

Tribol 4020/460-2

## Section 1. Identification

<b>GHS product identifier</b>	Tribol 4020/460-2
<b>Product code</b>	454411-US26
<b>SDS no.</b>	454411
<b>Historic SDS no.</b>	73780-AT
<b>Use of the substance/preparation</b>	Grease For specific application advice see appropriate Technical Data Sheet or consult our company representative.
<b>Manufacturer</b>	
<b>Supplier</b>	Castrol (China) Limited 22nd Floor Devon House 979 King's Road Taikoo Place Hong Kong Tel: (852) 2586 8899 Fax: (852) 2349 0049
<b>EMERGENCY TELEPHONE NUMBER</b>	Carechem: +65 6322 2513 (24 hours)

## Section 2. Hazards identification

<b>GHS Classification</b>	SKIN CORROSION/IRRITATION - Category 3 AQUATIC TOXICITY (ACUTE) - Category 3 AQUATIC TOXICITY (CHRONIC) - Category 3
<b>GHS label elements</b>	
<b>Signal word</b>	Warning
<b>Hazard statements</b>	Causes mild skin irritation. Harmful to aquatic life with long lasting effects.
<b>Precautionary statements</b>	
<b>Prevention</b>	Avoid release to the environment.
<b>Response</b>	If skin irritation occurs, get medical advice/attention.
<b>Storage</b>	Not applicable.
<b>Disposal</b>	Dispose of contents and container in accordance with all local, regional, national and international regulations.
<b>Other hazards which do not result in classification</b>	Defatting to the skin.

## Section 3. Composition/information on ingredients

Substance/mixture

Mixture

Ingredient name	%	CAS number
Base oil - unspecified	50 - 100	Varies
Naphthenic acids, lithium salts	1 - 5	61788-56-5
carbamodithioic acid, dibutyl-, methylene ester	1 - 5	10254-57-6
Molybdenum, bis(dibutylcarbamodithioato)di- $\mu$ -oxodioxodi-, sulphurized	1 - 5	68412-26-0

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in section 8.

## Section 4. First-aid measures

### Description of necessary first aid measures

#### Inhalation

Move exposed person to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

#### Ingestion

Wash out mouth with water. Remove dentures if any. Move exposed person to fresh air. Keep person warm and at rest. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

#### Skin contact

Wash skin thoroughly with soap and water or use recognised skin cleanser. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention if adverse health effects persist or are severe. Wash clothing before reuse. Clean shoes thoroughly before reuse.

#### Eye contact

Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

### Indication of immediate medical attention and special treatment needed, if necessary

#### Specific treatments

Not available.

#### Notes to physician

Note: High Pressure Applications  
Injections through the skin resulting from contact with the product at high pressure constitute a major medical emergency. Injuries may not appear serious at first but within a few hours tissue becomes swollen, discoloured and extremely painful with extensive subcutaneous necrosis.  
Surgical exploration should be undertaken without delay. Thorough and extensive debridement of the wound and underlying tissue is necessary to minimise tissue loss and prevent or limit permanent damage. Note that high pressure may force the product considerable distances along tissue planes.

#### Protection of first-aiders

No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

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## Section 5. Fire-fighting measures

### Extinguishing media

**Suitable** Use an extinguishing agent suitable for the surrounding fire.

**Not suitable** None known.

**Specific hazards arising from the chemical** This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

**Hazardous thermal decomposition products** Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide  
nitrogen oxides  
sulfur oxides  
metal oxide/oxides

**Special precautions for fire-fighters** Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

**Special protective equipment for fire-fighters** Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

**Remark** None identified.

## Section 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures** No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).

**Environmental precautions** Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

### Methods and materials for containment and cleaning up

**Small spill** Move containers from spill area. Vacuum or sweep up material and place in a designated, labelled waste container. Dispose of via a licensed waste disposal contractor.

**Large spill** Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labelled waste container. Dispose of via a licensed waste disposal contractor. Note: see section 1 for emergency contact information and section 13 for waste disposal.

## Section 7. Handling and storage

**Precautions for safe handling** Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid release to the environment. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

**Conditions for safe storage** Store in accordance with local regulations. Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.

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## Section 8. Exposure controls/personal protection

### Control parameters

Ingredient name	Exposure limits
Base oil - unspecified	<b>OSHB of Labor Department (HK).</b> STEL: 10 mg/m <sup>3</sup> 15 minute(s). Form: Oil mist, mineral TWA: 5 mg/m <sup>3</sup> 8 hour(s). Form: Oil mist, mineral
Molybdenum, bis(dibutylcarbamodithioato)di- $\mu$ -oxodioxodi-, sulphurized	<b>ACGIH TLV (United States).</b> TWA: 3 mg/m <sup>3</sup> 8 hour(s). Form: Insoluble Molybdenum(Mo) Respirable fraction TWA: 10 mg/m <sup>3</sup> 8 hour(s). Form: Insoluble Molybdenum(Mo) Inhalable fraction

### Recommended monitoring procedures

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

### Appropriate engineering controls

No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

### Environmental exposure controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

### Individual protection measures

#### Hygiene measures

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

#### Respiratory protection

Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

#### Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

#### Eye protection

Safety glasses with side shields.

#### Skin protection

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

## Section 9. Physical and chemical properties

### General information

#### Appearance

Physical state	Grease
Colour	Amber.
Odour	Mild

### Important health, safety and environmental information

Flash point	Open cup: 232°C (449.6°F) [Cleveland.]
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## Section 9. Physical and chemical properties

<b>Auto-ignition temperature</b>	Not available.
<b>Explosive properties</b>	Non-explosive in the presence of the following materials or conditions: open flames, sparks and static discharge, heat and shocks and mechanical impacts.
<b>Explosion limits</b>	Not available.
<b>Flammability (solid, gas)</b>	Slightly flammable in the presence of the following materials or conditions: open flames, sparks and static discharge and heat.
<b>Decomposition temperature</b>	Not available.
<b>Vapour pressure</b>	Not available.
<b>Vapour density</b>	Not available.
<b>Volatility</b>	Not available.
<b>Evaporation rate</b>	Not available.
<b>Critical temperature</b>	Not available.
<b>Oxidising properties</b>	Not available.
<b>Odour threshold</b>	Not available.
<b>Viscosity</b>	Kinematic: 460 mm <sup>2</sup> /s (460 cSt) at 40°C
<b>pH</b>	Not available.
<b>Boiling point / range</b>	Not available.
<b>Melting point / range</b>	Not available.
<b>Drop Point</b>	Not available.
<b>Relative Density</b>	Not available.
<b>Density</b>	888 kg/m <sup>3</sup> (0.888 g/cm <sup>3</sup> ) at 25°C
<b>Solubility</b>	insoluble in water.
<b>Solubility at room temperature (g/l)</b>	Not available.
<b>Dispersibility properties</b>	Not available.
<b>Partition coefficient (LogKow)</b>	Not available.

## Section 10. Stability and reactivity

<b>Chemical stability</b>	The product is stable.
<b>Possibility of hazardous reactions</b>	Under normal conditions of storage and use, hazardous reactions will not occur.
<b>Conditions to avoid</b>	Avoid all possible sources of ignition (spark or flame).
<b>Incompatible materials</b>	No specific data.
<b>Hazardous decomposition products</b>	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### Information on the likely routes of exposure

<b>Inhalation</b>	Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
<b>Ingestion</b>	Irritating to mouth, throat and stomach.
<b>Skin contact</b>	Causes mild skin irritation. Defatting to the skin.
<b>Eye contact</b>	Causes eye irritation.

### Symptoms related to the physical, chemical and toxicological characteristics

<b>Inhalation</b>	No specific data.
<b>Ingestion</b>	No specific data.

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## Section 11. Toxicological information

<b>Skin</b>	Adverse symptoms may include the following: irritation redness dryness cracking
<b>Eyes</b>	Adverse symptoms may include the following: pain or irritation watering redness

### Delayed and immediate effects and also chronic effects from short and long term exposure

#### Potential chronic health effects

<b>General</b>	No known significant effects or critical hazards.
<b>Inhalation</b>	No known significant effects or critical hazards.
<b>Ingestion</b>	No known significant effects or critical hazards.
<b>Skin contact</b>	Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.
<b>Eye contact</b>	No known significant effects or critical hazards.
<b>Carcinogenicity</b>	No known significant effects or critical hazards.
<b>Mutagenicity</b>	No known significant effects or critical hazards.
<b>Teratogenicity</b>	No known significant effects or critical hazards.
<b>Developmental effects</b>	No known significant effects or critical hazards.
<b>Fertility effects</b>	No known significant effects or critical hazards.
<b>Other information</b>	Not available.

## Section 12. Ecological information

<b>Environmental effects</b>	This material is harmful to aquatic life with long lasting effects.
<b>Other adverse effects</b>	No known significant effects or critical hazards.

## Section 13. Disposal considerations

<b>Disposal methods</b>	The generation of waste should be avoided or minimised wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.
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## Section 14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
<b>IATA Class</b>	Not regulated.	-	-	-		-
<b>IMDG Class</b>	Not regulated.	-	-	-		-

PG\* : Packing group

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## Section 15. Regulatory information

### Regulation according to other foreign laws

<b>Europe inventory</b>	All components are listed or exempted.
<b>United States inventory (TSCA 8b)</b>	All components are listed or exempted.
<b>Australia inventory (AICS)</b>	All components are listed or exempted.
<b>Canada inventory status</b>	All components are listed or exempted.
<b>China inventory (IECSC)</b>	All components are listed or exempted.
<b>Japan inventory (ENCS)</b>	At least one component is not listed.
<b>Korea inventory (KECI)</b>	All components are listed or exempted.
<b>Philippines inventory (PICCS)</b>	All components are listed or exempted.

## Section 16. Other information

### History

<b>Date of issue/Date of revision</b>	03/06/2010.
<b>Date of previous issue</b>	03/06/2010.
<b>Prepared by</b>	Product Stewardship

✔ Indicates information that has changed from previously issued version.

### Notice to reader

All reasonably practicable steps have been taken to ensure this data sheet and the health, safety and environmental information contained in it is accurate as of the date specified below. No warranty or representation, express or implied is made as to the accuracy or completeness of the data and information in this data sheet.

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