MATERIAL SAFETY DATA SHEET

Regulation(EC) No 1907/2006(REACH), Annex II

(COMMISSION REGULATION(EU) NO 453/2010)

Version 1 **Issue Date 29 Dec 2023**

Production Name antirust lubricant **Revision date 29 Dec 2023**

Section 1-Chemical product and company identification

Trade name: Antirust lubricant

Size: 100ml-450ml

Effective Date: 2023 12 18

MSDS#:2020748858

Information department: Technology Department

Emergency information: TEL 86-20-82833999 if located outside of China

Section 2 - Composition / Information on Ingredients

ITME	Ingredient Name	CAS Number	% weight
01	Refined white oil	8012-95-1	10%
02	Petroleum sulfonate	61789-85-3	5%
03	Pentaerythritol oleate	19321-40-5	15%
04	Propane	74-98-6	35%
05	Butane	106-97-8	35%

Section 3 - Hazards Identification

3.1 Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 \[CLP]

flammable aerosols Category 1 -(H222)

Germ cell mutagenicity Category 1B -(H340)

Carcinogenicity Category 1B -(H350)

Reproductive Toxicity Category 2 -(H361)

Aspiration toxicity Category 1 -(H304)

Classification according to Directive 67/548/EEC or 1999/45/EC

Xn -Harmful

F+ -Extremely flammable

F+; R12

Carcinogenic, Category 1; R45

Mutagenic Category 2; R46

Xn; R65

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Location: Moldova
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Toxic for reproduction Category 3; R63mouth, throat and stomach.

3.2 Label elements
Symbols/Pictograms

Signal word	Danger
Hazard Statements	H222 -Extremely flammable aerosol
	H304 -May be fatal if swallowed and enters airways
	H340 -May cause genetic defects
	H350 -May cause cancer
	H361 -Suspected of damaging fertility or the unborn child
	P264 -Wash face, hands and any exposed skin thoroughly after handling
	P273 -Avoid release to the environment
	P301 + P310 -IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
	P331 -Do NOT induce vomiting
	P405 -Store locked up
	P501 -Dispose of contents/ container to an approved waste disposal plant
	P210 -Keep away from heat/sparks/open flames/hot surfaces. -No smoking
	P211 -Do not spray on an open flame or other ignition source
	P251 -Pressurized container: Do not pierce or burn, even after use
	P410 + P412 -Protect from sunlight. Do not expose to temperatures exceeding 50 ℃/122 ° F

3.3 Other hazards

No information available

Section 4 - First aid measures

FIRST AID - EYE CONTACT: Immediately flush eyes with plenty of water. Get medical attention, if irritation persists.

FIRST AID - SKIN CONTACT: Immediately flush skin with plenty of water. Remove clothing. Get medical attention immediately. Wash clothing separately before reuse.

FIRST AID - INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention.

FIRST AID - INGESTION: Get medical attention immediately. If swallowed,do NOT induce vomiting. Give victim a glass of water or milk. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

Section 5 - Fire-Fighting Measures

Extinguishing Media: Dry chemical, foam, carbon dioxide., sand . Water jets are not suitable for fire fighting.

General Fire Hazards: Flammable liquid.Do not spray near sources of ignition such as open flames, sparks, hot surfaces or burning cigarettes. Aerosol cans may explodes if heated above 54 degrees Celsius.

Fire-Fighting Equipment/Instructions: Wear self-contained breathing apparatus. If possible remove aerosol containers from the vicinity of the fire. Otherwise keep containers as cool as possible by spraying with water from a protected position.

Section 6 - Accidental Release Measures

Containment Procedures: Contain the discharge material. Eliminate all sources of ignition or flammables that may come into contact with a spill of this material.

Clean-Up Procedures: Attempt to reclaim the free product, if this is possible. If molten product spilled, solidify and recover.

Evacuation Procedures: Isolate area. Keep unnecessary personnel away.

Special Instructions: Avoid inhalation of fumes from molten product. Avoid skin contact with molten resins. Wear appropriate protective equipment and clothing during clean-up. Do not allow the spilled product to enter public drainage systems or open water courses.

Section 7 - Handling and Storage

Procedures for Handling: Avoid breathing fumes if this product is used at high temperatures. Keep away from potential sources of ignition. Wash hands after handling and before eating.

Recommended Storage Methods: Keep the container tightly closed and in a cool, well-ventilated place. Store away from strong oxidizers. Do not store this material in open and unlabeled containers.

Section 8 - Exposure Controls / Personal Protection

Exposure Guidelines:

A. General Product Information - If oil mists are generated, observe the OSHA exposure limit of 5 mg/m3.

B. Component Exposure Limits - No ACGIH, NIOSH or OSHA exposure guidelines listed for the product's components.

Engineering Controls: Use general ventilation and use local exhaust, where possible, in confined or enclosed spaces.

Eye / Face Protection: Wear safety goggles or faceshield when working with melted material.

Skin Protection: Chemically resistant gloves with thermal protection when working with melted paraffin.

Respiratory Protection: Under normal conditions, respirator is not normally required.

General: Use good industrial hygiene practices.

Section 9 - Physical and Chemical Properties

Physical State: liquid

Appearance: transparent

Odor: Not available

Odor Threshold: Not available

Vapor Pressure: Compressed gas

Vapor Density:(water=1):0.8

Flash Point:N/A

Boiling Point: >35℃

Melting Point: <0℃

% Volatile :40-60

Evaporation Rate: slow

pH: N/A

Section 10 - Stability and Reactivity

Chemical Stability: Stable

Hazardous Polymerization: Hazard polymerization will not occur.

Chemical Incompatibilities: Strong oxidizing agents, strong acids and strong base

Conditions to Avoid (Stability): Avoid excessive heat and all sources of ignition.

Hazardous Decomposition Products: Carbon dioxide, carbon monoxide.

Section 11- Toxicological Information

Acute Toxicity / Target Organ Information:

A. General Product / Component Information - This material is typically inert. Paraffin fumes are a result of overheating product. Fumes are known to be mildly irritating to the nose, throat, and eyes.

B. Component LD50 / LC50 - No data available for product.

Epidemiology: No data available for product.

Carcinogenicity:

A. General Product / Component Information - Not listed by ACGIH, IARC, NIOSH, NTP or OSHA.

B. Component Carcinogenicity Listings - None of this product's components are listed by ACGIH, IARC, NIOSH, NTP or OSHA.

Teratogenicity / Reproductive Effects: No data available for the product as a whole.

Neurotoxicity: No data available for the product as a whole.

Mutagenicity: No data available on this product as a whole.

Other Information: No other information available.

Section 12 - Ecological Information

Ecotoxicity: No information is available on ecotoxicity of this product. Keep product out of sewers and waterways.

Environmental Fate: No information is available.

Section 13 - Disposal Considerations

U.S. EPA Waste Number & Descriptions:

A. General Product Information - Product as shipped does not meet the definition or characteristics of a hazardous waste.

B. Component Waste Numbers - No EPA Waste Numbers are applicable for this product's components.

Disposal Instructions: Incinerate the material under controlled conditions in an approved incinerator.

Section 14 - Transport Information

Proper Shipping Name: Aerosol

Hazard Class: 2.1

Identification number: N/A

ADR/RID class: 2.1
IMDG Class:IMO 2.1
ICAO/IATA Class: 2.1
Packing Group: II
EMS Number: F-D S-D S-U
MFAG: F-D S-D S-U
UN-Number: 1950

Section 15 - Regulatory Information

U.S. Federal Regulatory Information:

A. General Product Information - All components of this product are listed on the U.S. EPA TSCA Inventory.

B. Component Information - None of this product's components are listed under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65) or CERCLA (40 CFR 302.4).

State Regulations:

A. General Product Information - No components require labeling under California Proposition 65.

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

Other Regulations:

A. General Product Information - All known (non-proprietary) components of this product are listed on the EINECS inventory of existing chemicals.

B. Component Information - None of this product's components are listed on the Canadian Controlled Product Ingredient Disclosure List.

Section 16 - Other Information

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Veslee be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Veslee has been advised of the possibility of such damages

RENOLIT LX-PEP 2

EP-Longlife Multipurpose Grease

Description

RENOLIT LX-PEP 2 is a multipurpose EP grease with a wide temperature range. Mineral base oil along with high-quality lithium complex soap and a carefully selected additive combination give this grease outstanding performance.
Special EP additives improve the load-carrying capacity providing reliable lubrication even under extreme conditions.
RENOLIT LX-PEP 2 has exceptional anti-corrosion properties even under adverse environmental factors (moist, aggressive atmosphere and water). They ensure lifetime lubrication of roller bearings operating under high thermal loads.
RENOLIT LX-PEP 2 has excellent anti-wear properties and can be applied within a wide temperature range.

Application

RENOLIT LX-PEP 2 is used generally for all grease lubricated plain and roller bearings (e.g. electrical motors), various types of gears as longterm or lifetime lubrication in the specified temperature range.
RENOLIT LX-PEP 2 is used in plain and roller bearings, particularly well established is the use in wheel bearings of motor vehicles and roller bearings of e-motors as well as in needle bearings of cardan shafts.

Advantages

- Temperature range -30 °C to +150 °C
- Good aging resistance
- Good EP properties
- Excellent anti-wear properties
- Good corrosion protection

Specifications/Approvals

- MAN 284 Li-H2
- MB-Sheet 265.1
- ZF TE-ML 12
- Schaeffler Group
- VW TL 52 147 X
- Interprecise (IDC-Bearings)
- Deutsche Bahn

Shelf Life

The minimum shelf life is 36 months if the product is properly stored between 0°C and 40°C in its unopened original container in a dry place. The indication of a minimum shelf life does not include any guarantee of durability.

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ISO/TS 16949, ISO 14001
BS OHSAS 18001, ISO 50001
Reg. Nr. 2476

RENOLIT LX-PEP 2

EP-Longlife Multipurpose Grease

Characteristics

Properties	Unit	Data	Test method
Classification	-	KP 2 N-30 ISO-L-X-CDEB 2	DIN 51 502 ISO 6743-9
Colour	-	Green	-
Thickener	-	Lithium-complex-soap	-
Base oil	-	Mineral oil	-
Dropping point	°C	≥ 250	IP 396
Worked penetration (Pw 60)	0.1 mm	265 - 295	DIN ISO 2137
NLGI-class	-	2	DIN 51 818
Corrosion protection properties (SKF-Emcor-Test with dist. Water)	Degree of corr.	0 – 0	DIN 51 802
Water resistance	Eval.-stage	1 – 90	DIN 51 807-1
Four-ball welding load	N	2600	DIN 51 350-4
Flow pressure -30°C	hPa	≤ 1400	DIN 51 805-2
Oil separation at 18h / 40°C at 7d / 40°C	%	≤ 2 ≤ 6	DIN 51 817
Oxidation stability	bar	0.5	DIN 51 808
Base oil viscosity at 40°C at 100°C	mm²/s	170 14	DIN 51 562-1
Temperature range	°C	-30 up to +150	DIN 51 825

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Die Angaben in dieser Produktinformation beruhen auf den allgemeinen Erfahrungen und Kenntnissen der FUCHS SCHMIERSTOFFE GMBH in der Entwicklung und Herstellung von Schmierstoffen und entsprechen unserem heutigen Wissensstand. Die Wirkungsweise unserer Produkte ist von vielfältigen Faktoren abhängig, insbesondere vom konkreten Einsatzzweck, der Applikation der Produkte, den Betriebsbedingungen, der Bauteilvorbehandlung, eventuellem Schmutzanfall von außen, etc. Aus diesem Grund sind allgemeingültige Aussagen zur Funktion unserer Produkte nicht möglich. Unsere Produkte dürfen nicht in Luft-/Raumfahrzeugen bzw. Teilen davon verwendet werden. Dies gilt nicht, soweit die Produkte vor dem Einbau von Bauteilen in ein Luft-/ Raumfahrzeug wieder entfernt werden. Die Angaben in dieser Produktinformation stellen allgemeine, nicht verbindliche Richtwerte dar. Keinesfalls beinhalten sie hingegen eine Zusicherung von Eigenschaften oder eine Garantie für die Eignung des Produkts für den Einzelfall.

Wir empfehlen daher, vor dem Einsatz unserer Produkte mit den Ansprechpartnern der FUCHS SCHMIERSTOFFE GMBH ein individuelles Beratungsgespräch über die Einsatzbedingungen in der Anwendung und die Leistungsmerkmale der Produkte zu führen. Dem Anwender obliegt es, die Produkte in der vorgesehenen Anwendung auf deren Funktionssicherheit zu testen und mit der gebotenen Sorgfalt einzusetzen.

Unsere Produkte werden kontinuierlich weiterentwickelt. Deshalb behalten wir uns das Recht vor, das Produktprogramm, die Produkte und deren Herstellungsprozesse sowie alle Angaben in dieser Produktinformation jederzeit und ohne Vorankündigung zu ändern, sofern keine kundenspezifischen Vereinbarungen existieren, die dem entgegenstehen. Alle früheren Veröffentlichungen verlieren mit Erscheinen dieser Produktinformation ihre Gültigkeit.

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SAFETY DATA SHEET

acc.to ISO/DIS 11014 for USA

1 PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Product name: RENOLIT LX-PEP 2

Relevant identified uses of the substance or mixture and uses advised against

Identified uses: Lubricating grease

Uses advised against: No uses advised against identified.

Details of the supplier of the safety data sheet

Manufacturer	Fuchs Europe Schmierstoffe GmbH Friesenheimer Str. 19 68169 Mannheim
Telephone:	0621 3701-0 (ZENTRALE)
Fax:	0621 3701-570
Contact Person:	Fuchs Europe Schmierstoffe GmbH Abteilung Produktsicherheit
Telephone:	0621 3701-1333
Fax:	0621 3701-7303
e-mail:	PRODUKTSICHERHEIT@FUCHS-EUROPE.DE
US contact telephone :	708-333-8900
Emergency telephone:	**800-255-3924**

2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

The product has not been classified as hazardous, but needs to be labelled according to the legislation in force.

Hazard summary

Physical hazards: By handling of mineral oil products and chemical products no particular hazard is known when normal precautions (item 7) and personal protective equipment (item 8) are kept.

Health hazards

Inhalation: No data available.

Eye contact: No data available.

Skin contact: No data available.

Ingestion: No data available.

Other Health Effects: No data available.

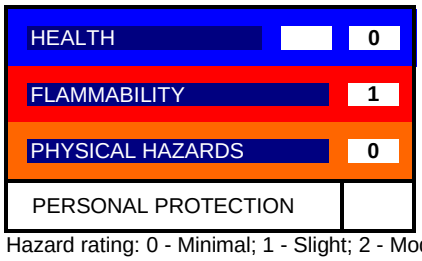
Environmental hazards: This product is water polluting.

Label elements

Safety data sheet available for professional user on request.

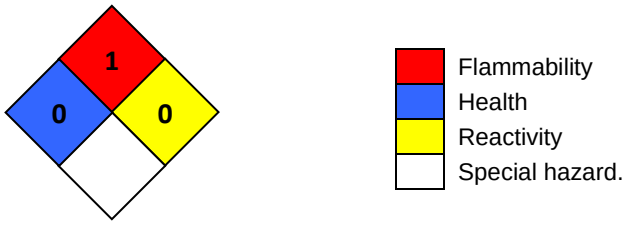
Other hazards: No data available.

HMIS Hazard ID



Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; *Chronic health effect

NFPA Hazard ID



Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe

3 COMPOSITION / INFORMATION ON INGREDIENTS

Mixtures

General information: Lubricating grease: Thickener system and additives in solvent refined mineral oil.

Chemical name	Concentration *	Identifier	Notes
ZnDTP	>=1.00 - <2.40%	85940-28-9	

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.
# This substance has workplace exposure limit(s).

Classification

Chemical name	Classification	
ZnDTP	CLP:	None

DSD: Directive 67/548/EEC.
CLP: Regulation No. 1272/2008.

4 FIRST AID MEASURES

General: Change clothes and shoes contaminated or soaked by the product. Never put rags contaminated by the product into cloth-pockets.

Description of first aid measures

Inhalation: Supply fresh air; consult doctor in case of symptoms.

Eye contact: Promptly wash eyes with plenty of water while lifting the eye lids.

Skin contact: Wash with soap and water. The product is not skin irritating.

Ingestion: Rinse mouth thoroughly.

Most important symptoms and effects, both acute and delayed: May cause skin and eye irritation.

Indication of any immediate medical attention and special treatment needed

Hazards: No data available.

Treatment: Get medical attention if symptoms occur.

5 FIRE-FIGHTING MEASURES

Extinguishing media

Suitable extinguishing media: CO_2, fire extinguishing powder or fog like water spraying. Extinguish larger fires with alcohol resistant foam or spray water with suitable tensides added

Unsuitable extinguishing media: Water with a full water jet.

Special hazards arising from the substance or mixture: During fire, gases hazardous to health may be formed.

Advice for firefighters

Special fire fighting procedures: No data available.

Special protective equipment for fire-fighters: Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Not required.

Environmental precautions: Avoid release to the environment. Environmental manager must be informed of all major spillages. Prevent further leakage or spillage if safe to do so. Do not allow to enter drainage system, surface or ground water.

Methods and material for containment and cleaning up: Scrape up spillage or absorb with absorbing material. Stop the flow of material, if this is without risk. Dispose of the material collected according to regulations.

Reference to other sections: See Section 8 of the MSDS for Personal Protective Equipment. See Section 7 for information on safe handling See Section 13 for information on disposal.

7 HANDLING AND STORAGE

Precautions for safe handling: Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities: Local regulations concerning handling and storage of waterpolluting products have to be followed.

Specific end use(s): Not available.

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure limits

Chemical name	Type	Exposure Limit values		Source
Base oil, low viscous - Inhalable fraction.	TWA		5 mg/m3	US. ACGIH Threshold Limit Values (02 2012)
Base oil, low viscous	PEL	500 ppm	2,000 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Base oil, low viscous - Mist.	PEL		5 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Base oil, low viscous	TWA	400 ppm	1,600 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
Base oil, low viscous - Mist.	TWA		5 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
Thickener compound for lithium greases - Inhalable fraction.	STEL		6 mg/m3	US. ACGIH Threshold Limit Values (02 2012)
Thickener compound for lithium greases - Inhalable fraction.	TWA		2 mg/m3	US. ACGIH Threshold Limit Values (02 2012)

Exposure controls

Appropriate engineering controls: No data available.

Individual protection measures, such as personal protective equipment

General information: Wash hands before breaks and after work. Use personal protective equipment as required. Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment. The usual precautionary measures should be adhered to inhandling the chemicals or the mineral oil products.

Eye/face protection: Wear goggles/face shield.

Skin protection

Hand protection:	Nitrile butyl rubber (NBR). Avoid long-term and repeated skin contact. Suitable gloves can be recommended by the glove supplier. Use skin protection cream for preventive skin protection. Protective gloves, where permitted in acc. to safety directions. The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
Other:	Do not carry cleaning cloths impregnated with the product in trouser pockets. Wear suitable protective clothing.
Respiratory Protection:	In case of inadequate ventilation use suitable respirator. Seek advice from local supervisor. Avoid breathing vapour/ aerosol.
Thermal hazards:	No data available.
Hygiene measures:	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing to remove contaminants. Discard contaminated footwear that cannot be cleaned.
Environmental Controls:	No data available.

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance	
Physical State:	Solid
Form:	Paste
Color:	Green
Odor:	Characteristic
Odor Threshold:	No data available.
pH:	Not applicable
Melting Point:	No data available.
Boiling Point:	Not applicable
Flash Point:	Not applicable
Evaporation Rate:	No data available.
Flammability (solid, gas):	No data available.
Flammability Limit - Upper (%)–:	No data available.
Flammability Limit - Lower (%)–:	No data available.
Vapor pressure:	No data available.
Vapor density (air=1):	No data available.
Density:	0.9000 g/cm3 (25 °C)
Solubility(ies)	
Solubility in Water:	Insoluble in water
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available.
Autoignition Temperature:	No data available.
Decomposition Temperature:	No data available.

NLGI:	2
Flow time	No data available.
Explosive properties:	No data available.
Oxidizing properties:	No data available.

10 STABILITY AND REACTIVITY

Reactivity:	Stable under normal temperature conditions and recommended use.
Chemical stability:	No data available.
Possibility of hazardous reactions:	None under normal conditions.
Conditions to avoid:	Avoid heat or contamination.
Incompatible materials:	Strong oxidizing substances. Strong acids. Strong bases.
Hazardous decomposition products:	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.

11 TOXICOLOGICAL INFORMATION

Specified substance(s):

Inhalation:	No data available.
Ingestion:	No data available.
Skin corrosion/irritation:	No data available.
Serious eye damage/eye irritation:	No data available.
Respiratory sensitizer/Skin sensitizer:	No data available.
Carcinogenicity:	No data available.
Mutagenesis:	No data available.
Reproductive toxicity:	No data available.

12 ECOLOGICAL INFORMATION

Ecotoxicity:

Specified substance(s):

Acute toxicity(Fish):

Name	Test results
ZnDTP	LC 50 (Fish, 96 h): 5 mg/l

Persistence and degradability: No data available.

Bioaccumulative potential: No data available.

Mobility: No data available.

13 DISPOSAL CONSIDERATIONS

Disposal methods: Do not empty into drains; dispose of this material and its container in a safe way. When storing used products, ensure that the waste categories and mixing instructions are observed.

Measures for Avoidance and Recovery: Dispose in accordance with all applicable regulations.

14 TRANSPORT INFORMATION

DOT
Not regulated.

IMDG - International Maritime Dangerous Goods Code
Not regulated.

IATA
Not regulated.

15 REGULATORY INFORMATION

US federal regulations

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

CERCLA Hazardous Substance List (40 CFR 302.4):

Superfund amendments and reauthorization act of 1986 (SARA)

Hazard categories
Not listed.

SARA 302 Extremely hazardous substance

SARA 304 Emergency release notification

SARA 311/312 Hazardous chemical:

SARA 313 (TRI reporting)

Other federal regulations

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):

US state regulations

US. California Proposition 65

US. New Jersey Worker and Community Right-to-Know Act

US. Massachusetts RTK - Substance List

US. Pennsylvania RTK - Hazardous Substances

US. Rhode Island RTK

Inventory Status

DSL	On or in compliance with the inventory
TSCA	On or in compliance with the inventory

16 OTHER INFORMATION

Revision Information:

Revision date: 07.07.2014

SDS No.:

Disclaimer: The data contained in this safety data sheet are based on our current knowledge and experience and are given to the best of our knowledge and belief. It characterizes the product only with regard to safety requirements for handling, transport and disposal. The data do not describe the product's properties (tech. product specification). Neither should any agreed property nor the suitability of the product for any specific technical application be deduced from the data contained in this safety data sheet. Modifications on this document are not allowed. The data are not transferable to other products. In the case of mixing the product with other products or in the case of processing, the data in this safety data sheet are not necessarily valid for the new-made material. It is the responsibility of the recipient of the product to observe federal, state and local law. Please contact us to obtain up-to-date safety data sheets. This document was issued electronically and has no signature.

Technical Data Sheet

Previous Name: **Shell Alvania Grease RL 2**

Shell Gadus *S2 V100 2*

- *Reliable Protection*
- *Multi-purpose*
- *Lithium*

High Performance Multipurpose Grease

Shell Gadus S2 V100 2 is a general purpose grease based on a new lithium hydroxystearate soap thickener fortified with anti-oxidant, anti-wear and anti-rust additives.

DESIGNED TO MEET CHALLENGES

Performance, Features & Benefits

- **Reliable high temperature performance**

  Very good performance up to +130°C, resulting in longer bearing life.

- **Good oxidation and mechanical stability**

  Resists the formation of deposits caused by oxidation at high operating temperatures. Shell Gadus S2 V100 greases are extremely stable under vibrations and give NO LEAKAGE even in repeated shock-loaded bearings.

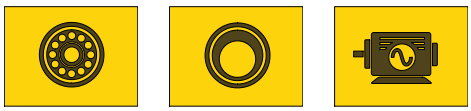
- **Good corrosion resistance characteristics**

  Effective protection in hostile environments.

- **Long storage life**

  Does not alter in consistency during prolonged storage.

Main Applications



- Rolling element and plain grease lubricated bearings
- Electric motor bearings
- Sealed-for-life bearings
- Water pump bearings

  May be used under a wide range of operating conditions offering very significant advantages over conventional lithium greases at high temperature or in the presence of water.

- A medium consistency grease designed, mainly, for general industrial lubrication. Ideal for centralised lubrication systems operating at normal temperatures.

Specifications, Approvals & Recommendations

For a full listing of equipment approvals and recommendations, please consult your local Shell Technical Helpdesk.

Typical Physical Characteristics

Properties			Method	Shell Gadus S2 V100 2
NLGI Consistency				2
Soap Type				Lithium hydroxystearate
Base Oil (Type)				Mineral
Kinematic Viscosity	@40°C	cSt	IP 71 / ASTM D445	100
Kinematic Viscosity	@100°C	cSt	IP 71 / ASTM D445	11
Cone Penetration, Worked	@25°C	0.1mm	IP 50 / ASTM D217	265-295
Dropping Point		°C	IP 396	180

These characteristics are typical of current production. Whilst future production will conform to Shell's specification, variations in these characteristics may occur.

Health, Safety & Environment

- **Health and Safety**

  Shell Gadus S2 V100 Grease is unlikely to present any significant health or safety hazard when properly used in the recommended application and good standards of personal hygiene are maintained.

  Avoid contact with skin. Use impervious gloves with used oil. After skin contact, wash immediately with soap and water.

  Guidance on Health and Safety is available on the appropriate Material Safety Data Sheet, which can be obtained from http://www.epc.shell.com/

- **Protect the Environment**

  Take used oil to an authorised collection point. Do not discharge into drains, soil or water.

Additional Information

- **Re-greasing Intervals**

  For bearings operating near their maximum recommended temperatures, re-greasing intervals should be reviewed.

- **Advice**

  Advice on applications not covered here may be obtained from your Shell representative.

SAFETY DATA SHEET

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Shell Gadus S2 V100 2

Version	Revision Date:	SDS Number:	Print Date: 11/02/2019
5.3	10/31/2019	800001006645	Date of last issue: 07/29/2019

SECTION 1. IDENTIFICATION

Product name : Shell Gadus S2 V100 2

Product code : 001D8463

Manufacturer or supplier's details

Manufacturer/Supplier : **Shell Oil Products US**
PO Box 4427
Houston TX 77210-4427
USA

SDS Request : (+1) 877-276-7285

Customer Service :

Emergency telephone number

Spill Information : 877-504-9351

Health Information : 877-242-7400

Recommended use of the chemical and restrictions on use

Recommended use : Automotive and industrial grease.

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with 29 CFR 1910.1200

Based on available data this substance / mixture does not meet the classification criteria.

GHS label elements

Hazard pictograms : No Hazard Symbol required

Signal word : No signal word

Hazard statements : PHYSICAL HAZARDS:
Not classified as a physical hazard under GHS criteria.
HEALTH HAZARDS:
Not classified as a health hazard under GHS criteria.
ENVIRONMENTAL HAZARDS:
Not classified as an environmental hazard under GHS criteria.

Precautionary statements :

Prevention:

No precautionary phrases.

Response:

No precautionary phrases.

Storage:

No precautionary phrases.

Disposal:

No precautionary phrases.

Other hazards which do not result in classification

Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis.
Used grease may contain harmful impurities.
High-pressure injection under the skin may cause serious damage including local necrosis.
Not classified as flammable but will burn.
The classification of this material is based on OSHA HCS 2012 criteria.
Under normal conditions of use or in a foreseeable emergency, this product does not meet the definition of a hazardous chemical when evaluated according to the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature : A lubricating grease containing highly-refined mineral oils and additives.
The highly refined mineral oil contains <3% (w/w) DMSO-extract, according to IP346.

Hazardous components

Chemical name	Synonyms	CAS-No.	Concentration (% w/w)
Alkyl thiadiazole	2,5-bis(octyldithio)-1,3,4-thiadiazole	13539-13-4	< 0.09
Triazole derivative	1-(N,N-bis(2-ethylhexyl)aminomethyl)-1,2,4-triazole	91273-04-0	0.01 - 0.09
Zinc naphthenate	Naphthenic acids, zinc salts	12001-85-3	0.1 - 0.9

SECTION 4. FIRST-AID MEASURES

If inhaled : No treatment necessary under normal conditions of use.
If symptoms persist, obtain medical advice.

In case of skin contact : Remove contaminated clothing. Flush exposed area with water and follow by washing with soap if available.
If persistent irritation occurs, obtain medical attention.

When using high pressure equipment, injection of product under the skin can occur. If high pressure injuries occur, the casualty should be sent immediately to a hospital. Do not wait for symptoms to develop.
Obtain medical attention even in the absence of apparent wounds.

In case of eye contact : Flush eye with copious quantities of water.
Remove contact lenses, if present and easy to do. Continue rinsing.

		If persistent irritation occurs, obtain medical attention.
If swallowed	:	In general no treatment is necessary unless large quantities are swallowed, however, get medical advice.
Most important symptoms and effects, both acute and delayed	:	Oil acne/folliculitis signs and symptoms may include formation of black pustules and spots on the skin of exposed areas. Ingestion may result in nausea, vomiting and/or diarrhoea. Local necrosis is evidenced by delayed onset of pain and tissue damage a few hours following injection.
Protection of first-aiders	:	When administering first aid, ensure that you are wearing the appropriate personal protective equipment according to the incident, injury and surroundings.
Indication of any immediate medical attention and special treatment needed	:	Treat symptomatically.
		High pressure injection injuries require prompt surgical intervention and possibly steroid therapy, to minimise tissue damage and loss of function. Because entry wounds are small and do not reflect the seriousness of the underlying damage, surgical exploration to determine the extent of involvement may be necessary. Local anaesthetics or hot soaks should be avoided because they can contribute to swelling, vasospasm and ischaemia. Prompt surgical decompression, debridement and evacuation of foreign material should be performed under general anaesthetics, and wide exploration is essential.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	:	Foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.
Unsuitable extinguishing media	:	Do not use water in a jet.
Specific hazards during fire-fighting	:	Hazardous combustion products may include: A complex mixture of airborne solid and liquid particulates and gases (smoke). Carbon monoxide may be evolved if incomplete combustion occurs. Unidentified organic and inorganic compounds.
Specific extinguishing methods	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Special protective equipment for firefighters	:	Proper protective equipment including chemical resistant gloves are to be worn; chemical resistant suit is indicated if large contact with spilled product is expected. Self-Contained Breathing Apparatus must be worn when approaching a fire in

a confined space. Select fire fighter's clothing approved to relevant Standards (e.g. Europe: EN469).

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Avoid contact with skin and eyes.
Environmental precautions	:	Use appropriate containment to avoid environmental contamination. Prevent from spreading or entering drains, ditches or rivers by using sand, earth, or other appropriate barriers.
Methods and materials for containment and cleaning up	:	Prevent from spreading or entering into drains, ditches or rivers by using sand, earth, or other appropriate barriers.
Additional advice	:	For guidance on selection of personal protective equipment see Chapter 8 of this Safety Data Sheet. For guidance on disposal of spilled material see Chapter 13 of this Safety Data Sheet.

SECTION 7. HANDLING AND STORAGE

Technical measures	:	Use local exhaust ventilation if there is risk of inhalation of vapours, mists or aerosols. Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material.
Advice on safe handling	:	Avoid prolonged or repeated contact with skin. Avoid inhaling vapour and/or mists. When handling product in drums, safety footwear should be worn and proper handling equipment should be used. Properly dispose of any contaminated rags or cleaning materials in order to prevent fires.
Avoidance of contact	:	Strong oxidising agents.
Further information on storage stability	:	Keep container tightly closed and in a cool, well-ventilated place. Use properly labeled and closable containers. Store at ambient temperature.
Packaging material	:	Suitable material: For containers or container linings, use mild steel or high density polyethylene. Unsuitable material: PVC.
Container Advice	:	Polyethylene containers should not be exposed to high temperatures because of possible risk of distortion.

SECTION 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Oil mist, mineral	Not Assigned	TWA (Mist)	5 mg/m3	OSHA Z-1
Oil mist, mineral		TWA (Inhalable fraction)	5 mg/m3	ACGIH

Biological occupational exposure limits

No biological limit allocated.

Monitoring Methods

Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls. For some substances biological monitoring may also be appropriate.
Validated exposure measurement methods should be applied by a competent person and samples analysed by an accredited laboratory.
Examples of sources of recommended exposure measurement methods are given below or contact the supplier. Further national methods may be available.
National Institute of Occupational Safety and Health (NIOSH), USA: Manual of Analytical Methods http://www.cdc.gov/niosh/
Occupational Safety and Health Administration (OSHA), USA: Sampling and Analytical Methods http://www.osha.gov/
Health and Safety Executive (HSE), UK: Methods for the Determination of Hazardous Substances http://www.hse.gov.uk/
Institut für Arbeitsschutz Deutschen Gesetzlichen Unfallversicherung (IFA) , Germany http://www.dguv.de/inhalt/index.jsp
L'Institut National de Recherche et de Securité, (INRS), France http://www.inrs.fr/accueil

Engineering measures : The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances. Appropriate measures include:
Adequate ventilation to control airborne concentrations.

Where material is heated, sprayed or mist formed, there is greater potential for airborne concentrations to be generated.

General Information:
Define procedures for safe handling and maintenance of controls.
Educate and train workers in the hazards and control measures relevant to normal activities associated with this product.
Ensure appropriate selection, testing and maintenance of equipment used to control exposure, e.g. personal protective equipment, local exhaust ventilation.
Drain down system prior to equipment break-in or mainte-

nance.
Retain drain downs in sealed storage pending disposal or subsequent recycle.
Always observe good personal hygiene measures, such as washing hands after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.

Due to the product's semi-solid consistency, generation of mists and dusts is unlikely to occur.

Personal protective equipment

Respiratory protection : No respiratory protection is ordinarily required under normal conditions of use.
In accordance with good industrial hygiene practices, precautions should be taken to avoid breathing of material.
If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation.
Check with respiratory protective equipment suppliers.
Where air-filtering respirators are suitable, select an appropriate combination of mask and filter.
Select a filter suitable for the combination of organic gases and vapours and particles [Type A/Type P boiling point >65°C (149°F)].

Hand protection
Remarks : Where hand contact with the product may occur the use of gloves approved to relevant standards (e.g. Europe: EN374, US: F739) made from the following materials may provide suitable chemical protection. PVC, neoprene or nitrile rubber gloves Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced.
Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturizer is recommended.
For continuous contact we recommend gloves with breakthrough time of more than 240 minutes with preference for > 480 minutes where suitable gloves can be identified. For short-term/splash protection we recommend the same but recognize that suitable gloves offering this level of protection may not be available and in this case a lower breakthrough time maybe acceptable so long as appropriate maintenance and replacement regimes are followed. Glove thickness is not a good predictor of glove resistance to a chemical as it is dependent on the exact composition of the glove material.
Glove thickness should be typically greater than 0.35 mm

depending on the glove make and model.

Eye protection	:	If material is handled such that it could be splashed into eyes, protective eyewear is recommended.
Skin and body protection	:	Skin protection is not ordinarily required beyond standard work clothes. It is good practice to wear chemical resistant gloves.
Protective measures	:	Personal protective equipment (PPE) should meet recommended national standards. Check with PPE suppliers.
Thermal hazards	:	Not applicable

Environmental exposure controls

General advice	:	Take appropriate measures to fulfill the requirements of relevant environmental protection legislation. Avoid contamination of the environment by following advice given in Section 6. If necessary, prevent undissolved material from being discharged to waste water. Waste water should be treated in a municipal or industrial waste water treatment plant before discharge to surface water. Local guidelines on emission limits for volatile substances must be observed for the discharge of exhaust air containing vapour.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	Semi-solid at room temperature.
Colour	:	light brown
Odour	:	Slight hydrocarbon
Odour Threshold	:	Data not available
pH	:	Not applicable
Dropping point	:	180 °C / 356 °F Method: IP 396
Melting / freezing point		Not applicable
Initial boiling point and boiling range	:	Data not available
Flash point	:	Not applicable
Evaporation rate	:	Data not available
Flammability (solid, gas)	:	Data not available
Upper explosion limit / upper	:	Typical 10 %(V)

flammability limit		
Lower explosion limit / Lower flammability limit	:	Typical 1 %(V)
Vapour pressure	:	< 0.5 Pa (20 °C / 68 °F) estimated value(s)
Relative vapour density	:	> 1 estimated value(s)
Relative density	:	0.900 (15 °C / 59 °F)
Density	:	900 kg/m3 (15.0 °C / 59.0 °F) Method: Unspecified
Solubility(ies)		
Water solubility	:	negligible
Solubility in other solvents	:	Data not available
Partition coefficient: n-octanol/water	:	log Pow: > 6 (based on information on similar products)
Auto-ignition temperature	:	> 320 °C / 608 °F
Decomposition temperature	:	Data not available
Viscosity		
Viscosity, dynamic	:	Data not available
Viscosity, kinematic	:	Not applicable
Explosive properties	:	Not classified
Oxidizing properties	:	Data not available
Surface tension	:	Data not available
Conductivity	:	This material is not expected to be a static accumulator.

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	The product does not pose any further reactivity hazards in addition to those listed in the following sub-paragraph.
Chemical stability	:	Stable.
Possibility of hazardous reactions	:	Reacts with strong oxidising agents.
Conditions to avoid	:	Extremes of temperature and direct sunlight.

Incompatible materials	:	Strong oxidising agents.
Hazardous decomposition products	:	No decomposition if stored and applied as directed.

SECTION 11. TOXICOLOGICAL INFORMATION

Basis for assessment	:	Information given is based on data on the components and the toxicology of similar products.Unless indicated otherwise, the data presented is representative of the product as a whole, rather than for individual component(s).

Information on likely routes of exposure
Skin and eye contact are the primary routes of exposure although exposure may occur following accidental ingestion.

Acute toxicity

Product:

Acute oral toxicity	:	LD50 (rat): > 5,000 mg/kg Remarks: Low toxicity: Based on available data, the classification criteria are not met.
Acute inhalation toxicity	:	Remarks: Based on available data, the classification criteria are not met.
Acute dermal toxicity	:	LD50 (Rabbit): > 5,000 mg/kg Remarks: Low toxicity: Based on available data, the classification criteria are not met.

Skin corrosion/irritation

Product:

Remarks: Slightly irritating to skin., Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis., Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation

Product:

Remarks: Slightly irritating to the eye., Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation

Product:

Remarks: Not a skin sensitiser.
Based on available data, the classification criteria are not met.

Components:

Triazole derivative:

Remarks: May cause an allergic skin reaction in sensitive individuals.

Germ cell mutagenicity

Product:

: Remarks: Non mutagenic, Based on available data, the classification criteria are not met.

Carcinogenicity

Product:

Remarks: Not a carcinogen., Based on available data, the classification criteria are not met.

Remarks: Product contains mineral oils of types shown to be non-carcinogenic in animal skin-painting studies., Highly refined mineral oils are not classified as carcinogenic by the International Agency for Research on Cancer (IARC).

IARC	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
OSHA	No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.
NTP	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Product:

: Remarks: Not a developmental toxicant., Does not impair fertility., Based on available data, the classification criteria are not met.

STOT - single exposure

Product:

Remarks: Based on available data, the classification criteria are not met.

STOT - repeated exposure

Product:

Remarks: Based on available data, the classification criteria are not met.

Aspiration toxicity

Product:
Not an aspiration hazard.

Further information

Product:
Remarks: Used grease may contain harmful impurities that have accumulated during use. The concentration of such harmful impurities will depend on use and they may present risks to health and the environment on disposal., ALL used grease should be handled with caution and skin contact avoided as far as possible.

Remarks: High pressure injection of product into the skin may lead to local necrosis if the product is not surgically removed.

Remarks: Slightly irritating to respiratory system.

SECTION 12. ECOLOGICAL INFORMATION

Basis for assessment	:	Ecotoxicological data have not been determined specifically for this product. Information given is based on a knowledge of the components and the ecotoxicology of similar products. Unless indicated otherwise, the data presented is representative of the product as a whole, rather than for individual component(s).(LL/EL/IL50 expressed as the nominal amount of product required to prepare aqueous test extract).

Ecotoxicity

Product:

Toxicity to fish (Acute toxicity)	:	Remarks: LL/EL/IL50 > 100 mg/l Practically non toxic: Based on available data, the classification criteria are not met.
Toxicity to daphnia and other aquatic invertebrates (Acute toxicity)	:	Remarks: LL/EL/IL50 > 100 mg/l Practically non toxic: Based on available data, the classification criteria are not met.
Toxicity to algae (Acute toxicity)	:	Remarks: LL/EL/IL50 > 100 mg/l Practically non toxic: Based on available data, the classification criteria are not met.
Toxicity to fish (Chronic toxicity)	:	Remarks: Data not available
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	Remarks: Data not available

Toxicity to microorganisms (Acute toxicity) : Remarks: Data not available

Components:

Triazole derivative:

M-Factor (Acute aquatic toxicity) : 1

Persistence and degradability

Product:

Biodegradability : Remarks: Not readily biodegradable.
Major constituents are inherently biodegradable, but contains components that may persist in the environment.

Bioaccumulative potential

Product:

Bioaccumulation : Remarks: Contains components with the potential to bioaccumulate.

Mobility in soil

Product:

Mobility : Remarks: Semi-solid under most environmental conditions.
If it enters soil, it will adsorb to soil particles and will not be mobile.

Remarks: Floats on water.

Other adverse effects

Product:

Additional ecological information : Does not have ozone depletion potential, photochemical ozone creation potential or global warming potential.
Product is a mixture of non-volatile components, which will not be released to air in any significant quantities under normal conditions of use.

Poorly soluble mixture.
Causes physical fouling of aquatic organisms.

Mineral oil does not cause chronic toxicity to aquatic organisms at concentrations less than 1 mg/l.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : Recover or recycle if possible.
It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations.
Do not dispose into the environment, in drains or in water courses

Waste product should not be allowed to contaminate soil or ground water, or be disposed of into the environment.
Waste, spills or used product is dangerous waste.

Contaminated packaging : Dispose in accordance with prevailing regulations, preferably to a recognized collector or contractor. The competence of the collector or contractor should be established beforehand. Disposal should be in accordance with applicable regional, national, and local laws and regulations.

Local legislation

Remarks : Disposal should be in accordance with applicable regional, national, and local laws and regulations.

SECTION 14. TRANSPORT INFORMATION

National Regulations

US Department of Transportation Classification (49 CFR Parts 171-180)

Not regulated as a dangerous good

International Regulations

IATA-DGR
Not regulated as a dangerous good

IMDG-Code
Not regulated as a dangerous good

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

Not applicable for product as supplied. MARPOL Annex 1 rules apply for bulk shipments by sea.

Special precautions for user

Remarks : Special Precautions: Refer to Section 7, Handling & Storage, for special precautions which a user needs to be aware of or needs to comply with in connection with transport.

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

*: This material does not contain any components with a CERCLA RQ., Shell classifies this material as an "oil" under the CERCLA Petroleum Exclusion, therefore releases to the environment are not reportable under CERCLA.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards : No SARA Hazards

SARA 313 : The following components are subject to reporting levels established by SARA Title III, Section 313:

Zinc-2-ethyl hexanoate	136-53-8	>= 0.1 - < 1 %
Zinc naphthenate	12001-85-3	>= 0.1 - < 1 %
zinc neodecanoate	27253-29-8	< 0.1 %

Clean Water Act

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

US State Regulations

Pennsylvania Right To Know

Zinc-2-ethyl hexanoate	136-53-8
Zinc naphthenate	12001-85-3
zinc neodecanoate	27253-29-8

California Prop. 65

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

Other regulations:

The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

The components of this product are reported in the following inventories:

EINECS : All components listed or polymer exempt.

TSCA : All components listed.

DSL : All components listed.

SECTION 16. OTHER INFORMATION

Further information

NFPA Rating (Health, Fire, Reactivity): 0, 1, 0

Full text of other abbreviations

ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
OSHA Z-1	:	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
ACGIH / TWA	:	8-hour, time-weighted average
OSHA Z-1 / TWA	:	8-hour time weighted average
Abbreviations and Acronyms	:	The standard abbreviations and acronyms used in this document can be looked up in reference literature (e.g. scientific dictionaries) and/or websites.

ACGIH = American Conference of Governmental Industrial Hygienists
ADR = European Agreement concerning the International Carriage of Dangerous Goods by Road
AICS = Australian Inventory of Chemical Substances
ASTM = American Society for Testing and Materials
BEL = Biological exposure limits
BTEX = Benzene, Toluene, Ethylbenzene, Xylenes
CAS = Chemical Abstracts Service
CEFIC = European Chemical Industry Council
CLP = Classification Packaging and Labelling
COC = Cleveland Open-Cup
DIN = Deutsches Institut fur Normung
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
DSL = Canada Domestic Substance List
EC = European Commission
EC50 = Effective Concentration fifty
ECETOC = European Center on Ecotoxicology and Toxicology Of Chemicals
ECHA = European Chemicals Agency
EINECS = The European Inventory of Existing Commercial Chemical Substances
EL50 = Effective Loading fifty
ENCS = Japanese Existing and New Chemical Substances Inventory
EWC = European Waste Code
GHS = Globally Harmonised System of Classification and Labelling of Chemicals
IARC = International Agency for Research on Cancer
IATA = International Air Transport Association
IC50 = Inhibitory Concentration fifty
IL50 = Inhibitory Level fifty
IMDG = International Maritime Dangerous Goods
INV = Chinese Chemicals Inventory

IP346 = Institute of Petroleum test method N° 346 for the determination of polycyclic aromatics DMSO-extractables
KECI = Korea Existing Chemicals Inventory
LC50 = Lethal Concentration fifty
LD50 = Lethal Dose fifty per cent.
LL/EL/IL = Lethal Loading/Effective Loading/Inhibitory loading
LL50 = Lethal Loading fifty
MARPOL = International Convention for the Prevention of Pollution From Ships
NOEC/NOEL = No Observed Effect Concentration / No Observed Effect Level
OE_HPV = Occupational Exposure - High Production Volume
PBT = Persistent, Bioaccumulative and Toxic
PICCS = Philippine Inventory of Chemicals and Chemical Substances
PNEC = Predicted No Effect Concentration
REACH = Registration Evaluation And Authorisation Of Chemicals
RID = Regulations Relating to International Carriage of Dangerous Goods by Rail
SKIN_DES = Skin Designation
STEL = Short term exposure limit
TRA = Targeted Risk Assessment
TSCA = US Toxic Substances Control Act
TWA = Time-Weighted Average
vPvB = very Persistent and very Bioaccumulative

A vertical bar (|) in the left margin indicates an amendment from the previous version.

Revision Date : 10/31/2019

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

US / EN

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Hot-line: +38 (0) 800 60 5555
Tel: +38 (061) 222 80 25 (laboratory)
State register No. 31852954

Quality Certificate No 18063.01.01.1

Grease YUKO 158

Manufacturer: JV YUKOIL LLC
Packed by: JV YUKOIL LLC
Viscosity grade: **NLGI 2**
Production date: May 2024
Package: pail 10L PE
Batch No: 18063.01.05.24.01.

Test	Norm	Result	Test method
Appearance	**homogeneous ointment from light green to dark blue color**	**homogeneous dark blue ointment**	GSTU 38.001 or 6.3 TU
Dropping point, °C, not low than	**160**	**180**	ASTM D2265
Worked penetration at 25°C, 0.1 mm	**265 - 320**	**265**	GOST 5346 A or ASTM D217
Effective viscosity at 0°C and with averege gradient of the strain rate 10 s-1, Pa·s, not more than	**400**	**79**	ASTM D1092
Colloidal stability: mass fraction of oil pressed from the oil,%, not more than	**18**	**16,6**	GOST 7142
Shear strength at 50°C, Pa, not less than	**150**	**160**	GOST 7143
Evaporation, %, not more than	**3**	**0,72**	GOST 9566
Corrosive effect on metals	**pass**	**pass**	GOST 9.080
Tribological characteristics on 4 balls machine at (20±5) °C			ASTM D2596
- critical load (Pk), N, not less than	**617**	**617**	ASTM D2596
Water resistance	**1-90**	**1-90**	6.6 TU
Oxidation stability, mg KOH/g, not more than	**3**	**1,35**	ASTM D943
Mass fraction of mechanical impurities, %, not more than	**0,05**	**0,028**	ASTM D128
Mass part of free alkali calculated to NaOH, %, not more than	**0,2**	**0,185**	ASTM D128

Result: the product quality meets the standard of

seal Head of Quality Assurance Department _____

ALCO QUALITY ASSURANCE LABORATORY
TEST REPORT
Accreditation No: AZS ISO/IEC 17025:2020/AZ 01.0571.01.21

AZERBAIJAN ACCREDITATION CENTER

Company: **ALCO LLC**
3, Vali Mammadov st., Sabail dist.
AZ1095, Baku, Azerbaijan

Certificate No.: 202444
Date of issue: 12/01/2024

Test sample

Product: AVTOIL GRAPHITE GREASE
Batch number: 2401044
Tank ID: T41.2

Manufacture date: 12/01/2024
Date of sampling: 12/01/2024
Date of analysis: 12/01/2024

Test result

Parameters	Unit	Test method	Limit	Test result	Conclusion
Appearance	-	Visual	Homogeneous ointment from dark brown to black color		Pass
Dropping temperature	˚C	GOST 6793	Min. 77	93	Pass
Penetration at 25^0C with stirring 60 double cycles	mm^{-1}	GOST 5346 method B	Min. 250	270	Pass
Viscosity effective and average strain rate gradient, $10c^{-1}$ - at 0^0C temperature	Pa	GOST 7163	Max. 100(1000)	90	Pass
Strength limit at 50^0C	Pa	GOST 7143 method B	Min. 100(1.0)	150	Pass
Colloidal stability	%	GOST 7142	Max. 5	5	Pass
Water content	%	GOST 2477	Max. 3.0	1.0	Pass
Corrosion effect on metals	-	GOST 9.080	pass	Pass	Pass

ALCO QUALITY ASSURANCE LABORATORY accredited by AzAK for AZS ISO/IEC 17025:2020 at test laboratory.

Shelf life: 5 years from the date of manufacture of the product if proper storage conditions are followed.

This product meets the specification set out in its product data sheet (PDS) and has been manufactured in a facility fully complying with the requirements of Integrated Management System standards.

Shelf life: 5 years from the date of manufacture of the product if proper storage conditions are followed.

This product meets the specification set out in its product data sheet (PDS) and has been manufactured in a facility fully complying with the requirements of Integrated Management System standards.

Notes & Instructions:

- Tests conducted according to International Standard Test Methods are routinely verified to be in compliance with the latest published versions. Minor changes may be made where they have no material impact on test results and are necessitated by reasons such as safety, environmental standards and method effectiveness.
- This certificate is only valid in its entirety.
- This certificate shall not be reproduced except in full, without the written approval of the laboratory.

Authorised singnatory

Allahverdieva Aytan
Head of Laboratory

Isgandarli Nazrin
Chemical Engineer

QUALITY ASSURANCE LABORATORY
FOR CERTIFICATE OF ANALYSIS
ALCO LLC.

LLC «JV YUKOIL»
48A Ivana Pulyuya str., Bila Tserkva, Kyiv region, Ukraine, 09100
Hot-line: +38 (0) 800 60 5555
Tel: +38 (061) 222 80 25 (laboratory)
State register No. 31852954

Quality Certificate No 06033.03.01.1

Grease YUKO Litol-24

Manufacturer JV YUKOIL LLC
Packed by JV YUKOIL LLC
Viscosity grade:
Quality Index: **K3K-40, ISO-L-XDCEA3**
Production date: February 2024
Package: pail 20L tin
Batch No: 06033.07.02.24.01.

Test	Norm	Result	Test method
Appearance	**homogeneous ointment with a smooth structure from light yellow to dark brown**	**smooth homogeneous yellow ointment**	GOST 38.001
Dropping point, °C, not low than	**140**	**148**	ASTM D2265
Worked penetration at 25°C, 0.1 mm	**230-290**	**240**	ASTM D217
Effective viscosity at minus 20°C and with averege gradient of the strain rate 10 s-1, Pa·s, not more than	**1500**	**564**	ASTM D1092
Oil separation, %, not more than	**15,0**	**8,00**	GOST 7142
Shear strength at 50°C, Pa, not less than	**150**	**360**	GOST 7143
Evaporation, %, not mor than	**5,0**	**0,89**	GOST 9566
Corrosive effect on metals	**pass**	**pass**	GOST 9.080
- welding load, N, not less	**1 381**	**1 381**	ASTM D2596

Result: the product quality meets the standard of

seal Head of Quality Assurance Department _____

науково виробниче підприємство
RIMOL
оливи та мастила

ТОВ «НВП РІМОЛ»: 03113, м. Київ, пр-т Перемоги, буд. 68/1, оф. 62, тел./факс: +38 (044) 469-45-69
ел. адреса: rimol@ukr.net, www.rimol.com.ua

П/р UA 093510050000026002403133300
в АТ «УКРСИББАНК», м. Харків, МФО 351005
ЄДРПОУ 38320673, ІПН 383206726592, ПДВ 200067731

Паспорт якості №19 від 22.02.2024р.

Мастило
«1-13»
ГОСТ 1631-61

Партія №1
Маса нетто: 2,720тн
Дата виготовлення: лютий 2024 року

Фізико-хімічні показники

Найменування показника	***Норма згідно з НД на продукцію***	***Фактично***	***НД на метод випробувань***
1. Зовнішній вигляд та колір	Однорідна мазь від світло-жовтого до коричневого кольору	*Відповідає*	Згідно п.4
2. Температура крапання, ºС	Не нижче 120	*158*	ГОСТ 6793
3. В`язкість ефективна за температури 0ºС та середньому градієнті швидкості деформації 10 $с^{-1}$	Не більше 5000	*4400*	ГОСТ 7163
4. Границя міцності за температури 80ºС, гс/см2	Не менше 1,5	*1,8*	ГОСТ 7143
5. Колоїдна стабільність, % виділеної оливи	Не більше 20	*18*	ГОСТ 7142
6. Термічна стабільність	Витримує	*Витримує*	Згідно п.5
7. Корозійна дія на метали	Витримує	*Витримує*	ГОСТ 9.080 п.6
8. Наявність вільних органічних кислот	Відсутність	*Відсутність*	ГОСТ 6707
9. Масова частка вільних лугів в перерахунку на NaOH, %	Не більше 0,2	*0,16*	ГОСТ 6707
10. Масова частка води, %	Не більше 0,75	*0,40*	ДСТУ ГОСТ 2477
11. Масова частка механічних домішок, %	Відсутність	*Відсутність*	ГОСТ 6479

Виробник: *ТОВ «НВП РІМОЛ».*
Висновок: *зразок мастила «1-13» за визначеними показниками відповідає вимогам ГОСТ 1631-61 «Смазка 1-13».*
Гарантійний термін зберігання 5 років від дня виготовлення.

Начальник ВТК ***М.П.*** ***В.П. ХМІЛЕВСЬКИЙ***

Product Information

LUBRICANTS. TECHNOLOGY. PEOPLE. FUCHS

LUBRITECH
Special Application Lubricants

GLEITMO 585 K

Heavy-duty grease with white solid lubricants

Performance Features

- **temperature range: -45 / +130 °C**
- **provides extensive protection against wear, even when subject to shock load and oscillatory movement**
- **prevents fretting corrosion**
- **provides excellent corrosion protection**
- **permits long lubrication intervals**
- **very resistant to ageing**
- **permits machines and systems subject to extreme stress to function reliably**

Description

GLEITMO 585 K is a high-grade lithium-soap grease on a synthetic oil basis. It contains a synergetically effective combination of white solid lubricants which damp shock loads and reduce wear. GLEITMO 585 K helps to prevent fretting corrosion and permits long lubrication intervals.

Field of application

GLEITMO 585 K is used for bearings and lubrication points of all types subject to particularly stringent requirements. For lubrication points subject to risk of fretting corrosion or exposed to oscillatory movements and vibration. Owing to the white coloration, GLEITMO 585 K is also used in applications involving clean conditions, amongst others in textile and paper processing and filling and packaging machines.

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Graphitprodukte Dohna
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Phone: +49 (0) 3529 5646-30

Method of application

Roller bearings: fill free space in bearing and in housing only to approximately 30 to 50 % with GLEITMO 585 K. Regarding bearings which rotate only very slowly the housing can be filled entirely with GLEITMO 585 K. GLEITMO 585 K can be pumped with automatic lubrication devices. Do not mix with greases on a different soap base. Please consult us in case of doubt!

Technical Data: GLEITMO 585 K

Characteristics	Value	Unit	Test Method
Reference	KPFHC2K-40		DIN 51502
Colour	beige		
Temperature range	-45 /+130	° C	DIN 51825
Base oil	syn		
Thickener	Li		
Solid lubricants	white		
Base oil viscosity [40°C]	50	mm²/s	DIN 51562-1
Working stability / penetration drop after:			
100 000 double strokes	max. 40	1/10 mm	
NLGI grade	2		DIN 51818
Moisture content	<0,1	%	DIN ISO 3733
Dropping point	>180	° C	DIN ISO 2176
Water resistance	0-90	rating	DIN 51807-1
Oil separation [40 °C, 7 d]	<5	%	DIN 51817
Flow pressure [-40 °C]	1100	hPa	DIN 51805
Copper strip test [24 h / 100°C]	1	rating	DIN 51811
EMCOR [dist. Water]	0-0	rating	DIN 51802
FAG-FE 8 test [ang. cont ball 7.5 min-1/80 kN]	mw10=3.2 mw50=6.3	mg	E DIN 51819
Qualitative rating	very good		
FAG-FE 9 test A/1500/6000-130	F50>200	h	DIN 51821

LLS = LUBRITECH Laboratory Specification
Typical for current production. Variations in these characteristics may occur.

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As far as we know this information reflects the current state of knowledge and our research. It cannot, however, be taken as an assurance about the properties nor as a guarantee of the suitability of the product for the individual case in point. Before using our products the purchaser must, therefore, check their suitability and be satisfied that the output will be satisfactory. Our products undergo continuous improvement. We therefore retain the right to change our product program, the products, and their manufacturing processes as well as all details of our product information sheets at any time and without prior announcement, unless otherwise provided in customer-specific agreements. With the publication of this product information sheet, all previous editions cease to be valid.

We are specialized in developing products for extreme tribological problems in cooperation with end users.
FUCHS LUBRITECH provides service and individual advice. Please contact us!
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LUBRITECH
Special Application Lubricants

LUBRICANTS. TECHNOLOGY. PEOPLE. FUCHS

SAFETY DATA SHEET

acc.to ISO/DIS 11014 for USA

1 PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifier

Product name: GLEITMO 585 K

Other means of identification: For further information, please refer to section 9 of the SDS.

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses: Lubricant

Uses advised against: No uses advised against identified.

1.3 Details of the supplier of the safety data sheet

Manufacturer

FUCHS LUBRITECH GmbH
Werner-Heisenberg-Straße 1
67661 Kaiserslautern/Germany

US Distributor
Fuchs Lubricants Co.
17050 Lathrop Avenue
Harvey, IL 60426

Telephone: +49 (0) 6301 3206-0
Fax: +49 (0) 6301 3206-940

Contact Person: FUCHS LUBRITECH GmbH - Product Safety Management
Telephone: +49 (0) 6301 3206-0
Fax: +49 (0) 6301 3206-940
E-mail: INFO@FUCHS-LUBRITECH.DE

1.4 US contact telephone : 708-333-8900

Emergency telephone: 800-255-3924

2 HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Health Hazards

Serious Eye Damage/Eye Irritation	Category 2A
Toxic to reproduction	Category 2
Specific Target Organ Toxicity - Repeated Exposure	Category 2

Environmental Hazards

Acute hazards to the aquatic environment	Category 2
Chronic hazards to the aquatic environment	Category 3

Hazard summary

Physical Hazards: No data available.

2.2 Label Elements

Signal Words: Warning

Hazard Statement(s):
H319: Causes serious eye irritation.
H361: Suspected of damaging fertility or the unborn child.
H373: May cause damage to organs through prolonged or repeated exposure.
H401: Toxic to aquatic life.
H412: Harmful to aquatic life with long lasting effects.

Precautionary Statements

Prevention:
P264: Wash thoroughly after handling.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P201: Obtain special instructions before use.
P202: Do not handle until all safety precautions have been read and understood.
P281: Use personal protective equipment as required.
P260: Do not breathe dust or mists.
P273: Avoid release to the environment.

Response:
P305+P351+P338: If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313: If eye irritation persists: Get medical advice/attention.
P308+P313: If exposed or concerned: Get medical advice/attention.

Storage:
P405: Store locked up.

Disposal:
P501: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

2.3 Other hazards: The product may not be released into the environment without control. By handling of chemical products no particular hazard is known when normal precautions (item 7) and personal protective equipment (item 8) are kept.

Unknown toxicity: Due to information available product does not contain any ingredients of unknown toxicity.

3 COMPOSITION / INFORMATION ON INGREDIENTS

General information: Mixture of the substances listed below with harmless additions.

Chemical name	Identifier	Concentration *	Notes
mineral oil, highly refined	72623-83-7	3.00 - 7.00%	
Lime hydrate	1305-62-0	1.00 - 5.00%	
Traizine derivative	37640-57-6	1.00 - 5.00%	
inorganic Zn compound	138265-88-0	1.00 - 5.00%	
Zn compound	1314-13-2	0.10 - 1.00%	

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.
PBT: persistent, bioaccumulative and toxic substance.
vPvB: very persistent and very bioaccumulative substance.

Classification

Chemical name	Classification	
mineral oil, highly refined	72623-83-7	
Lime hydrate	1305-62-0	Eye Dam. 1;H318, STOT SE 3;H335, Skin Irrit. 2;H315
Traizine derivative	37640-57-6	STOT RE 2;H373
inorganic Zn compound	138265-88-0	Repr. 2;H361d, Aquatic Acute 1;H400, Aquatic Chronic 2;H411
Zn compound	1314-13-2	Aquatic Acute 1;H400, Aquatic Chronic 1;H410

4 FIRST AID MEASURES

General: Instantly remove any clothing soiled by the product.

4.1 Description of first aid measures

Inhalation: Supply fresh air; consult doctor in case of symptoms.

Eye contact: Promptly wash eyes with plenty of water while lifting the eye lids.

Skin Contact: Wash with soap and water.

Ingestion: Rinse mouth thoroughly.

4.2 Most important symptoms and effects, both acute and delayed: No data available.

4.3 Indication of any immediate medical attention and special treatment needed Get medical attention if symptoms occur.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media: CO_2, fire extinguishing powder or fog like water spraying. Extinguish larger fires with alcohol resistant foam or spray water with suitable surfactant added

Unsuitable extinguishing media: Water with a full water jet.

5.2 Special hazards arising from the substance or mixture: During fire, gases hazardous to health may be formed.

5.3 Advice for firefighters

Special fire fighting procedures: Move container from fire area if it can be done without risk. Dispose of fire debris and contaminated fire fighting water inaccordance with official regulations. Collect contaminated fire fighting water separately. It must not enter drains.

Special protective equipment for fire-fighters: Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures: In case of spills, beware of slippery floors and surfaces.

6.2 Environmental Precautions: Avoid release to the environment. Prevent further leakage or spillage if safe to do so.

6.3 Methods and material for containment and cleaning up: Scrape up spillage or absorb with absorbing material. Dispose of the material collected according to regulations. Stop the flow of material, if this is without risk.

6.4 Reference to other sections: See Section 8 of the SDS for Personal Protective Equipment. See Section 7 for information on safe handling See Section 13 for information on disposal.

SECTION 7: Handling and storage:

7.1 Precautions for safe handling: Provide adequate ventilation. Observe good industrial hygiene practices. Do not eat, drink or smoke when working with the product. Take usual precautions when handling mineral oil products or chemical products.

7.2 Conditions for safe storage, including any incompatibilities: Local regulations concerning handling and storage of waterpolluting products have to be followed.

7.3 Specific end use(s): not applicable

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1.Exposure Limits

Chemical name	Type	Exposure Limit Values		Source
mineral oil, highly refined - Inhalable fraction.	TWA		5 mg/m3	US. ACGIH Threshold Limit Values (03 2014)
mineral oil, highly refined	PEL	500 ppm	2,000 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
mineral oil, highly refined - Mist.	PEL		5 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
mineral oil, highly refined	TWA	400 ppm	1,600 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
mineral oil, highly refined - Mist.	TWA		5 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)

8.2.Exposure controls

Appropriate engineering controls: Provide adequate ventilation. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

General information:	Wash hands before breaks and after work. Use personal protective equipment as required. Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment. The usual precautionary measures should be adhered to inhandling the chemicals or the mineral oil products.
Eye/face protection:	Safety glasses (EN 166) recommended during refilling.
Skin protection	
Hand Protection:	Avoid long-term and repeated skin contact. Protective gloves, where permitted in acc. to safety directions.
Other:	Do not carry cleaning cloths impregnated with the product in trouser pockets. Wear suitable protective clothing.
Respiratory Protection:	Not relevant, due to the form of the product.
Thermal hazards:	No data available.
Hygiene measures:	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing to remove contaminants. Discard contaminated footwear that cannot be cleaned.
Environmental Controls:	No data available.

9 PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical propertiesAppearance

Physical state:	solid
Form:	Paste
Color:	Light brown
Odor:	Characteristic
Odor Threshold:	Not applicable for mixtures
pH:	not applicable
Melting Point:	Not applicable for mixtures
Boiling Point:	430 °C
Flash Point:	201 °C
Evaporation Rate:	Not applicable for mixtures
Flammability (solid, gas):	Value not relevant for classification
Flammability Limit - Upper (%)–:	Not applicable for mixtures
Flammability Limit - Lower (%)–:	Not applicable for mixtures
Vapor pressure:	Not applicable for mixtures

Vapor density (air=1):	Not applicable for mixtures
Density:	1.00 g/cm3 (15 °C)
Solubility(ies)	
Solubility in Water:	Insoluble in water
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	Not applicable for mixtures
Autoignition Temperature:	Value not relevant for classification
Decomposition Temperature:	Value not relevant for classification
Flow time:	Value not relevant for classification
Explosive properties:	Value not relevant for classification
Oxidizing properties:	Value not relevant for classification
9.2 Other information	No data available.

SECTION 10: Stability and reactivity

10.1 Reactivity:	Stable under normal use conditions.
10.2 Chemical Stability:	Stable under normal use conditions.
10.3 Possibility of hazardous reactions:	Stable under normal use conditions.
10.4 Conditions to avoid:	Stable under normal use conditions.
10.5 Incompatible Materials:	Strong oxidizing substances. Strong acids. Strong bases.
10.6 Hazardous Decomposition Products:	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.

11 TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation:	No data available.
Ingestion:	No data available.
Skin Contact:	No data available.
Eye contact:	No data available.

Acute toxicity

Oral

Product:

ATEmix: 37,279.93 mg/kg

Specified substance(s)

mineral oil, highly refined	LD 50 (Rat): > 5,000 mg/kg
Lime hydrate	LD 50 (Rat): > 2,001 mg/kg
Traizine derivative	LD 50 (Rat): > 3,000 mg/kg
Zn compound	LD 50 (Rat): > 2,001 mg/kg

Dermal

Product:

ATEmix: 30,440.5 mg/kg

Specified substance(s)

mineral oil, highly refined	LD 50 (Rabbit): > 3,000 mg/kg
Lime hydrate	LD 50 (Rabbit): > 2,500 mg/kg

Inhalation

Product:

Not classified for acute toxicity based on available data.

Specified substance(s)

Zn compound	LC 50 (Rat, 4 h): 5.7 mg/l

Skin Corrosion/Irritation:

Product: OECD 404 (Rabbit): Based on available data, the classification criteria are not met.

Serious Eye Damage/Eye Irritation:

Product: OECD 405 (Rabbit): No irritant effect at the eyes of rabbits (OECD 405).

Respiratory or Skin Sensitization:

Product: Skin sensitizer: Based on available data, the classification criteria are not met.
Respiratory sensitizer: Based on available data, the classification criteria are not met.

Germ Cell Mutagenicity

Product: Based on available data, the classification criteria are not met.

Carcinogenicity

Product: Based on available data, the classification criteria are not met.

IARC: IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:
No carcinogenic components identified

NTP: US. National Toxicology Program (NTP) Report on Carcinogens:
No carcinogenic components identified

OSHASP: US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):
No carcinogenic components identified

Reproductive toxicity

Product: Based on available data, the classification criteria are met.

Specific Target Organ Toxicity - Single Exposure

Product: Based on available data, the classification criteria are not met.

Specific Target Organ Toxicity - Repeated Exposure

Product: Based on available data, the classification criteria are met.

Aspiration Hazard

Product: Based on available data, the classification criteria are not met.

12 ECOLOGICAL INFORMATION

12.1 Toxicity

Acute toxicity

Product: Based on available data, the classification criteria are met.

Fish
Specified substance(s)

Lime hydrate	LC 50 (Fish, 96 h): 50.6 mg/l
Zn compound	LC 50 (Fish, 96 h): > 6 mg/l

Aquatic Invertebrates
Specified substance(s)

Lime hydrate	EC 50 (Water Flea, 48 h): 49.1 mg/l
Zn compound	EC 50 (Water Flea, 48 h): 2.2 mg/l

Chronic ToxicityProduct: Based on available data, the classification criteria are met.

Toxicity to Aquatic Plants
Specified substance(s)

Lime hydrate	EC 50 (Alga, 72 h): 184.57 mg/l
Zn compound	EC 50 (Alga, 72 h): 0.17 mg/l

12.2 Persistence and Degradability

Biodegradation
Product: Not applicable for mixtures

12.3 Bioaccumulative potential
Product: Not applicable for mixtures

12.4 Mobility in soil:
Product: Not applicable for mixtures

12.5 Results of PBT and vPvB assessment: The product does not contain any substances fulfilling the PBT/vPvB criteria.

12.6 Other adverse effects: Harmful to aquatic life with long lasting effects.

13 Disposal considerations

13.1 Waste treatment methods

General information: Dispose in accordance with all applicable regulations.

Disposal methods: Discharge, treatment, or disposal may be subject to national, state, or local laws.

14 TRANSPORT INFORMATION

DOT
Not regulated.

IMDG - International Maritime Dangerous Goods Code
Not regulated.

IATA
Not regulated.

15 REGULATORY INFORMATION

US Federal Regulations

US State Regulations

Inventory Status

DSL	Not in compliance with the inventory.
NDSL	Not in compliance with the inventory.
TSCA	On or in compliance with the inventory

16 OTHER INFORMATION

Revision Information: Vertical lines in the margin indicate an amendment.

Wording of the R-phrases and H-statements in section 2 and 3

H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H361	Suspected of damaging fertility or the unborn child.
H361d	Suspected of damaging the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H401	Toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Revision Date: 31.03.2017

Disclaimer: The data contained in this safety data sheet are based on our current knowledge and experience and are given to the best of our knowledge and belief. It characterizes the product only with regard to safety requirements for handling, transport and disposal. The data do not describe the product's properties (tech. product specification). Neither should any agreed property nor the suitability of the product for any specific technical application be deduced from the data contained in this safety data sheet. Modifications on this document are not allowed. The data are not transferable to other products. In the case of mixing the product with other products or in the case of processing, the data in this safety data sheet are not necessarily valid for the new-made material. It is the responsibility of the recipient of the product to observe federal, state and local law. Please contact us to obtain up-to-date safety data sheets. This document was issued electronically and has no signature.

Изготовитель ООО "Черкасский завод автохимии", Украина, г. Черкассы,
ул. В.Чорновола 118, тел. +38 (0472) 64-24-04, 64-04-90

ПАСПОРТ КАЧЕСТВА № 16-1834/2

Жидкость охлаждающая низкозамерзающая марки А-38 красный Антифриз Ct12+ ТУ У 24.6-14215951-001:2010 зі змінами 1-6

Партия №: 23-769-01 — Дата фасовки — 08.12.2023
Масса нетто, кг указано на канистре — Вид и тип тары — кан. п/е 10л,5л

№	Название показателя	Норма	Факт	Метод испытания
1	Внешний вид	Однородная прозрачная жидкость без механических примесей.Цвет соответствует образцу-эталону	Соответствует	ГОСТ 28084-89, п.4.1
2	Плотность при температуре 20 °С, г/см³, не меньше	1,06	1,073	ГОСТ 18995.1-73, раздел 1
3	Температура начала кристаллизации, °С, не выше	-36	-36,0	ГОСТ 28084-89, п.4.3
4	Фракционный состав:			ГОСТ 28084-89, п.4.4
	Точка кипения, °С, не ниже	108	108,0	
	Фракционный состав массовая доля жидкости, перегоняемая до температуры °С, не больше	60	52,0	
5	Коррозионное воздействие на металлы г/м2 сут., не больше *			ГОСТ 28084-89, п.4.5
	□ алюминий	0.1	0,08	
	□ чугун	0.1	0,07	
	□ сталь	0.1	0,06	
	□ медь	0.1	0,05	
	□ латунь	0.1	0,06	
	□ припой	0.2	0,12	
6	Вспениваемость:			ГОСТ 28084-89, п.4.6
	□ Объем пены, см3 не больше	30	0,00	
	□ Стойкость пены, с, не больше	3	0,00	
7	Содержание золы, %, не более	2,5	0,00	ГОСТ 28084-89
8	Набухание резины, %, не больше	5	0,9	ГОСТ 28084-89, п.4.7
9	Водородный показатель(pH), при 20 °С	7.5-11.0	8,6	ГОСТ 28084-89, п.4.8
10	Щелочность, см3 раствора КОН, не менше	не нормируется	20,0	ГОСТ 28084-89, п.4.9
11	Температура застывания, °С, не выше	-39	-40,0	ТУ У 24.6-14215951-001:2010, п.6.13

***Согласно протокола периодических испытаний № 23-68 от 02.11.2023**

Гарантированный срок хранения – 5 лет

Вывод: соответствует требованиям ТУ У 24.6-14215951-001:2010 зі змінами 1-6

Ответственный за анализ Суржикова Н. Л. ***Подпись***

Контролер качества упаковки Бабенкова Т.Г. ***Подпись***

Печать

ЧЕРКАСЬКИЙ ЗАВОД АВТОХІМІЇ Для паспортів якості 36994791 ТОВАРИСТВО З ОБМЕЖЕНОЮ ВІДПОВІДАЛЬНІСТЮ УКРАЇНА м. ЧЕРКАСИ

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MINISTERUL SĂNĂTĂŢII AL REPUBLICII MOLDOVA
МИНИСТЕРСТВО ЗДРАВООХРАНЕНИЯ РЕСПУБЛИКИ МОЛДОВА
AGENŢIA NAŢIONALĂ PENTRU SĂNĂTATE PUBLICĂ
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Certificat nr. LÎ-044 din 17.02.2018 valabil până la 16.02.2026

AVIZ SANITAR

PENTRU PRODUSELE ALIMENTARE ŞI NEALIMENTARE Nr. P-17027/2023

Санитарное заключение для пищевых и непищевых продуктов

din/от **14 aprilie 2023**

Prin prezentul aviz sanitar se confirmă că producerea, importul, utilizarea şi desfacerea produselor / echipamentelor
Настоящим санитарным заключением подтверждается что производство, ввоз, использование и реализация продукции / оборудовании
Soluție de spălat parbriz ”IARNA” -20 C, -30 C; Soluție de spălat parbriz ”VARA”, lichid pentru aprinderea focului

sunt conforme Regulamentului (lor) sanitar (e) / *соответствуют санитарному (ым) регламенту (ам)* (se va indica denumirea completă a Regulamentului (lor) sanitar (e) */ указать полное наименование санитарного (ых) регламента (ов)*)
SF 41279445-001:2020, IT MD 41279445-001:2020, SM GOST R 51696:2003 Produse chimice de uz casnic

Organizaţia-producătoare/importatoare, ţara de origine / *организация произв./импортер, страна происхождения*

”AMID-AUTO” SRL, Republica Moldova

Destinatarul avizului sanitar / *получатель санитарного заключения*
AMID-AUTO S.R.L. , Republica Moldova, mun. Chişinău, sec. Botanica, str. Independenţei, 42, ap./of. 20

Temei pentru recunoaşterea conformităţii produselor Regulamentului (lor) sanitar (e) menţionat (e) a servit /
Основанием для признания продукции указанному (ым) санитарному (ым) регламенту (ам) послужило
Demers, autorizație sanitară de funcționare, standard de firmă, instrucțiune tehnologică, rețeta, raport de încercări nr.69 din 17.05.2022, rapoarte a încercărilor de laborator nr.51007043-51007046 din 06.04.2023, din 11.04.2023
(a enumera documentele de însoţire, buletinele de analiză */ перечислить сопроводительные док., протоколы исслед.)*

Caracteristica sanitară a produselor / *санитарная характеристика продукции:*

Parametrii (factorii) / *показатели (факторы)*	**Normativul sanitar** */ санитарный норматив*
conform rapoartelor încercărilor de laborator nr.51007043-51007046 din 06.04.2023, din 11.04.2023	

Domeniu de utilizare / *Область применения:*
întreținere auto

Condiţiile necesare de utilizare, depozitare, transportare, măsurile de securitate / *Необходимые условия использования, хранения, транспортировки, меры безопасности:*
producerea, plasarea pe piaţă în condiţiile respectării legislaţiei în vigoare în Republica Moldova

AVIZUL SANITAR este valabil pînă la */ Санитарное заключение действительно до:* 30.04.2026

DIRECTORUL AGENŢIEI NAŢIONALE PENTRU SĂNĂTATE PUBLICĂ

Nicolae Jelamschi

Digitally signed by Jelamschi Nicolae
Date: 2023.04.14 11:46:18 EEST
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