

STABURAGS NBU 12 ALTEMP

Version 1.1 Revision Date: 12/10/2021 Date of last issue: 05/18/2021 Print Date: 12/11/2021
Date of first issue: 05/18/2021

SECTION 1. IDENTIFICATION

Product name : STABURAGS NBU 12 ALTEMP
Article-No. : 005018

Manufacturer or supplier's details

Company name of supplier : Klüber Lubrication NA LP
9010 CR 2120
Tyler, Texas 75707
Phone: (903) 534-8021
Fax: (903) 581-4376

32 Industrial Drive
Londonderry, NH 03053
Phone: (603) 647-4104
Fax: (603) 647-4106

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

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.

SECTION 2. HAZARDS IDENTIFICATION

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

Skin sensitisation : Category 1

GHS label elements

Hazard pictograms : 

Signal word : Warning

Hazard statements : May cause an allergic skin reaction.

Precautionary statements : **Prevention:**

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Contaminated work clothing should not be allowed out of the workplace.
Wear protective gloves.

Response:

IF ON SKIN: Wash with plenty of water.
If skin irritation or rash occurs: Get medical advice/ attention.
Take off contaminated clothing and wash it before reuse.

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 : barium complex soap
Mineral oil.
solid lubricant

Components

Chemical name	CAS-No.	Concentration (% w/w)
Distillates (petroleum), hydrotreated heavy paraffinic	64742-54-7	Trade secret ($\geq 30 - < 60$)
Barium compound	Proprietary	Trade secret ($\geq 10 - < 30$)
trizinc bis(orthophosphate)	7779-90-0	Trade secret ($\geq 5 - < 10$)
Zinc oxide	1314-13-2	Trade secret ($\geq 1 - < 5$)
4-ethyl-2-(8-heptadecenyl)-2-oxazoline-4-methanol	68140-98-7	Trade secret ($\geq 0.1 - < 1$)
pin-2(3)-ene	80-56-8	Trade secret ($\geq 0.1 - < 1$)

Actual concentration is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

If inhaled : 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.
Wash off immediately with soap and plenty of water.

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- Get medical attention immediately if irritation develops and persists.
Wash clothing before reuse.
Thoroughly clean shoes before reuse.
- 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 without medical advice.
Never give anything by mouth to an unconscious person.
- Most important symptoms and effects, both acute and delayed : May cause an allergic skin reaction.
Allergic appearance
- Notes to physician : The first aid procedure should be established in consultation with the doctor responsible for industrial medicine.

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
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.
Use the indicated respiratory protection if the occupational exposure limit is exceeded and/or in case of product release (dust).

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- 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 : Clean up promptly by sweeping or vacuum.
Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

- Advice on safe handling : Avoid contact with skin and eyes.
For personal protection see section 8.
Persons with a history of skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.
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
Distillates (petroleum), hydrotreated heavy paraffinic	64742-54-7	TWA (Mist)	5 mg/m3	OSHA Z-1 (2011-07-01)
		TWA (Inhalable particu-	5 mg/m3	ACGIH (2013-03-01)

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		late matter)		
		TWA (Mist)	5 mg/m3	OSHA P0 (1989-01-19)
		TWA (Mist)	5 mg/m3	NIOSH REL (2013-10-08)
		ST (Mist)	10 mg/m3	NIOSH REL (2013-10-08)
Zinc oxide	1314-13-2	TWA (Respirable particulate matter)	2 mg/m3	ACGIH (2007-01-01)
		STEL (Respirable particulate matter)	10 mg/m3	ACGIH (2007-01-01)
		TWA (Dust)	5 mg/m3	NIOSH REL (2013-10-08)
		TWA (Fumes)	5 mg/m3	NIOSH REL (2013-10-08)
		ST (Fumes)	10 mg/m3	NIOSH REL (2013-10-08)
		C (Dust)	15 mg/m3	NIOSH REL (2013-10-08)
		TWA (total dust)	15 mg/m3	OSHA Z-1 (2007-01-01)
		TWA (respirable fraction)	5 mg/m3	OSHA Z-1 (2007-01-01)
		TWA (Fumes)	5 mg/m3	OSHA Z-1 (2007-01-01)
		TWA (Total dust)	10 mg/m3	OSHA P0 (1989-01-19)
		TWA (respirable dust fraction)	5 mg/m3	OSHA P0 (1989-01-19)
		TWA (Fumes)	5 mg/m3	OSHA P0 (1989-01-19)
		STEL (Fumes)	10 mg/m3	OSHA P0 (1989-01-19)
pin-2(3)-ene	80-56-8	TWA	20 ppm	ACGIH (2014-03-01)

Engineering measures : none

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

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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
Protective measures	:	The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.
Hygiene measures	:	Wash face, hands and any exposed skin thoroughly after handling.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	paste
Colour	:	beige
Odour	:	characteristic
Odour Threshold	:	No data available
pH	:	Not applicable
Melting point/range	:	No data available
Boiling point/boiling range	:	No data available
Flash point	:	Not applicable
Evaporation rate	:	No data available
Flammability (solid, gas)	:	Combustible Solids
Self-ignition	:	No data available
Upper explosion limit / Upper	:	No data available

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flammability limit

Lower explosion limit / Lower flammability limit : No data available

Vapour pressure : < 0.001 hPa (68 °F / 20 °C)

Relative vapour density : No data available

Relative density : 1.08 (68 °F / 20 °C)
Reference substance: Water
The value is calculated

Bulk density : No data available

Solubility(ies)

 Water solubility : insoluble

 Solubility in other solvents : No data available

Partition coefficient: n-octanol/water : No data available

Auto-ignition temperature : No data available

Decomposition temperature : No data available

Viscosity

 Viscosity, dynamic : No data available

 Viscosity, kinematic : Not applicable

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.

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

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

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:

Distillates (petroleum), hydrotreated heavy paraffinic:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg
Method: OECD Test Guideline 401
GLP: yes
Acute inhalation toxicity : LC50 (Rat): > 5.53 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
Assessment: The substance or mixture has no acute inhalation toxicity
Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg
Method: OECD Test Guideline 402

Barium compound:

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg
Method: Directive 67/548/EEC, Annex V, B.1.
GLP: yes
Assessment: The substance or mixture has no acute oral 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

trizinc bis(orthophosphate):

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg
Method: OECD Test Guideline 401

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Zinc oxide:

- Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg
Method: OECD Test Guideline 401
- Acute inhalation toxicity : LC50 (Rat): > 5.7 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
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

4-ethyl-2-(8-heptadecenyl)-2-oxazoline-4-methanol:

- Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 423
GLP: yes
Assessment: The substance or mixture has no acute oral toxicity

pin-2(3)-ene:

- Acute oral toxicity : LD50 (Rat): > 500 mg/kg
Method: OECD Test Guideline 423
GLP: yes
- Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg
Method: OECD Test Guideline 402
GLP: yes
Assessment: The substance or mixture has no acute dermal toxicity

Skin corrosion/irritation

Product:

Remarks : This information is not available.

Components:

Distillates (petroleum), hydrotreated heavy paraffinic:

- Species : Rabbit
Assessment : No skin irritation
Method : OECD Test Guideline 404
Result : No skin irritation
GLP : yes

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Barium compound:

Species : Rabbit
Assessment : No skin irritation
Method : OECD Test Guideline 404
Result : No skin irritation
GLP : yes

trizinc bis(orthophosphate):

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

Zinc oxide:

Species : Rabbit
Assessment : No skin irritation
Method : OECD Test Guideline 404
Result : No skin irritation

4-ethyl-2-(8-heptadecenyl)-2-oxazoline-4-methanol:

Species : human skin
Assessment : No skin irritation
Result : No skin irritation

pin-2(3)-ene:

Species : Human
Assessment : Irritating to skin.
Result : Irritating to skin.

Serious eye damage/eye irritation

Product:

Remarks : This information is not available.

Components:

Distillates (petroleum), hydrotreated heavy paraffinic:

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

Barium compound:

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

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trizinc bis(orthophosphate):

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

Zinc oxide:

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

4-ethyl-2-(8-heptadecenyl)-2-oxazoline-4-methanol:

Result : No eye irritation
Assessment : No eye irritation

pin-2(3)-ene:

Species : Human
Result : No eye irritation
Assessment : No eye irritation

Respiratory or skin sensitisation

Product:

Remarks : This information is not available.

Components:

Distillates (petroleum), hydrotreated heavy paraffinic:

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

Barium compound:

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

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trizinc bis(orthophosphate):

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

Zinc oxide:

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

4-ethyl-2-(8-heptadecenyl)-2-oxazoline-4-methanol:

Assessment : The product is a skin sensitiser, sub-category 1A.
 Result : The product is a skin sensitiser, sub-category 1A.

pin-2(3)-ene:

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

Germ cell mutagenicity

Product:

Genotoxicity in vitro : Remarks: No data available
 Genotoxicity in vivo : Remarks: No data available

Components:

Barium compound:

Genotoxicity in vitro : Test Type: Ames test
 Method: OECD Test Guideline 471
 Result: negative
 GLP: yes

trizinc bis(orthophosphate):

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

Zinc oxide:

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

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Carcinogenicity

Product:

Remarks : No data available

Components:

Distillates (petroleum), hydrotreated heavy paraffinic:

Carcinogenicity - Assessment : Not classifiable as a human carcinogen.

trizinc bis(orthophosphate):

Carcinogenicity - Assessment : Not classifiable as a human carcinogen.

Zinc oxide:

Carcinogenicity - Assessment : Not classifiable as a human carcinogen.

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.

Reproductive toxicity

Product:

Effects on fertility : Remarks: No data available

Effects on foetal development : Remarks: No data available

Components:

Distillates (petroleum), hydrotreated heavy paraffinic:

Reproductive toxicity - Assessment : - Fertility -
No toxicity to reproduction

trizinc bis(orthophosphate):

Reproductive toxicity - Assessment : - Fertility -
No toxicity to reproduction
- Teratogenicity -

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No effects on or via lactation

Zinc oxide:

Reproductive toxicity - Assessment : - Fertility -
No toxicity to reproduction
- Teratogenicity -
No toxicity to reproduction

STOT - single exposure

Components:

Zinc oxide:

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

STOT - repeated exposure

Components:

Zinc oxide:

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:

Barium compound:

NOAEL : 150 mg/kg

Aspiration toxicity

Product:

This information is not available.

Components:

Distillates (petroleum), hydrotreated heavy paraffinic:

No aspiration toxicity classification

trizinc bis(orthophosphate):

No aspiration toxicity classification

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Zinc oxide:

No aspiration toxicity classification

pin-2(3)-ene:

May be fatal if swallowed and enters airways.

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: 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:

Distillates (petroleum), hydrotreated heavy paraffinic:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): > 100 mg/l
Exposure time: 96 h
Test Type: static test
Method: OECD Test Guideline 203
GLP: yes

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 10,000 mg/l
Exposure time: 48 h
Test Type: Immobilization
Method: OECD Test Guideline 202
GLP: yes

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 10 mg/l
Exposure time: 21 d
Test Type: semi-static test
Method: OECD Test Guideline 211

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GLP: yes

Barium compound:

Toxicity to fish : LC50 (Danio rerio (zebra fish)): > 100 mg/l
Exposure time: 96 h
Test Type: static test
Method: OECD Test Guideline 203
GLP: yes

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 100 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)): > 100 mg/l
Exposure time: 72 h
Test Type: Growth inhibition
Method: OECD Test Guideline 201
GLP: yes

Toxicity to microorganisms : EC50 (Bacteria): > 1,000 mg/l
Exposure time: 3 h
Test Type: Respiration inhibition
Method: OECD Test Guideline 209
GLP: yes

trizinc bis(orthophosphate):

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 0.14 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 1.08 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202
GLP: yes

Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): > 0.136 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

M-Factor (Acute aquatic toxicity) : 1

M-Factor (Chronic aquatic toxicity) : 1

Zinc oxide:

Toxicity to fish : LC50 (Danio rerio (zebra fish)): 1.55 mg/l
Exposure time: 96 h
Test Type: static test

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- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 1 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202
- Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): 0.136 mg/l
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201
GLP: yes
- M-Factor (Acute aquatic toxicity) : 1
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : (Daphnia magna (Water flea)): 0.04 mg/l
Exposure time: 21 d
Test Type: semi-static test
Method: OECD Test Guideline 211
- M-Factor (Chronic aquatic toxicity) : 1
- Toxicity to microorganisms : EC50 (activated sludge): > 1,000 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209
GLP: yes

4-ethyl-2-(8-heptadecenyl)-2-oxazoline-4-methanol:

- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 69.17 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202
- Toxicity to algae/aquatic plants : EC50 (Desmodesmus subspicatus (green algae)): 65.6 mg/l
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201
GLP: yes

pin-2(3)-ene:

- Toxicity to fish : LC50 (Danio rerio (zebra fish)): 0.303 mg/l
Exposure time: 96 h
Test Type: semi-static test
Method: OECD Test Guideline 203
GLP: yes
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0.475 mg/l
Exposure time: 48 h
Test Type: semi-static test
Method: OECD Test Guideline 202
GLP: yes

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M-Factor (Acute aquatic toxicity) : 1
M-Factor (Chronic aquatic toxicity) : 1

Persistence and degradability

Product:

Biodegradability : Remarks: No data available

Physico-chemical removability : Remarks: No data available

Components:

Distillates (petroleum), hydrotreated heavy paraffinic:

Biodegradability : aerobic
Inoculum: activated sludge
Result: Not rapidly biodegradable
Biodegradation: 3 %
Exposure time: 28 d
Method: OECD Test Guideline 301B
GLP: yes

Barium compound:

Biodegradability : Primary biodegradation
Inoculum: activated sludge
Result: Not rapidly biodegradable
Biodegradation: 16.8 %
Exposure time: 28 d
Method: OECD Test Guideline 301F
GLP: yes

trizinc bis(orthophosphate):

Biodegradability : Remarks: The methods for determining biodegradability are not applicable to inorganic substances.

Zinc oxide:

Biodegradability : Remarks: The methods for determining biodegradability are not applicable to inorganic substances.

4-ethyl-2-(8-heptadecenyl)-2-oxazoline-4-methanol:

Biodegradability : Result: Not rapidly biodegradable
Biodegradation: 34.73 %
Method: OECD Test Guideline 301B

pin-2(3)-ene:

Biodegradability : aerobic
Inoculum: activated sludge
Result: rapidly biodegradable

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Biodegradation: 68 %
Exposure time: 28 d
Method: OECD Test Guideline 301D
GLP: yes

Bioaccumulative potential

Product:

Bioaccumulation : Remarks: This mixture contains no substance considered to be persistent, bioaccumulating and toxic (PBT).
This mixture contains no substance considered to be very persistent and very bioaccumulating (vPvB).

Components:

Distillates (petroleum), hydrotreated heavy paraffinic:

Partition coefficient: n-octanol/water : log Pow: > 2

Barium compound:

Partition coefficient: n-octanol/water : log Pow: 0.9 - 18

4-ethyl-2-(8-heptadecenyl)-2-oxazoline-4-methanol:

Partition coefficient: n-octanol/water : log Pow: 3.42 (68 °F / 20 °C)

pin-2(3)-ene:

Partition coefficient: n-octanol/water : log Pow: 4.48 (77 °F / 25 °C)
Method: OECD Test Guideline 107

Mobility in soil

Product:

Mobility : Remarks: No data available

Distribution among environmental compartments : Remarks: No data available

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.

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Components:

Distillates (petroleum), hydrotreated heavy paraffinic:

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

trizinc bis(orthophosphate):

Results of PBT and vPvB assessment : Remarks: Not applicable

Zinc oxide:

Results of PBT and vPvB assessment : Remarks: Not applicable

4-ethyl-2-(8-heptadecenyl)-2-oxazoline-4-methanol:

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

- UN number : UN 3077
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
(Zinc Phosphate)
Class : 9
Packing group : III
Labels : 9

IATA-DGR

- UN/ID No. : UN 3077
Proper shipping name : Environmentally hazardous substance, solid, n.o.s.
(Zinc Phosphate)
Class : 9

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Packing group : III
Labels : Miscellaneous
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. (Zinc Phosphate)
Class : 9
Packing group : III
Labels : 9
EmS Code : F-A, S-F
Marine pollutant : yes

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

Not applicable for product as supplied.

National Regulations

49 CFR

UN/ID/NA number : UN 3077
Proper shipping name : Environmentally hazardous substance, solid, n.o.s. (Zinc Phosphate)
Class : 9
Packing group : III
Labels : CLASS 9
ERG Code : 171
Marine pollutant : no
Remarks : Not regulated by ground transportation in non-bulk packages less than 119 gallons. For packages greater than 119 gallons, or for air/sea shipping, refer to applicable marine pollutant regulations.

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.

SECTION 15. REGULATORY INFORMATION

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

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

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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 : Respiratory or skin sensitisation

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

Barium compound	Proprietary	>= 20 - < 30 %
trizinc bis(orthophosphate)	7779-90-0	>= 5 - < 10 %
Zinc oxide	1314-13-2	>= 1 - < 5 %
zinc dioleate	557-07-3	>= 1 - < 5 %
barium bis(dinonylnaphthalenesulphonate)	25619-56-1	>= 0.1 - < 1 %

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).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCM Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

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

This product contains the following toxic pollutants listed under the U.S. Clean Water Act Section 307

trizinc bis(orthophosphate)	7779-90-0	>= 5 - < 10 %
Zinc oxide	1314-13-2	>= 1 - < 5 %
zinc dioleate	557-07-3	>= 1 - < 5 %

This product does not contain any priority pollutants related to the U.S. Clean Water Act

US State Regulations

Massachusetts Right To Know

Zinc oxide 1314-13-2

Pennsylvania Right To Know

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Distillates (petroleum), hydrotreated heavy paraffinic	64742-54-7
Barium compound	Proprietary
trizinc bis(orthophosphate)	7779-90-0
Zinc oxide	1314-13-2
zinc dioleate	557-07-3
barium bis(dinonylnaphthalenesulphonate)	25619-56-1

Maine Chemicals of High Concern

Product does not contain any listed chemicals

Vermont Chemicals of High Concern

Product does not contain any listed chemicals

Washington Chemicals of High Concern

Product does not contain any listed chemicals

New York City Hazardous Substances

Barium compound	Proprietary
trizinc bis(orthophosphate)	7779-90-0
Zinc oxide	1314-13-2
zinc dioleate	557-07-3
barium bis(dinonylnaphthalenesulphonate)	25619-56-1
Distillates (petroleum), hydrotreated light naphthenic	64742-53-6
pin-2(3)-ene	80-56-8
Distillates (petroleum), hydrotreated light paraffinic	64742-55-8
lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based	72623-87-1
Distillates (petroleum), solvent-refined heavy naphthenic	64741-96-4
Distillates (petroleum), solvent-refined light naphthenic	64741-97-5
Camphene	79-92-5

California List of Hazardous Substances

trizinc bis(orthophosphate)	7779-90-0
Zinc oxide	1314-13-2
zinc dioleate	557-07-3

California Permissible Exposure Limits for Chemical Contaminants

Distillates (petroleum), hydrotreated heavy paraffinic	64742-54-7
Zinc oxide	1314-13-2

TSCA list

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

SECTION 16. OTHER INFORMATION

Further information

Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)

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NIOSH REL : USA. NIOSH Recommended Exposure Limits
 OSHA P0 : USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
 OSHA Z-1 : USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
 ACGIH / TWA : 8-hour, time-weighted average
 ACGIH / STEL : Short-term exposure limit
 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
 NIOSH REL / C : Ceiling value not be exceeded at any time.
 OSHA P0 / TWA : 8-hour time weighted average
 OSHA P0 / STEL : Short-term exposure limit
 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 Harmonized 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 Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; 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 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 - Organization 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; 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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