

MATERIAL SAFETY DATA SHEET

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME **HYDRAULIC/TURBINE/COMPRESSOR/HEAT Tr OILS** ISO ' **ALL**

Product Use Clos Functional fluids/Hydraulic/Compressor/Turbine lubricants **Product Number**

Uses advised against: No additional information available

Company Identification

United Grease and Lubricants Co LLC, PO Box 2685, Ajman, United Arab Emirates. Www.unitedgrease.com

Transportation Emergency Response	Health Emergency	Product Information
(971)(54) 2171575	(971)(54)2171575	(971)(54)2171575

SECTION 2 HAZARDS IDENTIFICATION

Classification Not classified as hazardous according to 29 CFR 1910.1200 (2012)

Hazards Not Otherwise Classified Not applicable

Adverse Physico chemical, human health and environmental effects: None to be reported, according to the present EU regulations. For specific information about the toxicological/ecotoxicological properties and classification of this product, see section 11 and 12

EC Index No	N/A	EC No	N/A	CAS No	N/A	REACH Registration No	N/A
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SECTION 2 Label Elements

Labelling according to Regulation (EC) No. 1272/2008 (CLP)

EUH Statements EUH 210 - Safety data sheet available on request

Labelling according to Directive 67/548/EEC or 1999/45/EC Not classified

Full text of H and EUH statements: See Section 16 and 11

Other hazards (not relevant for classification)

Physical/Chemical This product is combustible, but not classified as flammable. The creation of flammable vapour mixtures takes place at temperatures which are higher than normal ambient levels

Health If the product is handled or used at high temperatures, contact with hot product or vapours may cause burns. Any material in case of accidents involving pressurised circuits and the like, may be accidentally injected under the skin, even without external damage. In such a case the victim should be brought to an hospital as soon as possible, to get specialized medical treatment. Do not wait for symptoms to develop

Environment
Contaminants A potential risk may arise from the release of hydrogen sulfide, when the product is stored or handled at high temperatures. H2S may accumulate in the tanks or other confined spaces, with danger to the workers that enter the spaces. In these cases, overexposure to H2S may cause irritation to airways nausea, dizziness, loss of consciounsess and death

This substance/mixture does not meet the PBT criteria of REACH regulation, , Annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, Annex XIII

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS (SUBSTANCES)

Not applicable

3.2 Mxtures Mineral base oil, severly refined additives
all the mineral base oils contained in this product have a value of <3% wt of DMSO extract, according to IP 346/92 (note L Dor 94/69/EC Reg (CE) 1272/2008, this product must be regarded as non carcinogenic Substance with occupational exposure limits for some EU countries, affecting the category of mineral oils - contact the company rep.

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Hazardous ingredients and/or with relevant occupational exposure limits

Name	Product Identifier	%	Classification according to Directive 67/548/EEC
Lubricating oils (petroleum), C24-50, solvent extracted, dewaxed and hydrogenated	CAS 101316-72-7 EC 309-877-7 ECINo. 649-530-00-X REACH No. 01-2119489969-	>99	Not classified

Full text of H and EUH statements: See section 16

SECTION 4 - First Aid Measures

General	In case of spontaneous vomiting, transport the victim to a hospital, to verify the possibility that the product has been aspirated into the lungs
Inhalation	In case of disturbances owing to inhalation of vapours or mists, remove the victim from exposure, keep at rest; if necessary, seek medical attention, see also point 4.3 If breathing is difficult, give oxygen if possible or assisted ventilation. Give external cardiac massage
Skin Contact	Take off contaminated clothing and shoes. Wash thoroughly with soap and water. If inflammation or irritation persists, seek medical advice. In case of contact with hot product, cool affected part with plenty of cold water, and cover with gauze or clean cloth. Call a doctor to bring to a hospital. Do not use salts or ointments, unless directed by the doctor. Body hypothermia must be avoided. Do not put ice on the burn
Eye contact	Rinse eyes thoroughly for at least 15 minutes. Keep eyelids well apart. If irritation persists, seek medical advice. In case of contact with hot product, cool affected part with plenty of cold water, and cover with gauze or clean cloth. Call a doctor or bring to a hospital. Do not use salts or ointments, unless directed by doctor. Remove contact lenses, if present and easy to do so
Ingestion	Do not use induce vomiting to avoid aspiration into the lungs. If the person is conscious, rinse mouth with water without swallowing. Keep at rest, call for medical assistance or bring to a hospital. If the casualty is unconscious, place in the recovery position. In case of spontaneous vomiting, keep head low, to avoid the risk of aspiration into the lungs

Most important symptoms and effects, both acute and delayed

Symptoms/injuries (general indications)	Prolonged and repeated skin contact may cause redness, irritation and dermatitis
Systems/Injuries after inhalation	This product has a low vapour pressure, and in normal conditions at ambient temperature the concentration in the air is negligible. A significant concentration may be built up only if the product is used at high temperature, or, in case of sprays and mists. In these cases overexposure to vapours may cause irritation to airways, nausea and dizziness. Symptoms include drowsiness, weakness, headache and dizziness, nausea, vomiting and dimming of vision
Systems/Injuries after skin contact	Prolonged or repeated skin contact may cause a redness, irritation and dermatitis, due to a defatting effect. Contact with hot product may cause thermal burns
Systems/Injuries after eye contact	Contact with eyes may cause temporary reddening and irritation Contact with hot product or vapours may cause burns
Symptoms/injuries after ingestion	Accidental ingestion of small quantities of the product may cause nausea, discomfort and gastric disturbances.
Symptoms/injuries upon intravenous administration	No information available
Chronic symptoms	None to be reported, according to the present classification criteria

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Indication of any immediate medical attention and special treatment needed

If there is any suspicion of inhalation of H₂S. The casualty should be sent immediately to hospital. Immediately begin artificial if breathing has ceased. Administer oxygen if necessary. Seek medical attention in all cases especially if the casualty has an altered state of consciousness or if symptoms do not resolve and in case of serious burns

SECTION 5 - FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA Dry powder, CO₂, water spray, other extinguishing gases (as per regulation)
These means should be used by trained personnel only.

UNSUITABLE Do not use a heavy water jets. They could cause splattering, and spread the fire

Special hazards arising from the substance or mixture

Fire Hazard The product is combustible, but not classified as flammable. The creation of flammable vapour mixtures takes place at temperatures which are higher than normal ambient levels

Explosion Hazard In case of losses from pressurised circuits, the sprays may form mists. Take into account that in this case the lower explosion limit for mists is about 45g/m³ of air

Hazardous decomposition products in case of fire

Incomplete combustion releases dangerous carbon monoxide, carbon dioxide and other toxic gases Nox, H₂S, Sox, oxygenated compounds (aldehydes etc.; Pox XNoX, CaOx

Advice for firefighters

Firefighting instructions Shut off source of product, if possible. If possible, move containers and drums away from danger area. Spilled product which is not burning should be covered with sand or foam. Use water sprays to cool containers and surfaces exposed to the flames. If the fire cannot be controlled, evacuate area

Special protective equipment for firefighters

Wear personal protection equipment (see chapter 8).
Self contained breathing apparatus

Other information In case of fire, do not discharge residual product, waste materials and run off water. Collect separately and use a proper treatment

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Stop or contain leak at the source, if safe to do so. Eliminate all ignition sources if safe to do so (e.g. electricity, sparks, fires, flares). Avoid contact with released material

For Non emergency Personnel

Protective Equipment See section 8

Emergency Procedures Keep non-involved personnel away from the area of spillage. Alert emergency personnel. Except in case of small spillages, the feasibility of any actions should always be assessed and advised, if possible, by a trained, competent person in charge of managing the emergency.

For Emergency Responders

Protective equipment Standard EN 469.

Small spillages: normal antistatic working clothes are usually adequate.
Large spillage: full body suit of chemically resistant and antistatic material necessary heat resistant and insulated. Work gloves providing adequate chemical resistance, specifically to aromatic hydrocarbons. Gloves made of PVA are not water-resistant, and are not suitable for emergency use.

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If contact with hot product is possible or anticipated, gloves should be heat-resistant and thermally insulated. Antistatic non skid safety shoes or boots, chemical resistant, if necessary heat resistant and insulated. Work helmet, antistatic non skid safety shoes or boots.

Respiratory protection: A half or full-face respirator with filter for organic vapours (and when applicable for H₂S). A Self Contained Breathing Apparatus (SCBA) can be used according to the extent of spill and predictable amount of exposure. If the situation cannot be completely assessed, or if an oxygen deficiency is possible, only SCBA's should be used. Notify local authorities according to relevant regulations.

Emergency Procedures

Environmental precautions

Do not let the product flow into sewers or water courses, or in any way contaminate the environment. In case of contamination of environment compartments (soil, subsoil, surface or underground waters), remove contaminated soil when possible, and in any case treat all involved compartments in accordance with local regulations. The site should have a spill plan to ensure that adequate safeguards are in place to minimize the impact of episodic releases.

Methods and material for containment and cleaning up

For containment

Contain spilled liquid with sand, earth or other suitable absorbents. Recover free liquid and waste materials in suitable waterproof and oil resistant containers. Clean contaminated area. Dispose of according to local regulations. Water: Confine the spillage. Remove from surface by skimming or suitable floating absorbents. Collect recovered product and other waste materials in suitable waterproof, oil resistant containers. Recover or dispose of according to local regulations.

Methods for cleaning up

Transfer recovered product and other materials to suitable tanks or containers and store/dispose according to relevant regulations

Other Information

Recommended measures

are based on the most likely spillage scenarios for this material; however, local conditions (wind, air temperature, wave/current direction and speed) may significantly influence the choice of appropriate actions.

Local regulations may also prescribe or limit actions to be taken.

Reference to other sections

for further information, refer to section 8 and 13

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling

This material is combustible, but will not ignite readily. Provide adequate ventilation. Use adequate PPE as needed.

Ensure that all relevant regulations regarding handling and storage of flammable products are followed. DO not use compressed air for filling, discharging or handling operations. Keep away from heat/sparks/open flames/hot surfaces. Use and store only outdoors or in a well ventilated area. During transfer and mixing operations, ensure that all equipment is correctly grounded. Avoid the build up of electric charges

Provide good ventilation in process area to prevent formation of vapour

Keep away from sources of ignition No smoking. Store in dry, well ventilated area. Do not breathe fume/mist/vapours

Because of the extremely slippery nature of this material, more care than

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usual must be exercised in material handling practices to keep off all walking surfaces. Floors, walls and other surfaces in the hazard area must be cleaned regularly. Avoid releases to the environment. Emptied containers can contain combustible product residues. Do not cut, weld, drill, burn or incinerate empty containers or drums, unless they have been drained and cleaned. Before entering storage tanks and commencing any operation in a confined area (tunnels), carry out an adequate clean up, and check the atmosphere for oxygen content and flammability

Handling temperatures

0 to 65 deg C

Hygiene Measures

Avoid contact with skin. DO not breathe fume/mist/vapours. DO not ingest. Do not smoke. DO not eat and do not drink during use. Do not clean hands with dirty or oil soaked rags. Do not reuse clothes. If they are still contaminated, keep away from food and beverages

Conditions for safe storage, including any incompatibilities

Storage conditions

Store in dry, well ventilated area. Keep away from open flames, hot surfaces and sources of ignition. Do not smoke.

If product is supplied in containers, keep only in the original container or in a suitable container for this kind of product. Keep containers tightly closed and properly labelled

Incompatible Products

Strong acids, strong oxidants. Strong bases/alkalies

Storage temperatures

0 to 55 deg C

Storage area

Storage area layout, tank design, equipment and operating procedures must comply with the local legislation. Storage installations should be designed with adequate bunds so as to prevent ground and water pollution in case of leaks or spills. Cleaning, inspection and maintenance of internal structure of storage tanks must be done only by properly equipped and qualified personnel as defined by national, local or company regulations.

Package and Containers

If the product is supplied in containers, keep containers tightly closed and properly labelled. Keep only in the original container or in suitable container for this kind of product. Empty containers may contain combustible residues. Do not weld, solder, drill, cut or incinerate empty containers, unless they have been properly cleaned

Packaging Materials

For containers, or container linings use materials specifically approved for use with this product. Recommended materials for containers or container linings use mild steel, stainless steel. Some synthetic materials may be unsuitable for containers or containing linings depending upon the material specifications and intended use.

Specific End Uses

No information available

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

National occupational exposure and biological limit values (US NIOSH, ACGIH AND OSHA)

Mineral base oil

NIOSH REL (TWA) mg/m³ - 5 (mineral oil mist, severely refined)
NIOSH REL (STEL) mg/m³-10 mg/m³
ACGIH TLV-TWA - 5 MG/M³
ACGIH TLV - STEL - 19 mg/m³
OSHA PEL (TWA) - 5 mg/m³

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All hydraulic/compressor/turbine oils

DNEL AND PNEC (additional information)

Long term systemic effects inhalation Not applicable

Lubricating oils (petroleum), C24-50, solvent extracted, dewaxed and hydrogenated (10131607207)

DNEL AND PNEC (Workers)

Long term systemic effects dermal 1.2 mg/kg bodyweight/day

Long term systemic effects inhalation 2.7 mg/m³

Long term local effects inhalation 5.6 mg/m³

DNEL AND PNEC (General population)

Long term systemic effects, oral 0.74 mg/kg bodyweight/day

PNEC oral

PNEC oral (secondary poisoning) 9.33 mg/kg food

Additional information

Note: The derived no effect level (DNEL) is an estimated safe level of exposure that is derived from toxicity data in accord with specific guidance within the European REACH regulations. The DNEL may differ from an Occupational Exposure Limit (OEL) for the same chemical. OELs may be recommended by an individual company, a governmental regulatory body or an expert organization, such as the society committee for occupational exposure limit (SCOEL), or the American conference of governmental industrial hygienists (ACGIH). OELs are considered to be safe exposure levels for a typical worker in an occupational setting for a 8 hour work shift, 40 hour work week, as a time weighted average (TWA) or a 15 minute short term exposure limit (STEL). While also considered to be protective of health, OELs are derived by a process different from that of REACH

EXPOSURE CONTROLS

Appropriate Engineering Controls

Before entering storage tanks and commencing any operation in a confined area, carry out an adequate clean up and check the atmosphere for oxygen content, flammability and the presence of sulfur compounds
See also section 16, Other information

PERSONAL PROTECTIVE EQUIPMENT (for industrial or professional use)

Face shield, Gloves, Protective clothing, safety glasses, safety shoes or boots, dust/aerosol mask

Personal Protective Equipment (Symbol(s)):



Eye/Face Protection

Safety glasses DIN EN 166

Skin Protection

Long sleeved overalls. If necessary, refer to EN 340 and related standards for definition of characteristics and performance according to the risk rating of the area. Wash contaminated clothing before use
for protective gloves include:

Hand Protection

Protective gloves, adequate materials, nitrile (NBR) or PVC with a protection index >5 (permeation time > 240 min). Use gloves respecting all the conditions and within the limits set by the manufacturer. Replace gloves immediately in case of cuts, holes or other signs of damages or degradation
If necessary refer to the EN 374 standards. Thickness of glove min >0,4 mm

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Personal hygiene is a key element for an effective hand care. Gloves must be worn only with clean hands. After wearing of gloves, hands must be carefully washed and dried

Eye protection

When there is a risk of contact with the eyes, use safety goggles or other means of protection(face shield). If necessary refer tonational standards or to the EN 166 standard

Respiratory Protection

No respiratory protection is normally required with sufficient ventilation Independently from other substances action (technical modifications, operating procedures, and other means to limit the exposure of workers) personal protection equipment can be used according to necessity. Open or well ventiated spaces; if product is handled without adequate containment; use full or half face masks with adequate filter for mists and organic vapours. (En 136/140/145). Closed or confined areas (ex tank interiors), the use of protection measures for airways (masks or self contained breathing apparatus) must be assessed according to the specific activity, as well as level and duration of predicted exposure (EN 136/140/145) Combination filter device (DIN EN 141). Combined gas/dust mask with filter type A Filter P (White)

Thermal Hazards

None in normal use conditions

Thermal hazard protection

If contact with hot product is possible, or anticipated, gloves should be heat resistant and thermally insulated

Environmental exposure controls

Stoage areas/installations should be designed with adequate bunds so as to prevent ground and water pollution in case of leaks or spills. Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed Do not discharge the product into the environment.

Consumer exposure controls

Ensure adequate ventilation. No special requirements necessary, if handled at room temp

Hygeine measures

Avoid contact with skin. DO not breathe fume/mist/vapours. DO not ingest Do not smoke. DO not eat and do not drink during use. Donot clean hands with dirty or oil soaked rags. Donot reuse clothes. If they are still contaminated, keep away from food and beverages

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Attention: The data below are typical values and do not constitute a specification

Color	Yellow brown
Physical State	Liquid
Odor	Slight odor of petroleum
Odor Threshold	No data available
pH	Not applicable
Vapor Pressure	≤ 0.1 hPa (20 deg C) mineral oil (D 5191)
Boiling Point	>250 deg C (D 1120)
Solubility	Insoluble in water
Freezing Point	≈- deg C (CAS101316-72-7)
Boiling Point	>200 deg c (D 1160)
FlashPoint	>180 deg c (D 93)
Self ignition temperature	>300 deg C(DIN 51794)

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Density	>0.89 kg/L @ 20°C (Typical)
Viscosity	> 3 to 30 cst at 100 deg C
Log Kow	Not applicable for mixtures
Evaporation Rate	No data available
Decomposition Temperature	No data available
Octanol/Water Partition Coefficient	No data available
VOC Content	0% (EU, CH)
Flammability	No data available
Explosive properties	None
Oxidising properties	None
Explosive limits	None
Lower explosion limit	>45 g/m3 (mineral oil mists)
Upper explosion limit	None
Autoignition temperature	Not determined
Log Kow	Not applicable for mixtures
Relative density	Not determined
Relative vapour density at 20 deg C	Not determined
Particle characteristics	Not determined

Other information

Information with regard to physical hazard classes

No additional information available

Other safety characteristics

Relative evaporation rate (butylacetate=1) Negligible. No other data available

SECTION 10 - STABILITY AND REACTIVITY

Reactivity This mixture does not offer any further hazard, except what is reported in the following paragraphs

Chemical Stability Stable product according to its intrinsic properties

Incompatibility with Other Materials: Strong oxidants and acids

Possibility of Hazardous reactions None (in normal conditions of storage and handling). Contact with strong oxidisers (peroxides, chromates etc) may cause a fire hazard. A mixture with nitrates and other strong oxidisers (chlorates, perchlorates, liquid oxygen) may create an explosive mass
Sensitivity to heat, friction or shock cannot be assessed in advance

Conditions to avoid Keep away from strong oxidants, open flames, hot surfaces and sources of ignition. Avoid buildup of static charge

Hazardous decomposition products In exceptional cases (prolonged storage in tanks contaminated with water and presence of anaerobic bacteria sulfate reducing microbial colonies), the product may undergo a degradation and generate small amounts of sulfur compounds, including H₂S

SECTION 11 - TOXICOLOGICAL INFORMATION (mixture)

Acute toxicity (oral)	Not classified (based on available data, the classification criteria are not met)
Acute toxicity (dermal)	Not classified (based on available data, the classification criteria are not met)
Acute toxicity (inhalation)	Not classified (based on available data, the classification criteria are not met)
Additional information	According to composition

Lubricating oils (petroleum), C24-50, solvent extracted, dewaxed and hydrogenated (10131607207)

LD 50 Oral rat	>5000 mg/kg of body weight (Calculated data)
LD 50 dermal rabbit	>2000 mg/kg of body weight (Calculated data)
LC 50 Inhalation rat	2.18-5.53 mg/l/ (4 hours) (Calculated data)

Skin Corrosion/Irritation Not classified (based on available data, classification criteria are not met)

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	According to composition Prolonged or repeated skincontact may cause reddening, irritation and dermatitis due to defatting effect pH Not applicable
Serious eye damage/irritation	Not classified (based on available data, the classification criteria are not met) pH Not applicable
Respiratory or skin sensitization	Not classified (based on available data, the classification criteria are not met)
Additional information	According to composition Contains amines, C12-C14 tert-alkyl amount contained in the product <0.1%
Germ cell mutagenicity	Not classified (based on available data, the classification criteria are not met)
Additional information	According to composition This product does not conatin any significant amounts of substances classified as mutagenic by the EU (in any case <0.1 wt%)
Carcinogenicity	Not classified (based on available data, the classification criteria are not met)
Additional information	According to composition All the mineral base oils contained in the product have a value of ,3% of DMSO extract, according to IP 346/92 (nota L Dir 94/69/CE)
Reproductive toxicity	Not classified (based on available data, the classification criteria are not met) According to composition This product does not contain any significant amounts of substacnes classified as toxic for reproduction by the EU (In any case ,0.1 wt%)
Specific target organ (Single exposure)	Not classified (based on available data, the classification criteria are not met) According to composition
Specific target organ Repeated exposure	Not classified (based on available data, the classification criteria are not met) According to composition

Mineral base oil, severely refined	
LOAEL (oral, rat, 90 days)	125 mg/kg of body weight/day (OECD TG 408)
LOAEL (dermal, rat/rabbit, 90 days)	100 mg/kg bodyweight/day (mouse OECD 453)
NOAEL (dermal, rat/rabbit, 90 days)	1000-2000 mg/mg bodyweight/ day (OECD 410)
NOAEC (inhalation, rat, vapour, 90 days)	220-1500 mg/m3 (OECD 412)

Aspiration hazard	Not classified (based on available data, the classification criteria are not met)
Potential adverse human health effects and symptoms	Repeated and prolonged skin contact may cause reddening, irritation and dermatitis due to defatting effect. Contact with eyes may cause temporary irritation
Additional information	According to composition
Viscosity	5 to 680 cst at 40 degC

SECTION 12 - ECOLOGICAL INFORMATION

ECOTOXICITY/Ecolory-General	According to the components, and by comparison withother products of the same type and composition, it is expected that this product has a toxicity for aquatic oranisms >199mg/L and must not be regarded as dangerous to the environment
An uncontrolled	release to the environment may nevertheless produce a contamination of different environmental compartments (soil, underground, surface water bodies, aquifers). Handle according to general working hygiene practices to avoid pollution and release into the environment.

Ecology - air This product has low vapour pressure. A significant exposure may happen only

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Ecology water if the product is used at high temperature or in case of sprays/mists
 This product is not soluble in water and floats on water and forms a film on the surface. The damage to aquatic organisms is of mechanical kind (immobilization and entrapment)

Hazardous to the aquatic environment, short term acute: Not applicable

Hazardous to the aquatic environment, long term chronic: Not applicable

All hydraulic/compressor/turbine oils	
LC 50 fish 1	
LC 50 fish 2	
EC50 Daphnia 1	>100 mg/L (calculated data)
NOEC Chronic algae	100 mg/l (21d)
Lubricating oils (petroleum), C24-50, solvent extracted, dewaxed and hydrogenated (10131607207)	
LC 50 fish 1	>100 mg/L (OECD 203)
LC 50 fish 2	
EC50 Daphnia 1	>10000 mg/L (OECD 202)
NOEC (acute)	>100 mg/l (OECD 201)
NOEC chronic fish	>1000 mg/L (CALCULATED)
NOEC chronic crustacea	>1000 mg/L (OECD 211)
PERSISTENCE AND DEGRADABILITY	
All hydraulic/compressor/turbine oils	

Persistence and degradability The most significant constituents of the product should be considered as 'inherently biodegradable', but not as readily biodegradable" and they may be moderately persistent, particularly in anaerobic conditions

Lubricating oils (petroleum), C24-50, solvent extracted, dewaxed and hydrogenated (10131607207)	
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Persistence and degradability The most significant constituents of the product should be considered as 'inherently biodegradable', but not as readily biodegradable" and they may be moderately persistent, particularly in anaerobic conditions

BIO ACCUMULATIVE POTENTIAL	
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All hydraulic/compressor/turbine oils	
Log POW	Not applicable for mixtures
Log Kow	Not applicable for mixtures
Bioaccumulative potential	test methods are not applicable to UVCB stuff

Mobility in Soil	
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All hydraulic/compressor/turbine oils	
Mobility in soil	Not determined

Results of PBT and vPvB assessment	
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ALL KINDS OF GEAR OILS and Mineral base oils, severely refined	
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This substance/mixture does not meet the PBT criteria of REACH regulation, , Annex XIII
 This substance/mixture does not meet the vPvB criteria of REACH regulation, Annex XIII
 Results of PBT-VpVB assessment The components inthis formulation do not meet the criteria for classification as PBT or vPvB. The prodcut should be considered persistent' in the environment according to the REACH Annex XIII criteria (Point 1.1)

Other adverse effects None

Additional information This product has no specific properties for inhibition of bacterial activity. In any case, wastewater containing this

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product should be treated in plants that are suited for the specific purpose

SECTION 13 - DISPOSAL CONSIDERATIONS

Waste treatment methods Do not dispose of the product, either new or used, by dumping on the ground, or discharging into seweres, tunnels, lakes or water courses. Deliver to a qualified official collector

Sewage disposal considerations Do not apply industrial sludge to natural soils;. Sludge should be incinerated, contained or reclaimed Dispose off in a safe manner in accordance with local and national regulations

Product/Packing disposal considerations European Waste Catalogue code (s) (Decision 2001/118/CE): 13 02 05* (mineral based non chlorinated engine, gear and lube oils) This EWC code is only a general indication and takes into account the original composition of the product and its intended use.
The user has the responsibility of choosing the right EWC code, considering the actual use of the product, alterations and contaminations

Additional information Do not cut, weld, bore, burn or incinerate emptied containers, unless they have been cleaned and declared safe

Ecology- waste materials The product as it is does not contain halogenated substances

EURAL Code (EWC) 13 02 05 - Mineral based non chlorinated engine, gear and lubricating oils

SECTION 14 - TRANSPORT INFORMATION

In accordance with ADR/IMDG/IATA/AND/RID

ADR	IMDG	IATA	ADN	RID
UN Number or ID Number				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
UN Proper shipping name				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
Transport hazard class(es)				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
Packing Group				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
Environmental hazards				
regulated	Not regulated	Not regulated	Not regulated	Not regulated

Special precautions for user:

Overland transport Not regulated
Transport by sea Not regulated
Air transport Not regulated
Inland waterway transport Not regulated
Rail transport Not regulated

Transport in bulk according to annex II of MARPOL 73/78 and the IBC Code

IBC Code None

SECTION 15 - REGULATORY INFORMATION (Mixture)

EU Regulations

No REACH Annex XVII restrictions
 No ingredients are included in the REACH candidate list
 Other information, restriction and prohibition regulations

EC No. 1907/2006 EC 1272/2008 67/548/EEC 1999/45/EC 1907/2006 89/931/CEE

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89/654/CEE	89/655/CEE	90/269/CEE	90/270/CEE	90/394/CEE	90/679/CEE
93/88/CEE	95/63/CE	97/42/CE	98/24/CE	99/38/CE	99/92/CE
2001/45/CE	2003/10/CE	2003/18/CE	2012/18/CE	2004/42/CE	98/24/EC
98/25/CE	1005/2009	850/2004	79/117/EEC	649/2012	
VOC Content	0% (EU, CH)				
EURAL Code (EWC)	13 02 05				

National Regulations

National adoption of EU Directives concerning health and safety on the workplace

Relevant national laws of protection of the health of pregnant workers (national adoption of 92/85/EEC_

National adoption of EU directives concerning control of major-accident hazards involving dangerous substances (2012/18/CE). Relevant national laws on prevention of water pollution

Chemical safety assessment

This mixture is classified as not hazardous according to regulation EC 1272/2008 (CLP)

No chemical safety assessment has been carried out

A chemical safety assessment has been carried out for the following components of this mixture:

Lubricating oils (petroleum), C24-50, solvent extracted, dewaxed and hydrogenated (10131607207)

SECTION 16 - OTHER INFORMATION**Indication of Changes Modification as per regulation EC 1907/2006 and 453/2010**

Section	Changed item	Change
1.1	Formula	Modified
2.1	Adverse effects	Modified
2.3	Other hazards	Modified
3	Composition	Modified
8.1	DNEL/DMEL/PNEC values	Modified
9.1	boiling point	Added
9.1	auto ignition temperature	Added
9.1	critical temperature	Added
9.1	critical pressure	Added
9.1	freezing point	Added
11	additional information	Modified
15	water hazard class (WGK) D	Modified
15	WGK remark	Modified
16	other information	Modified
16	indication of changes	Modified

ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT

TLV - Threshold Limit Value	TWA - Time weighted average
STEL - Short term exposure limit	PEL - Permission exposure limit
GHS - Globally Harmonized System	CAS - Chemical abstract service number
AC	IMO/IM
API - American Petroleum Institute	SDS - Safety Data Sheet
HMIS - Hazardous Materials Information System	NFPA - National Fire Protection Association (USA)
DOT - Department of Transport	NTP - National Toxicology Program (USA)
IARC - International agency for research on cancer	OSHA -
NCEL - New chemical exposure limit	EPA - Environmental Protection Agency
SCBA - Self contained breathing apparatus	NA - Not applicable
ND Not available	CSR - Chemical Safety Report
DNEL - Derived No effect Level	DMEL - Derived Minimum Effect Level
EC - 50 - Effective Concentration , 50%	EL50 - Effective Loading, 50%
IC 50 - Inhibition concentration, 50%	LC 50 - Lethal concentration, 50%

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Product **HYDRAULIC/TURBINE/COMPRESSOR/HEAT Tr OILS**

MATERIAL SAFETY DATA SHEET

LD 50 -Lethal dose, 50%	LL50 - Lethal loading, 50%
LOAEL - Low observed adverse effects level	NOEL - No observed effects level
NOAEL No observed adverse effects level	OECD Organization for economic co-op and devmt
PNEC Predicted no effect concentration	PBT - Predicted, bioaccumulative, toxic
STOT - Single Target Organ Toxicity	STOT - RE (above) with repeated exposure
STOT - SE (Above) with single exposure	vPvB - Very persistent, very bioaccumulative
UVCB - substance of unkonw or variable composition, complex reaction products of bio materials	
WAF - Water accommodated fraction	

ADN - European agreement concerning the international carriage of dangerous goods by inward waterways

ADR- European agreement concerning the international carriage of dangerous goods by road

ATE - Acute Toxicity estimate

BCF-Bioconcentration factor

CLP - classification labelling packaging refulation -regulation EC No. 1272/2008

IATA - Internatinal air transport association

IMDG - Internation maritime dangerous goods

NOAEC - no observed adverse effect concentration

NOEC No observed effect concentration

REACH - Registration, authorisation and restriction of chemicals, regulations No 1907/2006

RID - regulation concerning the international carriage of dangerous goods by railways

STP - sewage treatment plant

Data sources This safety data sheet is based on the real characteristics of the components and their combination, taking into account the information provided by the suppliers

Training Advice - Provide adequate training to professional operators for the use of PPEs, according to the information contained in this safety data sheet

Other information: Do not use the product for any purposes that have not been advised by the manufacturer

Full text of R-, H- and EUH-phrases

Acute Tox 4 (Oral)	Acute Toxicity (oral), category 4
Aquatic acute 1	Hazardous to the aquatic environment - acute Hazard, category 1
Aquatic chronic 1	Hazardous to the aquatic environment - CHronic Hazard, category 1
Aquatic chronic 2	Hazardous to the aquatic environment - CHronic Hazard, category 2
Aquatic chronic 3	Hazardous to the aquatic environment - CHronic Hazard, category 3
Aquatic chronic 4	Hazardous to the aquatic environment - CHronic Hazard, category 4
Eye Dam 1	Serious eye damage/eye irritation, category 1
Eye Irrt. 2	Serious eye damage/eye irritation, category 2
Repr. 2	Reproductive toxicity, Category 2
Skin Irrit.2	Skin corrosion/irritation, category 2
Skin Sens. 1B	Sensitisation - Skin, category 1B
H 302	Harmful if swallowed
H 315	Causes Skin Irritation
H 317	May cause an allergic skin reaction
H 318	Causes serious eye damage
H 319	Causes serious eye irritation
H 361f	Supsected of damaging fertility
H 400	Very toxic to aquatic life

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Product **HYDRAULIC/TURBINE/COMPRESSOR/HEAT Tr OILS**

MATERIAL SAFETY DATA SHEET

H 410	Very toxic to aquatic life with long lasting effects
H 411	Toxic to aquatic life with long lasting effects
Full text of R-, H- and EUH-phrases (continued)	
H 412	Harmful to aquatic life with long lasting effects
H 413	May cause long lasting effects to aquatic life
R 22	Harmful if swallowed
R 36/38	Irritating to eyes/skin
R 38	Irritating to skin
R 41	Risk of serious damage to eyes
R 43	May cause sensitization by skin contact
R 50/53	Very toxic to aquatic organisms, may cause long term adverse effects to them
R 51/53	Toxic to aquatic organisms, may cause long term adverse effects
R 53	May cause long term adverse effects in the aquatic environment
R 62	Possible risk of impaired fertility
N	Dangerous for the environment
Xi	Irritant
Xn	Harmful

Classification and procedure used to deliver the classification for mixtures according to regulation EC 1272/2008 (CLP)

Acute Tox 4 (Oral) as per H 302	Calculation method
STOT RE 2 as per H 373	Calculation method

Prepared as per to the 29 CFR 1910.1200 (2012) and EU by United Grease and Lubricants Co LLC, PO Box 2685, Ajman, United Arab Emirates. Meets EU No. 2015/830 regulations also