

SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard
- US



Klüberlub BE 41-542

Version	Revision Date:	Date of last issue: 02/18/2025	Print Date:
4.0	03/23/2026	Date of first issue: 05/12/2021	03/23/2026

SECTION 1. IDENTIFICATION

Product name : Klüberlub BE 41-542

Article-No. : 020269

Manufacturer or supplier's details

Company name of supplier : Klüber Lubrication NA LP
9010 County Road 2120
Tyler, Texas 75707
USA
Phone: +1 903 534 8021
Fax: +1 903 581 4376
info@us.kluber.com

Klüber Lubrication NA LP
32 Industrial Drive
Londonderry, NH 03053
USA
Phone: +1 603 647 4104
Fax: +1 603 647 4106
info@us.kluber.com

E-mail address of person responsible for the SDS : mcm@us.kluber.com

Emergency telephone number : +1 517 545 7070 NCEC

Recommended use of the chemical and restrictions on use

Recommended use : Grease

Restrictions on use : Restricted to professional users.
The Environmental Protection Agency prohibits processing and distribution of this chemical/product for any use other than: (1) In hydraulic fluids either for the aviation industry or to meet military specifications for safety and performance where no alternative chemical is available that meets U.S. Department of Defense specification requirements, (2) In lubricants and greases for aerospace and turbine uses and, for all other lubricant and grease uses before November 21, 2039, (3) circuit boards and wire harnesses, including but not limited to terminal and fuse covers, cable sleeves, casings, connectors and tapes, (4) As an intermediate in the manufacture of cyanoacrylate glue, (5) In specialized engine

SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard
- US



Klüberlub BE 41-542

Version	Revision Date:	Date of last issue: 02/18/2025	Print Date:
4.0	03/23/2026	Date of first issue: 05/12/2021	03/23/2026

air filters for locomotive and marine applications, (6) In adhesives and sealants before January 6, 2025, after which use in adhesives and sealants is prohibited, (7) In new parts for motor vehicles before November 21, 2039 and replacement parts for motor vehicles before November 19, 2054, (8) In new parts for aerospace vehicles before November 19, 2054 and replacement parts for aerospace vehicles after the end of the aerospace vehicles service lives, (9) In marine antifouling coating products that are registered under the Federal Insecticide, Fungicide, and Rodenticide Act and that meet U.S. Department of Defense specification requirements before November 19, 2029, (10) In new manufacturing equipment, new products or articles in the semiconductor industry, for new heating, ventilation, air-conditioning, refrigeration, and water-heating equipment, new power generating equipment, new laboratory equipment, new commercial electronic equipment, and new consumer electronic equipment before November 20, 2034, (11) replacement parts for manufacturing and laboratory equipment after the end of the equipment's service life, (12) replacement parts for heating, ventilation, air-conditioning, refrigeration, and water-heating equipment, for power generating equipment, and for commercial electronic equipment before November 19, 2049, (13) replacement parts for consumer electronic equipment before November 19, 2031, (14) in other articles before October 31, 2024, after which use in articles other than those with later phase-in prohibition dates or exclusions is prohibited. In addition, all persons are prohibited from releasing PIP (3:1) to water during manufacturing, processing, and distribution in commerce, and must follow all existing regulations and best practices to prevent the release of PIP (3:1) to water during the commercial use of PIP (3:1).

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Hazards for the product as supplied

Skin irritation	: Category 2
Eye irritation	: Category 2A
Reproductive toxicity	: Category 2
Specific target organ toxicity	: Category 2 (ovaries, Testes, Liver, Adrenal gland, Digestive

SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard
- US

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Klüberlub BE 41-542

Version	Revision Date:	Date of last issue:	Print Date:
4.0	03/23/2026	02/18/2025 Date of first issue: 05/12/2021	03/23/2026

- repeated exposure (Oral) organs, thymus gland)

GHS label elements

Hazard pictograms :



Signal word : Warning

Hazard statements : Causes skin irritation.
Causes serious eye irritation.
Suspected of damaging fertility or the unborn child.
May cause damage to organs (ovaries, Testes, Liver, Adrenal gland, Digestive organs, thymus gland) through prolonged or repeated exposure if swallowed.

Precautionary statements : **Prevention:**
Obtain special instructions before use.
Wash skin thoroughly after handling.
Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response:
IF exposed or concerned: Get medical advice/ attention.
Storage:
Store locked up.
Disposal:
Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Chemical nature : Mineral oil.
special lithium soap

Components

SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard
- US



Klüberlub BE 41-542

Version 4.0	Revision Date: 03/23/2026	Date of last issue: 02/18/2025 Date of first issue: 05/12/2021	Print Date: 03/23/2026
----------------	------------------------------	---	---------------------------

Chemical name	CAS No./Unique ID	Concentration (% w/w)	Trade secret
Phenol, isopropylated, phosphate (3:1)	68937-41-7*	$\geq 1 - \leq 5$	TSC
2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol	95-38-5*	$\geq 1 - \leq 5$	TSC

* Indicates that the identifier is a CAS No.

TSC- the actual concentration or concentration range is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

- If inhaled : Obtain medical attention.
Remove person to fresh air. If signs/symptoms continue, get medical attention.
Keep patient warm and at rest.
If unconscious, place in recovery position and seek medical advice.
Keep respiratory tract clear.
If breathing is irregular or stopped, administer artificial respiration.
- In case of skin contact : Take off all contaminated clothing immediately.
Get medical attention immediately if irritation develops and persists.
Wash clothing before reuse.
Thoroughly clean shoes before reuse.
Wash off immediately with plenty of water.
- In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 10 minutes.
Seek medical advice.
- If swallowed : Move the victim to fresh air.
If unconscious, place in recovery position and seek medical advice.
Keep respiratory tract clear.
Do not induce vomiting without medical advice.
Obtain medical attention.
Rinse mouth with water.
Never give anything by mouth to an unconscious person.
- Most important symptoms and effects, both acute and delayed : No symptoms known or expected.
Causes skin irritation.
Causes serious eye irritation.
Suspected of damaging fertility or the unborn child.
May cause damage to organs through prolonged or repeated exposure if swallowed.

SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard
- US



Klüberlub BE 41-542

Version 4.0	Revision Date: 03/23/2026	Date of last issue: 02/18/2025 Date of first issue: 05/12/2021	Print Date: 03/23/2026
----------------	------------------------------	---	---------------------------

Notes to physician : Treat symptomatically.

SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
- Unsuitable extinguishing media : High volume water jet
- Hazardous combustion products : Carbon oxides
Nitrogen oxides (NOx)
Sulphur oxides
Oxides of phosphorus
Metal oxides
- Further information : Standard procedure for chemical fires.
Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.
Use personal protective equipment.
Exposure to decomposition products may be a hazard to health.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Evacuate personnel to safe areas.
Ensure adequate ventilation.
Do not breathe vapours, aerosols.
Refer to protective measures listed in sections 7 and 8.
- Environmental precautions : Do not allow contact with soil, surface or ground water.
If the product contaminates rivers and lakes or drains inform respective authorities.
- Methods and materials for containment and cleaning up : Pick up and transfer to properly labelled containers.

SECTION 7. HANDLING AND STORAGE

SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard
- US



Klüberlub BE 41-542

Version	Revision Date:	Date of last issue: 02/18/2025	Print Date:
4.0	03/23/2026	Date of first issue: 05/12/2021	03/23/2026

- Advice on safe handling : Avoid contact with skin and eyes.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Wash hands and face before breaks and immediately after handling the product.
Do not get in eyes or mouth or on skin.
Do not get on skin or clothing.
Do not ingest.
Do not repack.
These safety instructions also apply to empty packaging which may still contain product residues.
Keep container closed when not in use.
- Conditions for safe storage : Store in original container.
Keep container closed when not in use.
Keep in a dry, cool and well-ventilated place.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Store in accordance with the particular national regulations.
Keep in properly labelled containers.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Residual oils (petroleum), solvent-dewaxed	64742-62-7	TWA (Mist)	5 mg/m3	OSHA Z-1 (2018-03-15)
		TWA (Inhalable particulate matter)	5 mg/m3	ACGIH (2025-01-01)
		TWA (Mist)	5 mg/m3	NIOSH REL (2019-10-04)
		ST (Mist)	10 mg/m3	NIOSH REL (2019-10-04)
Residual oils (petroleum), hydrotreated	64742-57-0	TWA (Mist)	5 mg/m3	OSHA Z-1 (2018-03-15)
		TWA (Inhalable particulate matter)	5 mg/m3	ACGIH (2013-03-01)
		TWA (Mist)	5 mg/m3	NIOSH REL (2019-10-04)

SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard
- US



Klüberlub BE 41-542

Version	Revision Date:	Date of last issue: 02/18/2025	Print Date:
4.0	03/23/2026	Date of first issue: 05/12/2021	03/23/2026

		ST (Mist)	10 mg/m3	NIOSH REL (2019-10-04)
Distillates (petroleum), hydrotreated heavy naphthenic	64742-52-5	TWA (Mist)	5 mg/m3	OSHA Z-1 (2018-03-15)
		TWA (Inhalable particulate matter)	5 mg/m3	ACGIH (2013-03-01)
		TWA (Mist)	5 mg/m3	NIOSH REL (2019-10-04)
		ST (Mist)	10 mg/m3	NIOSH REL (2019-10-04)
lithium 12-hydroxystearate	7620-77-1	TWA (Inhalable particulate matter)	10 mg/m3	ACGIH (2025-01-01)
		TWA (Respirable particulate matter)	3 mg/m3	ACGIH (2025-01-01)
Sunflower oil	8001-21-6	TWA (mist - total)	10 mg/m3	NIOSH REL (2019-10-04)
		TWA (mist - respirable)	5 mg/m3	NIOSH REL (2019-10-04)

Engineering measures : Handle only in a place equipped with local exhaust (or other appropriate exhaust).

Personal protective equipment

Respiratory protection : Not required; except in case of aerosol formation.

Filter type : Filter type P

Hand protection

Material : Nitrile rubber

Break through time : > 10 min

Protective index : Class 1

Remarks : Wear protective gloves. The break through time depends amongst other things on the material, the thickness and the type of glove and therefore has to be measured for each case.

Eye protection : Safety glasses

Skin and body protection : Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.

Protective measures : The type of protective equipment must be selected according

SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard
- US



Klüberlub BE 41-542

Version	Revision Date:	Date of last issue: 02/18/2025	Print Date:
4.0	03/23/2026	Date of first issue: 05/12/2021	03/23/2026

to the concentration and amount of the dangerous substance
at the specific workplace.

Hygiene measures : Wash face, hands and any exposed skin thoroughly after
handling.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	: solid
Form	: paste
Colour	: brown
Odour	: characteristic
Odour Threshold	: No data available
Melting point/ range	: No data available
Boiling point/boiling range	: No data available
Flammability	: Flammability (solid, gas): Combustible Solids
Upper explosion limit / Upper flammability limit	: No data available
Lower explosion limit / Lower flammability limit	: No data available
Flash point	: Not applicable
Auto-ignition temperature	: No data available
Self-ignition	: No data available
Decomposition temperature	: No data available
pH	: Not applicable substance/mixture is non-soluble (in water)

SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard
- US



Klüberlub BE 41-542

Version 4.0	Revision Date: 03/23/2026	Date of last issue: 02/18/2025 Date of first issue: 05/12/2021	Print Date: 03/23/2026
----------------	------------------------------	---	---------------------------

Viscosity	
Viscosity, dynamic	: No data available
Viscosity, kinematic	: Not applicable
Solubility(ies)	
Water solubility	: insoluble
Solubility in other solvents	: No data available
Partition coefficient: n-octanol/water	: No data available
Vapour pressure	: < 0.001 hPa (68 °F / 20 °C)
Density	: 0.93 g/cm ³ (68 °F / 20 °C)
Relative density	: 0.93 (68 °F / 20 °C) Reference substance: Water The value is calculated
Relative vapour density	: No data available
Bulk density	: No data available
Particle characteristics	
Particle size	: Not applicable
Particle Size Distribution	: Not applicable
Other information	
Evaporation rate	: No data available
Explosive properties	: Not explosive
Oxidizing properties	: No data available
Sublimation point	: No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: No hazards to be specially mentioned.
Chemical stability	: Stable under normal conditions.

SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard
- US



Klüberlub BE 41-542

Version 4.0	Revision Date: 03/23/2026	Date of last issue: 02/18/2025 Date of first issue: 05/12/2021	Print Date: 03/23/2026
----------------	------------------------------	---	---------------------------

Possibility of hazardous reactions : No dangerous reaction known under conditions of normal use.

Conditions to avoid : No conditions to be specially mentioned.

Incompatible materials : No materials to be especially mentioned.

Hazardous decomposition products : No decomposition if stored and applied as directed.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

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

Product:

Acute oral toxicity : Acute toxicity estimate: > 5,000 mg/kg
Method: Calculation method

Acute inhalation toxicity : Remarks: This information is not available.

Acute dermal toxicity : Symptoms: Redness, Local irritation

Components:

Phenol, isopropylated, phosphate (3:1):

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 200 mg/l
Exposure time: 1 h
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Rabbit): > 10,000 mg/kg
GLP: no

2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol:

Acute oral toxicity : LD50 (Rat): 1,265 mg/kg
Method: OECD Test Guideline 401
GLP: yes

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity

Skin corrosion/irritation

Causes skin irritation.

Product:

SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard
- US



Klüberlub BE 41-542

Version	Revision Date:	Date of last issue: 02/18/2025	Print Date:
4.0	03/23/2026	Date of first issue: 05/12/2021	03/23/2026

Remarks : This information is not available.

Components:

Phenol, isopropylated, phosphate (3:1):

Species	: Rabbit
Exposure time	: 72 h
Assessment	: No skin irritation
Result	: No skin irritation
GLP	: no

2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol:

Species	: Rabbit
Method	: OECD Test Guideline 404
Result	: Corrosive, category 1C - where responses occur after exposures between 1 hour and 4 hours and observations up to 14 days.
GLP	: yes

Serious eye damage/eye irritation

Causes serious eye irritation.

Product:

Remarks : This information is not available.

Components:

Phenol, isopropylated, phosphate (3:1):

Species	: Rabbit
Result	: No eye irritation
Assessment	: No eye irritation
GLP	: no

2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol:

Species	: Rabbit
Result	: Corrosive
Assessment	: Corrosive
Method	: OECD Test Guideline 405

Respiratory or skin sensitisation

Skin sensitisation

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

Respiratory sensitisation

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

SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard
- US



Klüberlub BE 41-542

Version	Revision Date:	Date of last issue: 02/18/2025	Print Date:
4.0	03/23/2026	Date of first issue: 05/12/2021	03/23/2026

Product:

Remarks : This information is not available.

Components:

Phenol, isopropylated, phosphate (3:1):

Species	: Mouse
Assessment	: Did not cause sensitisation on laboratory animals.
Method	: OECD Test Guideline 429
Result	: Did not cause sensitisation on laboratory animals.
GLP	: yes

2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol:

Species	: Guinea pig
Assessment	: Does not cause skin sensitisation.
Method	: OECD Test Guideline 406
Result	: Does not cause skin sensitisation.

Germ cell mutagenicity

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

Product:

Genotoxicity in vitro : Remarks: No data available

Genotoxicity in vivo : Remarks: No data available

Components:

2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol:

Germ cell mutagenicity -	: Tests on bacterial or mammalian cell cultures did not show
Assessment	mutagenic effects.

Carcinogenicity

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

Product:

Remarks : No data available

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.

**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.

SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard
- US



Klüberlub BE 41-542

Version	Revision Date:	Date of last issue: 02/18/2025	Print Date:
4.0	03/23/2026	Date of first issue: 05/12/2021	03/23/2026

Reproductive toxicity

Suspected of damaging fertility or the unborn child.

Product:

Effects on fertility : Remarks: No data available

Effects on foetal development : Remarks: No data available

Components:

Phenol, isopropylated, phosphate (3:1):

Reproductive toxicity - Assessment	: - Fertility -
	Some evidence of adverse effects on sexual function and fertility, and/or on development, based on animal experiments.
	- Teratogenicity -
	Some evidence of adverse effects on sexual function and fertility, and/or on development, based on animal experiments.

2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol:

Reproductive toxicity - Assessment	: - Fertility -
	Animal testing did not show any effects on fertility.
	- Teratogenicity -
	Did not show teratogenic effects in animal experiments.

STOT - single exposure

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

Product:

Remarks : No data available

STOT - repeated exposure

May cause damage to organs (ovaries, Testes, Liver, Adrenal gland, Digestive organs, thymus gland) through prolonged or repeated exposure if swallowed.

Product:

Remarks : No data available

Components:

Phenol, isopropylated, phosphate (3:1):

Exposure routes	: Ingestion
Target Organs	: ovaries, Testes, Liver, Adrenal gland
Assessment	: The substance or mixture is classified as specific target organ

SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard
- US



Klüberlub BE 41-542

Version	Revision Date:	Date of last issue: 02/18/2025	Print Date:
4.0	03/23/2026	Date of first issue: 05/12/2021	03/23/2026

II toxicant, repeated exposure, category 2.

2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol:

Exposure routes	: Ingestion
Target Organs	: Digestive organs, thymus gland
Assessment	: May cause damage to organs through prolonged or repeated exposure.

Repeated dose toxicity

Product:

Remarks : This information is not available.

Components:

2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol:

Species	: Rat, male and female
NOAEL	: 20 mg/kg
Application Route	: Oral
Number of exposures	: daily
Control Group	: yes
Method	: OECD Test Guideline 422
GLP	: yes
Target Organs	: Gastrointestinal tract, thymus gland

Aspiration toxicity

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

Product:

This information is not available.

Components:

Phenol, isopropylated, phosphate (3:1):

II No aspiration toxicity classification

Further information

Product:

Remarks : Ingestion causes irritation of upper respiratory system and gastrointestinal disturbance.

SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard
- US



Klüberlub BE 41-542

Version	Revision Date:	Date of last issue: 02/18/2025	Print Date:
4.0	03/23/2026	Date of first issue: 05/12/2021	03/23/2026

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Toxicity to fish : Remarks: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Toxicity to daphnia and other aquatic invertebrates : Remarks: No data available

Toxicity to algae/aquatic plants : Remarks: No data available

Toxicity to microorganisms : Remarks: No data available

Components:

Phenol, isopropylated, phosphate (3:1):

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 1.6 mg/l
Exposure time: 96 h
Test Type: static test
Remarks: Information given is based on tests on the mixture itself.

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 2.44 mg/l
Exposure time: 48 h
Test Type: semi-static test
Remarks: Information given is based on tests on the mixture itself.

Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): > 2.5 mg/l
Exposure time: 96 h
Test Type: static test
Method: OECD Test Guideline 201
GLP: yes
Remarks: Information given is based on tests on the mixture itself.

Toxicity to fish (Chronic toxicity) : NOEC (Pimephales promelas (fathead minnow)): 0.0031 mg/l
Exposure time: 33 d

SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard
- US

KLÜBER
LUBRICATION

Klüberlub BE 41-542

Version	Revision Date:	Date of last issue: 02/18/2025	Print Date:
4.0	03/23/2026	Date of first issue: 05/12/2021	03/23/2026

Method: OECD Test Guideline 210

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 0.0415 mg/l
Exposure time: 21 d
Method: OECD Test Guideline 211

M-Factor (Chronic aquatic toxicity) : 10

2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol:

Toxicity to fish : LC50 (Danio rerio (zebra fish)): 0.3 mg/l
Exposure time: 96 h
Test Type: static test
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0.163 mg/l
Exposure time: 48 h
Test Type: Immobilization
Method: OECD Test Guideline 202
GLP: yes

Toxicity to algae/aquatic plants : ErC50 (Desmodesmus subspicatus (green algae)): 0.03 mg/l
Exposure time: 72 h
Test Type: Growth inhibition
Method: OECD Test Guideline 201

M-Factor (Acute aquatic toxicity) : 10

M-Factor (Chronic aquatic toxicity) : 1

Toxicity to microorganisms : EC50 (activated sludge): 26 mg/l
Exposure time: 3 h
Test Type: Respiration inhibition
Method: OECD Test Guideline 209

Persistence and degradability

Product:

Biodegradability : Remarks: No data available

SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard
- US

KLÜBER
LUBRICATION

Klüberlub BE 41-542

Version	Revision Date:	Date of last issue: 02/18/2025	Print Date:
4.0	03/23/2026	Date of first issue: 05/12/2021	03/23/2026

Physico-chemical
removability : Remarks: No data available

Components:

Phenol, isopropylated, phosphate (3:1):

Biodegradability : Result: Not rapidly biodegradable
Biodegradation: 17.9 %
Exposure time: 28 d
Method: OECD Test Guideline 301D
GLP: yes

2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol:

Biodegradability : Primary biodegradation
Result: Not rapidly biodegradable
Method: OECD Test Guideline 301B

Bioaccumulative potential

Product:

Bioaccumulation : Remarks: No data available

Components:

Phenol, isopropylated, phosphate (3:1):

Partition coefficient: n-
octanol/water : log Pow: 4.92 - 5.17 (77 °F / 25 °C)

2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol:

Bioaccumulation : Bioconcentration factor (BCF): 371.8
Remarks: Does not accumulate in organisms.

Partition coefficient: n-
octanol/water : log Pow: > 6

Mobility in soil

Product:

Mobility : Remarks: No data available

Distribution among
environmental compartments : Remarks: No data available

SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard
- US



Klüberlub BE 41-542

Version	Revision Date:	Date of last issue: 02/18/2025	Print Date:
4.0	03/23/2026	Date of first issue: 05/12/2021	03/23/2026

Other adverse effects

Product:

Ozone-Depletion Potential : Regulation: 40 CFR Protection of Environment; Part 82
Protection of Stratospheric Ozone - CAA Section 602 Class I
Substances
Remarks: This product neither contains, nor was
manufactured with a Class I or Class II ODS as defined by the
U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A +
B).

Additional ecological information : Toxic to aquatic life with long lasting effects.

Components:

Phenol, isopropylated, phosphate (3:1):

Results of PBT and vPvB assessment : Non-classified PBT substance Non-classified vPvB substance

Endocrine disrupting potential : Known or presumed endocrine disruptors for the environment.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : The product should not be allowed to enter drains, water
courses or the soil.
Do not dispose of with domestic refuse.
Dispose of as hazardous waste in compliance with local and
national regulations.

Contaminated packaging : Packaging that is not properly emptied must be disposed of as
the unused product.
Dispose of waste product or used containers according to
local regulations.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

UN number : UN 3077

Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID,
N.O.S.

SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard
- US



Klüberlub BE 41-542

Version	Revision Date:	Date of last issue: 02/18/2025	Print Date:
4.0	03/23/2026	Date of first issue: 05/12/2021	03/23/2026

(Triaryl Phosphate Isopropylated, 2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol)

Class : 9
Packing group : III
Labels : 9
Environmentally hazardous : yes

IATA-DGR

UN/ID No. : UN 3077
Proper shipping name : Environmentally hazardous substance, solid, n.o.s.
(Triaryl Phosphate Isopropylated, 2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol)

Class : 9
Packing group : III
Labels : Miscellaneous Dangerous Goods
Packing instruction (cargo aircraft) : 956
Packing instruction (passenger aircraft) : 956
Environmentally hazardous : yes

IMDG-Code

UN number : UN 3077
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
(Triaryl Phosphate Isopropylated, 2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol)

Class : 9
Packing group : III
Labels : 9
EmS Code : F-A, S-F
Marine pollutant : yes

Transport in bulk according to IMO instruments

Not applicable for product as supplied.

National Regulations

49 CFR

Not regulated as a dangerous good

Remarks : Shipment by ground under DOT is non-regulated for non-bulk packaging; however it may be shipped per the applicable hazard classification to facilitate multi-modal transport involving ICAO (IATA) or IMO.

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard
- US



Klüberlub BE 41-542

Version	Revision Date:	Date of last issue: 02/18/2025	Print Date:
4.0	03/23/2026	Date of first issue: 05/12/2021	03/23/2026

SECTION 15. REGULATORY INFORMATION

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 : Reproductive toxicity
Specific target organ toxicity (single or repeated exposure)
Skin corrosion or irritation
Serious eye damage or eye irritation

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

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.

TSCA list

The following substance(s) is/are subject to a Significant New Use Rule:

Triphenyl phosphate	115-86-6	See 40 CFR 721.11780; Proposed Rule
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The following substance(s) is/are subject to TSCA 12(b) export notification requirements:

Phenol, isopropylated, phosphate 68937-41-7
(3:1)

The Environmental Protection Agency prohibits processing and distribution of this chemical/product for any use other than: (1) In hydraulic fluids either for the aviation industry or to meet military specifications for safety and performance where no alternative chemical is available that meets U.S. Department of Defense specification requirements, (2) In lubricants and greases for aerospace and turbine uses and, for all other lubricant and grease uses before November 21, 2039, (3) circuit boards and wire harnesses, including but not limited to terminal and fuse covers, cable sleeves, casings, connectors and tapes, (4) As an intermediate in the manufacture of cyanoacrylate glue, (5) In specialized engine air filters for locomotive and marine applications, (6) In adhesives and sealants before January 6, 2025, after which use in adhesives and sealants is prohibited, (7) In new parts for motor vehicles before November 21, 2039 and replacement parts for motor vehicles before November 19, 2054, (8) In new parts for aerospace vehicles before November 19, 2054 and replacement parts for aerospace vehicles after the end of the aerospace vehicles service lives, (9) In marine antifouling coating products that are registered under the Federal Insecticide, Fungicide, and Rodenticide Act and that meet U.S. Department of Defense specification requirements before November 19, 2029, (10) In new manufacturing equipment, new products or articles in the semiconductor industry, for new heating, ventilation, air-

SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard
- US



Klüberlub BE 41-542

Version	Revision Date:	Date of last issue: 02/18/2025	Print Date:
4.0	03/23/2026	Date of first issue: 05/12/2021	03/23/2026

conditioning, refrigeration, and water-heating equipment, new power generating equipment, new laboratory equipment, new commercial electronic equipment, and new consumer electronic equipment before November 20, 2034, (11) replacement parts for manufacturing and laboratory equipment after the end of the equipment's service life, (12) replacement parts for heating, ventilation, air-conditioning, refrigeration, and water-heating equipment, for power generating equipment, and for commercial electronic equipment before November 19, 2049, (13) replacement parts for consumer electronic equipment before November 19, 2031, (14) in other articles before October 31, 2024, after which use in articles other than those with later phase-in prohibition dates or exclusions is prohibited. In addition, all persons are prohibited from releasing PIP (3:1) to water during manufacturing, processing, and distribution in commerce, and must follow all existing regulations and best practices to prevent the release of PIP (3:1) to water during the commercial use of PIP (3:1).

SECTION 16. OTHER INFORMATION

Further information

Full text of other abbreviations

ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
NIOSH REL	:	USA. NIOSH Recommended Exposure Limits
OSHA Z-1	:	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
ACGIH / TWA	:	8-hour, time-weighted average
NIOSH REL / TWA	:	Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek
NIOSH REL / ST	:	STEL - 15-minute TWA exposure that should not be exceeded at any time during a workday
OSHA Z-1 / TWA	:	8-hour time weighted average

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonised System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organisation; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardisation; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of

SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard
- US



Klüberlub BE 41-542

Version	Revision Date:	Date of last issue: 02/18/2025	Print Date:
4.0	03/23/2026	Date of first issue: 05/12/2021	03/23/2026

Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organisation for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

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- || Relevant changes compared to the last edition are highlighted at the left margin. This version replaces all previous editions.

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