronic 4, H413	LONG-TERM AQUATIC HAZARD - Category 4
	Asp. Tox. 1, H304	ASPIRATION HAZARD - Category 1

Full text of abbreviated R Phrases	R53- May cause long-term adverse effects in the aquatic environment.
Full text of classifications [DSD/DPD]	Not Applicable

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Prepared by	

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