

**ALTEMP Q NB 50**

Version	Revision Date:	Date of last issue: 11/30/2021	Print Date:
1.2	01/18/2022	Date of first issue: 05/18/2021	01/25/2024

**SECTION 1. IDENTIFICATION**

Product name : ALTEMP Q NB 50

Article-No. : 005011

**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)**

Not a hazardous substance or mixture.

**GHS label elements**

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

**Other hazards**

None known.

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance / Mixture : Mixture

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Chemical nature : solid lubricant  
Mineral oil.  
barium complex soap

**Components**

Chemical name	CAS-No.	Concentration (% w/w)
trizinc bis(orthophosphate)	7779-90-0	Trade secret ( $\geq 30 - < 60$ )
Barium compound	Proprietary	Trade secret ( $\geq 10 - < 30$ )
Distillates (petroleum), solvent-dewaxed heavy paraffinic	64742-65-0	Trade secret ( $\geq 10 - < 30$ )
White mineral oil (petroleum)	8042-47-5	Trade secret ( $\geq 10 - < 30$ )
Zinc oxide	1314-13-2	Trade secret ( $\geq 5 - < 10$ )
Distillates (petroleum), hydrotreated light naphthenic	64742-53-6	Trade secret ( $\geq 1 - < 5$ )

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 : Remove contaminated clothing. If irritation develops, get medical attention.  
Wash off with soap and water.  
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 : No information available.  
None known.

Notes to physician : No information available.

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**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).  
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.  
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 ingest.  
Do not repack.

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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), solvent-dewaxed heavy paraffinic	64742-65-0	TWA (Mist)	5 mg/m3	OSHA Z-1 (2011-07-01)
		TWA (Inhalable particulate matter)	5 mg/m3	ACGIH (2013-03-01)
		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)
White mineral oil (petroleum)	8042-47-5	TWA (Mist)	5 mg/m3	OSHA Z-1 (2011-07-01)
		TWA (Inhalable particulate matter)	5 mg/m3	ACGIH (2013-03-01)
		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

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				(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)
Distillates (petroleum), hydrotreated light naphthenic	64742-53-6	TWA (Mist)	5 mg/m3	OSHA Z-1 (2011-07-01)
		TWA (Inhalable particulate matter)	5 mg/m3	ACGIH (2013-03-01)
		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)

**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

Protective index : Class 1

Remarks : For prolonged or repeated contact use 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

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- 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 : white
- 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 flammability limit : No data available
- Lower explosion limit / Lower flammability limit : No data available
- Vapour pressure : < 0.001 hPa (68 °F / 20 °C)
- Relative vapour density : No data available

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Relative density : 1.440 (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.

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

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**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 : Remarks: This information is not available.

**Components:**

**trizinc bis(orthophosphate):**

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

**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

**Distillates (petroleum), solvent-dewaxed heavy paraffinic:**

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

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg  
Method: OECD Test Guideline 402

**White mineral oil (petroleum):**

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

Acute inhalation toxicity : LC50 (Rat): > 5 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: OECD Test Guideline 403  
GLP: yes  
Assessment: The substance or mixture has no acute inhalation toxicity



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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

**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

**Distillates (petroleum), hydrotreated light naphthenic:**

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

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg

**Skin corrosion/irritation**

**Product:**

Remarks : This information is not available.

**Components:**

**trizinc bis(orthophosphate):**

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

**Barium compound:**

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

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**Distillates (petroleum), solvent-dewaxed heavy paraffinic:**

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

**White mineral oil (petroleum):**

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

**Zinc oxide:**

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

**Distillates (petroleum), hydrotreated light naphthenic:**

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

**Serious eye damage/eye irritation**

**Product:**

Remarks : This information is not available.

**Components:**

**trizinc bis(orthophosphate):**

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

**Distillates (petroleum), solvent-dewaxed heavy paraffinic:**

Species : Rabbit

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

**White mineral oil (petroleum):**

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

**Distillates (petroleum), hydrotreated light naphthenic:**

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

**Respiratory or skin sensitisation**

**Product:**

Remarks : This information is not available.

**Components:**

**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

**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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**Distillates (petroleum), solvent-dewaxed heavy paraffinic:**

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

**White mineral oil (petroleum):**

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

**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

**Distillates (petroleum), hydrotreated light naphthenic:**

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

**Germ cell mutagenicity**

**Product:**

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

**Components:**

**trizinc bis(orthophosphate):**

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

**Barium compound:**

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

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**Distillates (petroleum), solvent-dewaxed heavy paraffinic:**

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

Genotoxicity in vivo : Species: Mouse  
Application Route: Oral  
Method: OECD Test Guideline 474  
Result: negative

**White mineral oil (petroleum):**

Genotoxicity in vitro : Test Type: Ames test  
Method: Mutagenicity (Salmonella typhimurium - reverse mutation assay)  
Result: negative  
GLP: yes

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.

**Carcinogenicity**

**Product:**

Remarks : No data available

**Components:**

**trizinc bis(orthophosphate):**

Carcinogenicity - Assessment : Not classifiable as a human carcinogen.

**Distillates (petroleum), solvent-dewaxed heavy paraffinic:**

Species : Mouse  
Application Route : Dermal  
Method : OECD Test Guideline 451  
Result : negative

**White mineral oil (petroleum):**

Carcinogenicity - Assessment : No evidence of carcinogenicity in animal studies.

**Zinc oxide:**

Carcinogenicity - Assessment : Not classifiable as a human carcinogen.

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ment

**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:**

**trizinc bis(orthophosphate):**

Reproductive toxicity - Assessment : - Fertility -  
No toxicity to reproduction  
- Teratogenicity -  
No effects on or via lactation

**Distillates (petroleum), solvent-dewaxed heavy paraffinic:**

Effects on foetal development : Species: Rat  
Application Route: Dermal  
General Toxicity Maternal: NOAEL: 30 mg/kg body weight  
Developmental Toxicity: NOAEL: 30 mg/kg body weight  
Method: OECD Test Guideline 414

**White mineral oil (petroleum):**

Reproductive toxicity - Assessment : - Fertility -  
No toxicity to reproduction  
- Teratogenicity -  
No effects on or via lactation

**Zinc oxide:**

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

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**STOT - single exposure**

**Components:**

**White mineral oil (petroleum):**

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

**Zinc oxide:**

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

**STOT - repeated exposure**

**Components:**

**White mineral oil (petroleum):**

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

**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

**White mineral oil (petroleum):**

NOAEL : 1,800 mg/kg  
Exposure time : 90 d

**Aspiration toxicity**

**Product:**

This information is not available.

**Components:**

**trizinc bis(orthophosphate):**

No aspiration toxicity classification

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**Distillates (petroleum), solvent-dewaxed heavy paraffinic:**

No aspiration toxicity classification

**White mineral oil (petroleum):**

No aspiration toxicity classification

**Zinc oxide:**

No aspiration toxicity classification

**Distillates (petroleum), hydrotreated light naphthenic:**

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: 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:**

**trizinc bis(orthophosphate):**

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



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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

**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

**Distillates (petroleum), solvent-dewaxed heavy paraffinic:**

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

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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: static test  
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : NOEC (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l  
Exposure time: 72 h  
Test Type: static test  
Method: OECD Test Guideline 201

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 10 mg/l  
Exposure time: 21 d

**White mineral oil (petroleum):**

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l  
Exposure time: 96 h  
Test Type: static test  
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia (water flea)): > 100 mg/l  
Exposure time: 48 h  
Test Type: Immobilization  
Method: OECD Test Guideline 202

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): >= 1,000 mg/l  
Exposure time: 21 d

**Zinc oxide:**

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

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

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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

**Distillates (petroleum), hydrotreated light naphthenic:**

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

**Persistence and degradability**

**Product:**

Biodegradability : Remarks: No data available

Physico-chemical removability : Remarks: No data available

**Components:**

**trizinc bis(orthophosphate):**

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

**Barium compound:**

Biodegradability : Primary biodegradation

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

**Distillates (petroleum), solvent-dewaxed heavy paraffinic:**

Biodegradability : aerobic  
Inoculum: activated sludge  
Result: Not rapidly biodegradable  
Biodegradation: 31 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301B  
GLP: yes

**White mineral oil (petroleum):**

Biodegradability : Primary biodegradation  
Inoculum: activated sludge  
Result: Not rapidly biodegradable  
Biodegradation: 31 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301B

**Zinc oxide:**

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

**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:**

**Barium compound:**

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

**White mineral oil (petroleum):**

Partition coefficient: n- : Pow: > 6

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octanol/water

**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 : Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**Components:**

**trizinc bis(orthophosphate):**

Results of PBT and vPvB assessment : Remarks: Not applicable

**White mineral oil (petroleum):**

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

**Zinc oxide:**

Results of PBT and vPvB assessment : Remarks: Not applicable

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**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

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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, zinc oxide)  
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, zinc oxide)  
Class : 9  
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, zinc oxide)  
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, zinc oxide)  
Class : 9  
Packing group : III  
Labels : CLASS 9

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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.

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**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.

**SARA 302 Extremely Hazardous Substances Threshold Planning Quantity**

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

**SARA 311/312 Hazards** : No SARA Hazards

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

trizinc bis(orthophosphate)	7779-90-0	>= 30 - < 50 %
Barium compound	Proprietary	>= 10 - < 20 %
Zinc oxide	1314-13-2	>= 5 - < 10 %
zinc dioleate	557-07-3	>= 5 - < 10 %

**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 I Intermediate or Final VOC's (40 CFR 60.489).

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**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	7779-90-0	>= 30 - < 50 %
bis(orthophosphate)		
Zinc oxide	1314-13-2	>= 5 - < 10 %
zinc dioleate	557-07-3	>= 5 - < 10 %

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

**US State Regulations**

**Massachusetts Right To Know**

White mineral oil (petroleum)	8042-47-5
Zinc oxide	1314-13-2

**Pennsylvania Right To Know**

trizinc bis(orthophosphate)	7779-90-0
Barium compound	Proprietary
Distillates (petroleum), solvent-dewaxed heavy paraffinic	64742-65-0
White mineral oil (petroleum)	8042-47-5
Zinc oxide	1314-13-2
zinc dioleate	557-07-3

**Maine Chemicals of High Concern**

White mineral oil (petroleum)	8042-47-5
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**Vermont Chemicals of High Concern**

White mineral oil (petroleum)	8042-47-5
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**Washington Chemicals of High Concern**

White mineral oil (petroleum)	8042-47-5
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**New York City Hazardous Substances**

trizinc bis(orthophosphate)	7779-90-0
Barium compound	Proprietary
Zinc oxide	1314-13-2
zinc dioleate	557-07-3
pin-2(3)-ene	80-56-8
Distillates (petroleum), hydrotreated light naphthenic	64742-53-6
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



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**California Permissible Exposure Limits for Chemical Contaminants**

Distillates (petroleum), solvent-dewaxed heavy paraffinic	64742-65-0
White mineral oil (petroleum)	8042-47-5
Zinc oxide	1314-13-2
Distillates (petroleum), hydrotreated light naphthenic	64742-53-6

**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)
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;

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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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