CO-250

Version	Revision Date:	Date of last issue: 2026-04-13	Print Date: 2026-08-06
3.0	2026-08-06	Date of first issue: 2021-10-18	

SECTION 1. IDENTIFICATION

Product name : CO-250

Article-No. : 340016

Other means of identification : No data available

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 : klna-productstewardship@klueber.com

Emergency telephone number : +1 517 545 7070 NCEC

Recommended use of the chemical and restrictions on use

Recommended use : Lubricating oil

Restrictions on use : Restricted to professional users.

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the Hazardous Products Regulations

Skin sensitisation : Category 1

Reproductive toxicity : Category 2

a brand of FREUDENBERG

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GHS label elements

Hazard pictograms :

Signal word : Warning

Hazard statements : May cause an allergic skin reaction.
Suspected of damaging the unborn child.

Precautionary statements :

Prevention:

Obtain special instructions before use.
Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

IF exposed or concerned: Get medical advice/ attention.
If skin irritation or rash occurs: 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 : ester oil
Synthetic hydrocarbon oil

Components

Chemical name	Common Name/Synonym	CAS No./Unique ID	Concentration (% w/w)	Trade secret
Phenol, 2(or 4)-C9-10-branched alkyl derivs., phosphorothioates (3:1)	O,O,O-tris(2(or 4)-C 9-10-isoalkylphenyl) phosphorothioate	126019-82-7*	>= 1 - <= 5	TSC

tris(nonylphenyl) phosphite	tris(nonylphenyl) phosphite	26523-78-4*	>= 0.1 - <= 1	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.
If eye irritation persists, consult a specialist.

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.
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.
May cause an allergic skin reaction.
Suspected of damaging the unborn child.

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
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. Use personal protective equipment. Ensure adequate ventilation. Do not breathe vapours or spray mist. Refer to protective measures listed in sections 7 and 8.
Environmental precautions	:	Do not allow contact with soil, surface or ground water. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.
Methods and materials for containment and cleaning up	:	Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

SECTION 7. HANDLING AND STORAGE

Advice on safe handling	:	Do not breathe vapours or spray mist. 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.
Do not re-use empty containers.
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
Contains no substances with occupational exposure limit values.

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 A-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 with side-shields

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 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	:	liquid
Colour	:	yellow
Odour	:	No information available.
Odour Threshold	:	No data available
Melting point/ range	:	No data available
Boiling point/boiling range	:	No data available
Flammability	:	Flammability (solid, gas): Not applicable
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Flash point	:	266 °C Method: ASTM D 92
Auto-ignition temperature	:	No data available

Self-ignition	:	No data available
Decomposition temperature	:	No data available
pH	:	Not applicable
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	257 mm2/s (40 °C)
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 (20 °C)
Density	:	0.90 g/cm3 (20 °C)
Relative density	:	0.902 (20 °C) Reference substance: Water The value is calculated
Relative vapour density	:	No data available
Bulk density	:	No data available
Particle characteristics		
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.

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	:	Remarks: This information is not available.
Acute inhalation toxicity	:	Remarks: This information is not available.
Acute dermal toxicity	:	Symptoms: Redness, Local irritation

Components:

Phenol, 2(or 4)-C9-10-branched alkyl derivs., phosphorothioates (3:1):

Acute oral toxicity	:	LD50 (Rat): > 2,000 mg/kg Method: OECD Test Guideline 401 GLP: yes Assessment: The substance or mixture has no acute oral toxicity
Acute inhalation toxicity	:	Assessment: The substance or mixture has no acute inhalation toxicity
Acute dermal toxicity	:	LD50 (Rat): > 2,000 mg/kg Method: OECD Test Guideline 402 GLP: yes Assessment: The substance or mixture has no acute dermal toxicity

Skin corrosion/irritation

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

Product:

Remarks	:	This information is not available.

Components:

Phenol, 2(or 4)-C9-10-branched alkyl derivs., phosphorothioates (3:1):

Species	:	Rabbit
Assessment	:	No skin irritation
Result	:	No skin irritation

Serious eye damage/eye irritation

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

Product:

Remarks	:	This information is not available.

Components:

Phenol, 2(or 4)-C9-10-branched alkyl derivs., phosphorothioates (3:1):

Species	:	Rabbit
Result	:	No eye irritation
Assessment	:	No eye irritation
Method	:	OECD Test Guideline 405
GLP	:	yes

Respiratory or skin sensitisation

Skin sensitisation

May cause an allergic skin reaction.

Respiratory sensitisation

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

Product:

Remarks	:	This information is not available.

Components:

Phenol, 2(or 4)-C9-10-branched alkyl derivs., phosphorothioates (3:1):

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

tris(nonylphenyl) phosphite:

Assessment	:	May cause sensitisation by skin contact.
Result	:	May cause sensitisation by skin contact.

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:

Phenol, 2(or 4)-C9-10-branched alkyl derivs., phosphorothioates (3:1):

Genotoxicity in vitro : Test Type: Ames test
Test system: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
GLP: yes

Test Type: In vitro mammalian cell gene mutation test
Test system: Chinese hamster ovary cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative
GLP: yes

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Chinese hamster (male and female)
Application Route: oral (gavage)
Method: OECD Test Guideline 474
Result: negative
GLP: yes

Germ cell mutagenicity - Assessment : Weight of evidence does not support classification as a germ cell mutagen.

Carcinogenicity

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

Product:

Remarks : No data available

Components:

Phenol, 2(or 4)-C9-10-branched alkyl derivs., phosphorothioates (3:1):

Carcinogenicity - Assessment : Not classifiable as a human carcinogen.

Reproductive toxicity

Suspected of damaging the unborn child.

Product:

Effects on fertility	:	Remarks: No data available
Effects on foetal development	:	Remarks: No data available

Components:

Phenol, 2(or 4)-C9-10-branched alkyl derivs., phosphorothioates (3:1):

Effects on foetal development	:	Test Type: Developmental Toxicity Species: Rat Application Route: Oral Developmental Toxicity: NOAEL: 150 mg/kg body weight Method: OECD Test Guideline 414 Result: Some evidence of adverse effects on development, based on animal experiments. GLP: yes Remarks: Based on data from similar materials
Reproductive toxicity - Assessment	:	- Fertility - Some evidence of adverse effects on development, based on animal experiments.

STOT - single exposure

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

Product:

Remarks	:	No data available

Components:

Phenol, 2(or 4)-C9-10-branched alkyl derivs., phosphorothioates (3:1):

Assessment	:	The substance or mixture is not classified as specific target organ toxicant, single exposure.

STOT - repeated exposure

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

Product:

Remarks	:	No data available

Components:

Phenol, 2(or 4)-C9-10-branched alkyl derivs., phosphorothioates (3:1):

Assessment	:	The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Repeated dose toxicity

Product:

Remarks	:	This information is not available.

Components:

Phenol, 2(or 4)-C9-10-branched alkyl derivs., phosphorothioates (3:1):

Species	:	Rat
NOAEL	:	1,000 mg/kg
Application Route	:	Oral
Exposure time	:	28 d
Method	:	OECD Test Guideline 407
GLP	:	yes

Species	:	Rat
NOAEL	:	50 mg/kg
Application Route	:	Oral
Exposure time	:	90 d
Number of exposures	:	daily
Method	:	OECD Test Guideline 408
GLP	:	yes
Remarks	:	Not classified due to data which are conclusive although insufficient for classification.

Aspiration toxicity

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

Product:

This information is not available.

Components:

Phenol, 2(or 4)-C9-10-branched alkyl derivs., phosphorothioates (3:1):

No aspiration toxicity classification

Further information

Product:

Remarks	:	Information given is based on data on the components and the toxicology of similar products.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Toxicity to fish : Remarks: Harmful 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, 2(or 4)-C9-10-branched alkyl derivs., phosphorothioates (3:1):

Toxicity to fish : LC50 (Danio rerio (zebra fish)): > 25 mg/l
Exposure time: 96 h
Test Type: static test
Method: OECD Test Guideline 203
GLP: yes

Toxicity to algae/aquatic plants : EC50 (Desmodesmus subspicatus (green algae)): > 100 mg/l
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201
GLP: yes

Toxicity to microorganisms : EC50 (activated sludge): > 100 mg/l
Exposure time: 3 h
Test Type: Respiration inhibition
Method: OECD Test Guideline 209
GLP: yes

Ecotoxicology Assessment

Acute aquatic toxicity : Toxic to aquatic life.

Chronic aquatic toxicity : Toxic to aquatic life with long lasting effects.

tris(nonylphenyl) phosphite:

Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.

Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.

Persistence and degradability

Product:

Biodegradability : Remarks: No data available

Physico-chemical removability : Remarks: No data available

Components:

Phenol, 2(or 4)-C9-10-branched alkyl derivs., phosphorothioates (3:1):

Biodegradability : Primary biodegradation
Inoculum: activated sludge
Result: Not readily biodegradable.
Biodegradation: 2 - 4 %
Exposure time: 28 d
Method: OECD Test Guideline 301B
GLP: yes

Bioaccumulative potential

Product:

Bioaccumulation : Remarks: No data available

Components:

Phenol, 2(or 4)-C9-10-branched alkyl derivs., phosphorothioates (3:1):

Bioaccumulation : Species: Cyprinus carpio (Carp)
Bioconcentration factor (BCF): 48
Exposure time: 56 d
Concentration: 0.507 mg/l
Method: OECD Test Guideline 305C

GLP: yes

Partition coefficient: n-octanol/water : log Pow: 20

Mobility in soil

Product:

Mobility : Remarks: No data available

Distribution among environmental compartments : Remarks: No data available

Other adverse effects

Product:

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

Components:

Phenol, 2(or 4)-C9-10-branched alkyl derivs., phosphorothioates (3:1):

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

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
Not regulated as a dangerous good

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.

National Regulations

TDG
Not regulated as a dangerous good

Special precautions for user
Not applicable

SECTION 15. REGULATORY INFORMATION

Canadian lists
No substances are subject to a Significant New Activity Notification.

SECTION 16. OTHER INFORMATION

Full text of other abbreviations

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; 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; 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); LSPN - List of Hazardous Notified Substances (Chile); MARPOL - International Convention for the Prevention of Pollution from Ships; MERCOSUR - The Agreement for the Facilitation of the Transport of Dangerous Goods; n.o.s. - Not Otherwise

Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; 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; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; 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; WHMIS - Workplace Hazardous Materials Information System

Revision Date	:	2026-08-06
Date format	:	yyyy/mm/dd

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

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