

Product name: Chuck Grease Pro

Revision Date : 2024/1/17  
MA1127PHG6-E

Kitagawa Corporation encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

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## 1. PRODUCT AND COMPANY IDENTIFICATION

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**Product name:** Chuck Grease Pro

**Recommended use of the chemical and restrictions on use**

**Identified uses:** Lubricants and lubricant additives

**Uses advised against:** Do not use product for anything outside of the above specified uses.

### COMPANY IDENTIFICATION

Kitagawa Corporation  
Kitagawa Global hand Company  
77-1 Motomachi,  
Fuchu-shi, Hiroshima,  
726-8610, Japan

Customer Information Number:  
0847-40-0529

EMERGENCY TELEPHONE NUMBER  
0847-40-0533(Quality Control Section)

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## 2. HAZARDS IDENTIFICATION

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### GHS Classification

Specific target organ toxicity - repeated exposure : Category 2 (Kidney)

### GHS label elements

#### Hazard pictograms



Signal word: **WARNING!**

**Hazard statements**

May cause damage to organs (Kidney) through prolonged or repeated exposure.

**Precautionary statements****Prevention**

Do not breathe dust.

**Response**

Get medical advice/ attention if you feel unwell.

In case of fire: Avoid breathing fume.

**Disposal**

Dispose of contents/ container to an approved waste disposal plant.

**Other hazards which do not result in classification or are not covered by the GHS.**

No data available

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**3. COMPOSITION/INFORMATION ON INGREDIENTS**

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**Pure substance/mixture**

This product is a mixture.

Component	CASRN	ENCS number	ISHL number	Concentration
Petroleum Distillates, Hydrotreated, Heavy Paraffinic	64742-54-7	(9)-1692	(9)-1692	>= 50.0 - < 60.0 %
Melamine cyanurate	37640-57-6	5-1024/5- 1038	(5)- 1024/(5)- 1038	>= 10.0 - < 20.0 %
Titanium dioxide	13463-67-7	1-558	(1)-558	>= 1.0 - < 10.0 %
Lithium 12-hydroxyoctadecanoate	7620-77-1	2-1416	(2)-1416	>= 1.0 - < 10.0 %
Molybdenum, bis(dibutylcarbamodithioato)di-μ- oxodioxodi-, sulfurized	68412-26-0	非開示/CBI	非開示/CBI	>= 1.0 - < 2.5 %

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**4. FIRST AID MEASURES**

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**Description of first aid measures**

General advice:

First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

**Inhalation:** Move person to fresh air; if effects occur, consult a physician.

**Skin contact:** Wash off with plenty of water.

**Eye contact:** Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.

**Ingestion:** If swallowed, seek medical attention. Do not induce vomiting unless directed to do so by medical personnel.

**Most important symptoms and effects, both acute and delayed:**

Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

**Indication of any immediate medical attention and special treatment needed**

**Notes to physician:** No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

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## **5. FIREFIGHTING MEASURES**

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**Suitable extinguishing media:** Water spray Alcohol-resistant foam Carbon dioxide (CO<sub>2</sub>) Dry chemical

**Unsuitable extinguishing media:** None known.

**Special hazards arising from the substance or mixture**

**Hazardous combustion products:** Carbon oxides Fluorine compounds Nitrogen oxides (NO<sub>x</sub>)  
Metal oxides Sulphur oxides

**Unusual Fire and Explosion Hazards:** Exposure to combustion products may be a hazard to health. Toxic vapours are evolved.

**Advice for firefighters**

**Fire Fighting Procedures:** Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray to cool unopened containers. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Remove undamaged containers from fire area if it is safe to do so. Evacuate area.

**Special protective equipment for firefighters:** In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment. Wear neoprene gloves to prevent contact with hydrofluoric acid.

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## 6. ACCIDENTAL RELEASE MEASURES

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**Personal precautions, protective equipment and emergency procedures:** Use personal protective equipment. Follow safe handling advice and personal protective equipment recommendations.

**Environmental precautions:** Discharge into the environment must be avoided. Prevent further leakage or spillage if safe to do so. Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained.

**Methods and materials for containment and cleaning up:** Wipe up or scrape up and contain for salvage or disposal. Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable. For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.  
See sections: 7, 8, 11, 12 and 13.

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## 7. HANDLING AND STORAGE

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### Handling

#### Technical measures

Use with local exhaust ventilation. See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.

#### Precautions for safe handling

Do not swallow. Avoid contact with eyes. Avoid prolonged or repeated contact with skin. Take care to prevent spills, waste and minimize release to the environment. Handle in accordance with good industrial hygiene and safety practice.

#### Avoidance of contact

No information available.

#### Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Use good personal hygiene. Do not consume or store food in the work area. Wash hands before smoking or eating.

### Storage

#### Suitable storage conditions

Keep in properly labelled containers. Store in accordance with the particular national regulations.

Do not store with the following product types: Strong oxidizing agents.

#### Suitable container and packaging materials for safe storage

Unsuitable materials for containers: None known.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

If exposure limits exist, they are listed below. If no exposure limits are displayed, then no values are applicable.

Component	Regulation	Type of listing	Value
Petroleum Distillates, Hydrotreated, Heavy Paraffinic	ACGIH	TWA Inhalable particulate matter	5 mg/m <sup>3</sup>
	Further information: A4: Not classifiable as a human carcinogen		
Titanium dioxide	ACGIH	TWA Respirable particulate matter	2.5 mg/m <sup>3</sup> , Titanium dioxide
	Further information: A3: Confirmed animal carcinogen with unknown relevance to humans		
	ACGIH	TWA Respirable particulate matter	0.2 mg/m <sup>3</sup> , Titanium dioxide
	Further information: A3: Confirmed animal carcinogen with unknown relevance to humans		
	JP OEL JSOH	OEL-M Respirable dust	1 mg/m <sup>3</sup> , Titanium
	JP OEL JSOH	OEL-M Total dust	4 mg/m <sup>3</sup> , Titanium
Lithium 12-hydroxyoctadecanoate	ACGIH	TWA Inhalable particulate matter	10 mg/m <sup>3</sup>
	Further information: LRT irr: Lower Respiratory Tract irritation; J: Does not include stearates of toxic metals.; A4: Not classifiable as a human carcinogen; varies: varies		
	ACGIH	TWA Respirable particulate matter	3 mg/m <sup>3</sup>
	Further information: LRT irr: Lower Respiratory Tract irritation; J: Does not include stearates of toxic metals.; A4: Not classifiable as a human carcinogen; varies: varies		

### Exposure controls

**Engineering measures:** Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations.

### Individual protection measures

**Respiratory protection:** Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process.

**Hand protection:** Use gloves chemically resistant to this material. NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

**Eye/face protection:** Use safety glasses (with side shields).

**Skin and body protection:** Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.

### Special notes

No information available.

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**9. PHYSICAL AND CHEMICAL PROPERTIES**

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**Appearance**

Physical state	paste
Color	White to light yellow

**Odor** not significant

**Odor Threshold** No data available

**pH** Not applicable

**Melting point/range** No data available

**Freezing point** No data available

**Boiling point, initial boiling point and boiling range**

**Boiling point/boiling range** Not applicable

**Flash point** **Seta closed cup** >200 °C

**Evaporation Rate (Butyl Acetate = 1)** Not applicable

**Flammability** Not classified as a flammability hazard

**Lower explosion limit and upper explosion limit / flammability limit**

**Lower explosion limit** No data available

**Upper explosion limit** No data available

**Vapor Pressure** Not applicable

**Relative Vapor Density (air = 1)** No data available

**Density and / or relative density** 1.12

**Solubility(ies)**

**Water solubility** No data available

**Particle characteristics**

**Assessment** No information available.

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

**Auto-ignition temperature** No data available

**Decomposition temperature** No data available

**Dynamic Viscosity** Not applicable

**Kinematic Viscosity** No data available

**Explosive properties** Not explosive

**Oxidizing properties** The substance or mixture is not classified as oxidizing.

**Molecular weight** No data available

**Other data**

NOTE: The physical data presented above are typical values and should not be construed as a specification.

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## 10. STABILITY AND REACTIVITY

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**Reactivity:** Not classified as a reactivity hazard.

**Chemical stability:** Stable under normal conditions.

**Possibility of hazardous reactions:** Can react with strong oxidizing agents.

**Conditions to avoid:** None known.

**Incompatible materials:** Oxidizing agents

**Hazardous decomposition products:** Hexafluoroethane. Hydrogen Fluoride. 1,1,1,3,3,3-Hexafluoro-2-propanone. Carbonic difluoride. Carbon monoxide. Fluorinated hydrocarbons. Ammonia. Hydrogen Cyanide. 1-Butene.

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## 11. TOXICOLOGICAL INFORMATION

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*Toxicological information appears in this section when such data is available.*

### Acute toxicity

#### Acute oral toxicity

Product test data not available. Refer to component data.

#### Acute dermal toxicity

Product test data not available. Refer to component data.

#### Acute inhalation toxicity

Product test data not available. Refer to component data.

### Skin corrosion/irritation

Product test data not available. Refer to component data.

### Serious eye damage/eye irritation

Product test data not available. Refer to component data.

### Respiratory or skin sensitisation

Product test data not available. Refer to component data.

### Specific target organ toxicity - single exposure

Product test data not available. Refer to component data.

### Specific target organ toxicity - repeated exposure

Product test data not available. Refer to component data.

### Carcinogenicity

Product test data not available. Refer to component data.

### Teratogenicity

Product test data not available. Refer to component data.

**Reproductive toxicity**

Product test data not available. Refer to component data.

**Germ cell mutagenicity**

Product test data not available. Refer to component data.

**Aspiration Hazard**

Product test data not available. Refer to component data.

**COMPONENTS INFLUENCING TOXICOLOGY:**

**Petroleum Distillates, Hydrotreated, Heavy Paraffinic**

**Acute oral toxicity**

Typical for this family of materials. Rat, > 5,000 mg/kg

**Acute dermal toxicity**

Typical for this family of materials. Rabbit, > 2,000 mg/kg

**Acute inhalation toxicity**

For this family of materials: LC50, Rat, 4 Hour, vapour, 2.18 mg/l

**Skin corrosion/irritation**

Brief contact may cause slight skin irritation with local redness.

Prolonged contact may cause moderate skin irritation with local redness.

**Serious eye damage/eye irritation**

May cause slight eye irritation.

Corneal injury is unlikely.

**Respiratory or skin sensitisation**

For this family of materials, sensitization studies done in guinea pigs have been negative.

For respiratory sensitization:

No relevant data found.

**Specific target organ toxicity - single exposure**

Available data are inadequate to determine single exposure specific target organ toxicity.

**Specific target organ toxicity - repeated exposure**

For this family of materials:

In animals, effects have been reported on the following organs:

Liver.

**Carcinogenicity**

Typical for this family of materials. Did not cause cancer in animal skin painting studies.

**Teratogenicity**

Typical for this family of materials. Has been toxic to the fetus in laboratory animals at doses toxic to the mother.

**Reproductive toxicity**

Typical for this family of materials. Limited data in laboratory animals suggest that the material does not affect reproduction.



**Germ cell mutagenicity**

Typical for this family of materials. In vitro genetic toxicity studies were predominantly negative. For this family of materials: Animal genetic toxicity studies were negative.

**Aspiration Hazard**

May be fatal if swallowed and enters airways.

**Melamine cyanurate**

**Acute oral toxicity**

LD50, Rat, > 2,000 mg/kg OECD Test Guideline 423

**Acute dermal toxicity**

Information given is based on data obtained from similar substances. LD50, Rat, > 5,000 mg/kg

**Acute inhalation toxicity**

LC50, Rat, 4 Hour, dust/mist, > 5.1 mg/l OECD Test Guideline 403

**Skin corrosion/irritation**

Brief contact is essentially nonirritating to skin.

**Serious eye damage/eye irritation**

May cause slight temporary eye irritation.

**Respiratory or skin sensitisation**

Did not cause allergic skin reactions when tested in guinea pigs.

**Specific target organ toxicity - single exposure**

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

**Specific target organ toxicity - repeated exposure**

In animals, effects have been reported on the following organs:  
kidney effects

**Carcinogenicity**

The observed tumors do not appear to be relevant for men. For similar material(s):

**Teratogenicity**

Did not cause birth defects or any other fetal effects in laboratory animals. Information given is based on data obtained from similar substances.

**Reproductive toxicity**

No data available

**Germ cell mutagenicity**

In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative. Information given is based on data obtained from similar substances.

**Aspiration Hazard**

No aspiration toxicity classification

**Titanium dioxide**

**Acute oral toxicity**

LD50, Rat, > 5,000 mg/kg OECD Test Guideline 401

**Acute inhalation toxicity**

LC50, Rat, 4 Hour, dust/mist, > 5.09 mg/l OECD Test Guideline 403

**Skin corrosion/irritation**

No skin irritation

**Serious eye damage/eye irritation**

May cause slight temporary eye irritation.

**Respiratory or skin sensitisation**

Did not cause allergic skin reactions when tested in guinea pigs.

Did not cause allergic respiratory reaction in animal tests.

**Specific target organ toxicity - single exposure**

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

**Specific target organ toxicity - repeated exposure**

Based on available data, repeated exposures are not anticipated to cause significant adverse effects.

**Carcinogenicity**

Has caused cancer in some laboratory animals. However, the relevance of this to humans is unknown.

**Teratogenicity**

Did not cause birth defects or any other fetal effects in laboratory animals.

**Reproductive toxicity**

In animal studies, did not interfere with reproduction. In animal studies, did not interfere with fertility.

**Germ cell mutagenicity**

Animal genetic toxicity studies were negative. In vitro genetic toxicity studies were negative.

**Aspiration Hazard**

No aspiration toxicity classification

**Lithium 12-hydroxyoctadecanoate**

**Acute oral toxicity**

LD50, Rat, female, > 2,000 mg/kg OECD Test Guideline 420 No deaths occurred at this concentration.

**Acute dermal toxicity**

LD50, Rat, male and female, > 2,000 mg/kg OECD Test Guideline 402 No deaths occurred at this concentration.

**Acute inhalation toxicity**

The LC50 has not been determined.

**Skin corrosion/irritation**

Brief contact is essentially nonirritating to skin.

**Serious eye damage/eye irritation**

May cause slight eye irritation.

**Respiratory or skin sensitisation**

Did not demonstrate the potential for contact allergy in mice.

For respiratory sensitization:

No relevant data found.

**Specific target organ toxicity - single exposure**

Evaluation of available data suggests that this material is not an STOT-SE toxicant.

**Specific target organ toxicity - repeated exposure**

Based on available data, repeated exposures are not anticipated to cause significant adverse effects.

**Carcinogenicity**

No relevant data found.

**Teratogenicity**

Did not cause birth defects in laboratory animals.

**Reproductive toxicity**

In animal studies, did not interfere with reproduction.

**Germ cell mutagenicity**

In vitro genetic toxicity studies were negative.

**Aspiration Hazard**

Based on physical properties, not likely to be an aspiration hazard.

**Molybdenum, bis(dibutylcarbamodithioato)di-μ-oxodioxodi-, sulfurized**

**Acute oral toxicity**

LD50, Rat, > 5,000 mg/kg

**Acute dermal toxicity**

LD50, Rabbit, > 5,000 mg/kg

**Acute inhalation toxicity**

LC50, Rat, 4 Hour, dust/mist, > 34.4 mg/l

**Skin corrosion/irritation**

Brief contact is essentially nonirritating to skin.

May cause skin irritation due to mechanical abrasion.

**Serious eye damage/eye irritation**

May cause slight temporary eye irritation.

Solid or dust may cause irritation or corneal injury due to mechanical action.

**Respiratory or skin sensitisation**

For skin sensitization:

No relevant data found.

For respiratory sensitization:  
No relevant data found.

**Specific target organ toxicity - single exposure**

Evaluation of available data suggests that this material is not an STOT-SE toxicant.

**Specific target organ toxicity - repeated exposure**

No relevant data found.

**Carcinogenicity**

No relevant data found.

**Teratogenicity**

No relevant data found.

**Reproductive toxicity**

No relevant data found.

**Germ cell mutagenicity**

No relevant data found.

**Aspiration Hazard**

Based on physical properties, not likely to be an aspiration hazard.

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## 12. ECOLOGICAL INFORMATION

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*Ecotoxicological information appears in this section when such data is available.*

**Ecotoxicity**

**Petroleum Distillates, Hydrotreated, Heavy Paraffinic**

**Acute toxicity to fish**

Typical for this family of materials.

Material is practically non-toxic to aquatic organisms on an acute basis  
(LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).

For this family of materials:

LC50, Oncorhynchus mykiss (rainbow trout), semi-static test, 96 Hour, > 100 mg/l

**Acute toxicity to aquatic invertebrates**

For this family of materials:

EC50, Daphnia magna (Water flea), semi-static test, 48 Hour, > 100 mg/l

**Acute toxicity to algae/aquatic plants**

NOELR, Pseudokirchneriella subcapitata (green algae), 72 Hour, >100, OECD Test Guideline 201

ErC50, Pseudokirchneriella subcapitata (green algae), 72 Hour, >100, OECD Test Guideline 201

**Toxicity to bacteria**

Based on data from similar materials

NOEC, 10 min, > 1.93 mg/l, DIN 38 412 Part 8

**Chronic toxicity to aquatic invertebrates**

NOEC, Daphnia magna (Water flea), semi-static test, 21 d, number of offspring, 10 mg/l

**Melamine cyanurate**

**Acute toxicity to fish**

LC50, Danio rerio (zebra fish), 96 Hour, > 10,000 mg/l, OECD Test Guideline 203

**Acute toxicity to aquatic invertebrates**

Information given is based on data obtained from similar substances.

EC50, Daphnia magna, 48 Hour, 200 mg/l

**Acute toxicity to algae/aquatic plants**

Information given is based on data obtained from similar substances.

EC50, Raphidocelis subcapitata (freshwater green alga), 96 Hour, 325 mg/l

Information given is based on data obtained from similar substances.

NOEC, Raphidocelis subcapitata (freshwater green alga), 96 Hour, 98 mg/l

**Toxicity to bacteria**

EC50, 3 Hour, > 10,000 mg/l, OECD Test Guideline 209

**Chronic toxicity to fish**

NOEC, Pimephales promelas (fathead minnow), 33 d, >= 10 mg/l

**Chronic toxicity to aquatic invertebrates**

No toxicity at the limit of solubility

NOEC, Daphnia magna (Water flea), 22 d, >= 7.64 mg/l

**Titanium dioxide**

**Acute toxicity to aquatic invertebrates**

EC50, Daphnia magna (Water flea), 48 Hour, > 100 mg/l, OECD Test Guideline 202

**Acute toxicity to algae/aquatic plants**

NOEC, Lemna minor (duckweed), 7 d, 100 mg/l, OECD Test Guideline 221

**Toxicity to bacteria**

EC50, 3 Hour, > 1,000 mg/l, OECD Test Guideline 209

**Chronic toxicity to fish**

NOEC, Danio rerio (zebra fish), 6 d, 160 mg/l

**Chronic toxicity to aquatic invertebrates**

NOEC, Daphnia magna (Water flea), 21 d, 5 mg/l

**Lithium 12-hydroxyoctadecanoate**

**Acute toxicity to fish**

Material is practically non-toxic to aquatic organisms on an acute basis  
(LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).

LC50, Oncorhynchus mykiss (rainbow trout), semi-static test, 96 Hour, > 100 mg/l, OECD Test Guideline 203

**Acute toxicity to aquatic invertebrates**

EC50, Daphnia magna (Water flea), static test, 48 Hour, > 100 mg/l, OECD Test Guideline 202

**Acute toxicity to algae/aquatic plants**

EC50, *Pseudokirchneriella subcapitata* (green algae), static test, 72 Hour, Growth rate, > 160 mg/l, OECD Test Guideline 201

**Molybdenum, bis(dibutylcarbamodithioato)di-μ-oxodioxodi-, sulfurized**

**Acute toxicity to fish**

Material is slightly toxic to aquatic organisms on an acute basis (LC50/EC50 between 10 and 100 mg/L in the most sensitive species tested).

Based on information for a similar material:

LL50, *Oncorhynchus mykiss* (rainbow trout), semi-static test, 96 Hour, > 94.8 mg/l, OECD Test Guideline 203

**Acute toxicity to aquatic invertebrates**

Based on data from similar materials

EL50, *Daphnia magna* (Water flea), Static, 48 Hour, 15 mg/l, OECD Test Guideline 202

**Acute toxicity to algae/aquatic plants**

Based on information for a similar material:

EL50, *Desmodesmus subspicatus* (green algae), Static, 72 Hour, 3.4 mg/l, OECD Test Guideline 201

Based on information for a similar material:

NOELR, *Desmodesmus subspicatus* (green algae), Static, 72 Hour, 3.12 mg/l, OECD Test Guideline 201

**Toxicity to bacteria**

Based on data from similar materials

EC50, 3 Hour, > 100 mg/l, OECD Test Guideline 209

**Persistence and degradability**

**Petroleum Distillates, Hydrotreated, Heavy Paraffinic**

**Biodegradability:** For this family of materials: Based on stringent OECD test guidelines, this material cannot be considered as readily biodegradable; however, these results do not necessarily mean that the material is not biodegradable under environmental conditions.

10-day Window: Fail

**Biodegradation:** 1.5 - 29 %

**Exposure time:** 28 d

**Method:** OECD Test Guideline 301B or Equivalent

**Melamine cyanurate**

**Biodegradability:** Material is not readily biodegradable according to OECD/EEC guidelines.

**Biodegradation:** 3 %

**Exposure time:** 28 d

**Method:** OECD Test Guideline 301B

**Titanium dioxide**

**Biodegradability:** Biodegradation is not applicable.

**Lithium 12-hydroxyoctadecanoate**

**Biodegradability:** Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

10-day Window: Pass

**Biodegradation:** 78 %  
**Exposure time:** 28 d  
**Method:** OECD Test Guideline 301C

**Molybdenum, bis(dibutylcarbamodithioato)di-μ-oxodioxodi-, sulfurized**

**Biodegradability:** Based on stringent OECD test guidelines, this material cannot be considered as readily biodegradable; however, these results do not necessarily mean that the material is not biodegradable under environmental conditions.  
**For similar material(s):** 10-day Window: Fail  
**Biodegradation:** 22.75 %  
**Exposure time:** 29 d  
**Method:** OECD Test Guideline 301B

**Bioaccumulative potential**

**Petroleum Distillates, Hydrotreated, Heavy Paraffinic**

**Bioaccumulation:** For this family of materials: Bioconcentration potential is low (BCF less than 100 or log Pow greater than 7).

**Melamine cyanurate**

**Bioaccumulation:** Bioaccumulation is unlikely.  
**Partition coefficient: n-octanol/water(log Pow):** -2.28 at 25 °C

**Titanium dioxide**

**Bioaccumulation:** Bioaccumulation is unlikely. Partitioning from water to n-octanol is not applicable.

**Lithium 12-hydroxyoctadecanoate**

**Bioaccumulation:** No relevant data found.

**Molybdenum, bis(dibutylcarbamodithioato)di-μ-oxodioxodi-, sulfurized**

**Bioaccumulation:** No relevant data found.

**Mobility in Soil**

**Petroleum Distillates, Hydrotreated, Heavy Paraffinic**

No relevant data found.

**Melamine cyanurate**

Potential for mobility in soil is high (Koc between 50 and 150).  
**Partition coefficient (Koc):** 53.4 Estimated.

**Titanium dioxide**

No data available.

**Lithium 12-hydroxyoctadecanoate**

No relevant data found.

**Molybdenum, bis(dibutylcarbamodithioato)di-μ-oxodioxodi-, sulfurized**

No relevant data found.

**Hazardous to the ozone layer**

**Petroleum Distillates, Hydrotreated, Heavy Paraffinic**

This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

**Melamine cyanurate**

This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

**Titanium dioxide**

This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

**Lithium 12-hydroxyoctadecanoate**

This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

**Molybdenum, bis(dibutylcarbamodithioato)di-μ-oxodioxodi-, sulfurized**

This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

**Other adverse effects****Petroleum Distillates, Hydrotreated, Heavy Paraffinic**

This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

**Melamine cyanurate**

This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

**Titanium dioxide**

This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

**Lithium 12-hydroxyoctadecanoate**

This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

**Molybdenum, bis(dibutylcarbamodithioato)di-μ-oxodioxodi-, sulfurized**

This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

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## **13. DISPOSAL CONSIDERATIONS**

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**Information about safe and environmentally desirable disposal and/or recycling for the products, contaminated containers and packaging**

**Disposal methods:** Customers are advised to check their local legislation governing the disposal of waste materials.

**Treatment and disposal methods of used packaging:** For PLASTIC OR PAPER BAGS, DO NOT REUSE CONTAINER. Dispose of empty bag by incineration if allowed, or in an approved landfill or by other procedures approved by federal, state/provincial and local authorities. For CARTONS AND FIBER DRUMS, offer clean empty container for recycling. In such case, this label should be removed or defaced in its entirety. Dispose of empty liner (or non-recyclable container) by incineration if allowed, or in an approved landfill, or by other procedures approved by federal, state/provincial and local authorities.



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## 14. TRANSPORT INFORMATION

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**Classification for ROAD and Rail transport (ADR/RID):**

Not regulated for transport

**Classification for SEA transport (IMO-IMDG):**

Not regulated for transport

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

Consult IMO regulations before transporting ocean bulk

**Classification for AIR transport (IATA/ICAO):**

Not regulated for transport

**Regulatory information if there are applicable domestic transport regulations**

Fire Service Law

**Special precaution about transport or conveyance**

No information available.

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

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## 15. REGULATORY INFORMATION

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**Names of applicable laws and information on the regulation relevant to the law****Chemical Substance Control Law**

Not applicable for Specified Chemical Substance, Monitoring Chemical Substance and Priority Assessment Chemical Substance.

**Japan. ENCS - Existing and New Chemical Substances Inventory (ENCS)**

All intentional components are listed on the inventory, are exempt, or are supplier certified.

**Industrial Safety and Health Law****Substances Subject to be Notified Names**

Article 57-2 (Enforcement Order Table 9)

Chemical name	Number	Concentration (%)
Mineral oil	168	>=50 - <60
Titanium(IV) oxide	191	>=1 - <10
Molybdenum and its compounds	603	>=1 - <10

**Substances Subject to be Indicated Names**

Article 57 (Enforcement Order Article 18)

Chemical name	Number
Mineral oil	168
Titanium(IV) oxide	191
Molybdenum and its compounds	603

**Ordinance on Prevention of Hazards Due to Specified Chemical Substances**

Not applicable

**Ordinance on Prevention of Organic Solvent Poisoning**

Not applicable

**Substances Prevented From Impairment of Health**

Not applicable

**Circular concerning Information on Chemicals having Mutagenicity - Annex 2: Information on Existing Chemicals having Mutagenicity**

Not applicable

**Circular concerning Information on Chemicals having Mutagenicity - Annex 1: Information on Notified Substances having Mutagenicity**

Not applicable

**Enforcement Order of the Industrial Safety and Health Law - Attached table 1 (Dangerous Substances)**

Not applicable

**Ordinance on Prevention of Lead Poisoning**

Not applicable

**Ordinance on Prevention of Tetraalkyl Lead Poisoning**

Not applicable

**Fire Service Law**

Fire Service Law	Designated Flammable Substances, Synthetic resins, others, (3000 kilogram)
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**Poisonous and Deleterious Substances Control Law**

Not applicable

**Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof**

Not applicable

**High Pressure Gas Safety Act**

Not applicable

**Waste Disposal and Public Cleansing Law**

Industrial waste

**16. OTHER INFORMATION**

In Section 3 and Section 15, concentrations that are confidential for business purposes are indicated by a range of concentrations.

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Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

**Legend**

ACGIH	USA. ACGIH Threshold Limit Values (TLV)
JP OEL JSOH	Japan. The Japan Society for Occupational Health. Recommendation of Occupational Exposure Limits
OEL-M	Occupational Exposure Limit-Mean
TWA	8-hour, time-weighted average

**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 Harmonized 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 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; 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 - 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; 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

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