



## 1. Product and company identification

<b>Product name</b>	Tribol 1100/1500
<b>MSDS #</b>	454873
<b>Historic MSDS #:</b>	71197
<b>Code</b>	454873-US26
<b>Product use</b>	Gear lubricant . For specific application advice see appropriate Technical Data Sheet or consult our company representative.
<b>Manufacturer</b>	Castrol Industrial North America, Inc. 150 W. Warrenville Road Naperville, IL 60563
<b>Supplier</b>	Wakefield Canada, Limited 3620 Lakeshore Blvd West Toronto, Ontario, Canada M8W 1P2  Castrol Industrial North America, Inc. 150 W. Warrenville Road Naperville, IL 60563 Product Information: +1-877-641-1600
<b>EMERGENCY SPILL INFORMATION:</b>	1 (613) 996-6666 CANUTEC (Canada) 1 (703) 527-3887 CHEMTREC (USA)

## 2. Hazards identification

<b>Physical state</b>	Liquid.
<b>Color</b>	Black. [Dark]
<b>Emergency overview</b>	WARNING !  MAY CAUSE RESPIRATORY TRACT, EYE AND SKIN IRRITATION. POSSIBLE REPRODUCTIVE HAZARD - MAY IMPAIR FERTILITY POSSIBLE RISK OF HARM TO THE UNBORN CHILD.  Prolonged or repeated contact can defat the skin and lead to irritation and/or dermatitis. Do not breathe vapor or mist. Avoid contact with eyes, skin and clothing. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling. Possible reproductive hazard. May impair fertility. Possible risk of harm to the unborn child.
<b>Routes of entry</b>	Dermal contact. Eye contact. Inhalation.
<b>Potential health effects</b>	
<b>Eyes</b>	May cause eye irritation.
<b>Skin</b>	May cause skin irritation. Prolonged or repeated contact can defat the skin and lead to irritation and/or dermatitis.
<b>Inhalation</b>	May cause respiratory tract irritation.
<b>Ingestion</b>	Ingestion may cause gastrointestinal irritation and diarrhea.
<b>See toxicological information (Section 11)</b>	

### 3. Composition/information on ingredients

Highly refined mineral oil and additives

Ingredient name	CAS #	%
Base oil - highly refined	Varies - See Key to abbreviations	55 - 60
Phenol, isopropylated, phosphate (3:1) [Triphenyl phosphate >5%]	68937-41-7	1 - 5
Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate)	4259-15-8	1 - 5
molybdenum, bis[O,O-bis(2-ethyl-hexyl)phosphorodithioato-s,s']dioxodi-m-thioxodi,(mo-mo)	68958-92-9 / 72030-25-2	1 - 5

### 4. First aid measures

<b>Eye contact</b>	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if symptoms occur.
<b>Skin contact</b>	Immediately wash exposed skin with soap and water. Remove contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention if symptoms occur.
<b>Inhalation</b>	If inhaled, remove to fresh air. Get medical attention if symptoms occur.
<b>Ingestion</b>	Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

### 5. Fire-fighting measures

<b>Flash point</b>	Open cup: 226°C (438.8°F) [Cleveland.]
<b>Fire/explosion hazards</b>	In a fire or if heated, a pressure increase will occur and the container may burst.
<b>Extinguishing media</b>	
<b>Suitable</b>	Use an extinguishing agent suitable for the surrounding fire.
<b>Not suitable</b>	Do not use water jet.
<b>Fire-fighting procedures</b>	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.
<b>Hazardous combustion products</b>	Combustion products may include the following: phosphorus oxides metal oxide/oxides carbon oxides (CO, CO <sub>2</sub> ) (carbon monoxide, carbon dioxide) sulfur oxides (SO, SO <sub>2</sub> etc.)
<b>Protective clothing (fire)</b>	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

### 6. Accidental release measures

<b>Personal precautions</b>	No action shall be taken involving any personal risk or without suitable training. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. In accordance with good industrial hygiene and safety work practices, airborne exposures should be controlled to the lowest extent practicable. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).
<b>Environmental precautions</b>	Avoid dispersal of spilled 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).
<b>Methods for cleaning up</b>	
<b>Large spill</b>	Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

### Small spill

Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

## 7. Handling and storage

### Handling

Put on appropriate personal protective equipment (see Section 8). Workers should wash hands and face before eating, drinking and smoking. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate.

### Storage

Store in accordance with local regulations. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10). 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 unlabeled containers. Use appropriate containment to avoid environmental contamination.

## 8. Exposure controls/personal protection

### Occupational exposure limits

#### Ingredient name

Base oil - highly refined

#### Occupational exposure limits

##### CA Alberta Provincial (Canada).

15 min OEL: 10 mg/m<sup>3</sup> 15 minutes. Issued/Revised: 7/2009 Form: Mist  
8 hrs OEL: 5 mg/m<sup>3</sup> 8 hours. Issued/Revised: 4/2004 Form: Mist

##### CA Quebec Provincial (Canada).

STEV: 10 mg/m<sup>3</sup> 15 minutes. Issued/Revised: 1/2000 Form: mist  
TWAEV: 5 mg/m<sup>3</sup> 8 hours. Issued/Revised: 1/2000 Form: mist

##### CA Ontario Provincial (Canada).

TWA: 5 mg/m<sup>3</sup> 8 hours. Issued/Revised: 1/1992 Form: mist  
STEL: 10 mg/m<sup>3</sup> 15 minutes. Issued/Revised: 1/1992 Form: mist

molybdenum, bis[O,O-bis(2-ethyl-hexyl)  
phosphorodithioato-s,s']dioxodi-m-thioxodi,  
(mo-mo)

#### OSHA PEL (United States).

TWA: 5 mg/m<sup>3</sup> 8 hours. Form: All forms

#### ACGIH TLV (United States).

TWA: 0.5 mg/m<sup>3</sup> 8 hours. Form: Soluble

While specific OELs for certain components may be shown in this section, other components may be present in any mist, vapor or dust produced. Therefore, the specific OELs may not be applicable to the product as a whole and are provided for guidance only.

### Control Measures

Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

### 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.

### Personal protection

#### Eyes

Avoid contact with eyes. Safety glasses with side shields or chemical goggles.

#### Skin and body

Do not get on skin or clothing. Wear clothing and footwear that cannot be penetrated by chemicals or oil. Wear face shield.

#### Respiratory

Use adequate ventilation. Do not breathe vapor or mist.

<b>Hands</b>	<p>The correct choice of protective gloves depends upon the chemicals being handled, the conditions of work and use, and the condition of the gloves (even the best chemically resistant glove will break down after repeated chemical exposures). Most gloves provide only a short time of protection before they must be discarded and replaced. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. Gloves should therefore be chosen in consultation with the supplier/manufacturer and with a full assessment of the working conditions.</p> <p>Consult your supervisor or Standard Operating Procedure (S.O.P) for special handling instructions.</p>
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## 9. Physical and chemical properties

Physical state	Liquid.
Color	Black. [Dark]
Odor	Not available.
Odor threshold	Not available.
Flash point	Open cup: 226°C (438.8°F) [Cleveland.]
Specific gravity	Not available.
Density	1000 kg/m³ (<1 g/cm³) at 15.6°C
pH	Not available.
Viscosity	Kinematic: 1500 mm²/s (1500 cSt) at 40°C
Boiling point / Range	Not available.
Melting point / Range	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Evaporation rate	Not available.
Solubility	insoluble in water.
LogK <sub>ow</sub>	Not available.

## 10. Stability and reactivity

Stability and reactivity	The product is stable.
Possibility of hazardous reactions	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	Not available.
Incompatibility with various substances	Reactive or incompatible with the following materials: oxidizing materials.
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Hazardous polymerization	Under normal conditions of storage and use, hazardous polymerization will not occur.

## 11. Toxicological information

Other information	<p>Contains low concentration of zinc alkyl dithiophosphate (ZDDP). Concentration is not expected to cause eye or skin irritation.</p> <p>Contains material that may cause target organ damage, based on animal data. Target Organs: Thymus, liver, adrenal, Central nervous system.</p>
Potential chronic health effects	
Carcinogenicity	No known significant effects or critical hazards.
Mutagenicity	No known significant effects or critical hazards.
Teratogenicity	No known significant effects or critical hazards.
Fertility effects	Contains material which may impair fertility, based on animal data.

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<b>Reproductive effects</b>	Possible risk of harm to the unborn child.
<b>Medical conditions aggravated by over-exposure</b>	None known.

12. Ecological information

Ecotoxicity

No testing has been performed by the manufacturer.

<b>Persistence/degradability</b>	Expected to be biodegradable.
<b>Mobility</b>	Non-volatile. Liquid. insoluble in water.

13. Disposal considerations

<b>Waste information</b>	<p>The generation of waste should be avoided or minimized wherever possible. 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. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.</p>
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**NOTE: The generator of waste has the responsibility for proper waste identification (based on characteristic(s) or listing), transportation and disposal**

14. Transport information

Not classified as hazardous for transport (DOT, TDG, IMO/IMDG, IATA/ICAO)

15. Regulatory information

<b>WHMIS (Canada)</b>	Class D-2A: Material causing other toxic effects (Very toxic).
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This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Other regulations

<b>Canada inventory</b>	All components are listed or exempted.
<b>United States inventory (TSCA 8b)</b>	All components are listed or exempted.
<b>REACH Status</b>	For the REACH status of this product please consult your company contact, as identified in Section 1.
<b>Australia inventory (AICS)</b>	All components are listed or exempted.
<b>China inventory (IECSC)</b>	All components are listed or exempted.
<b>Japan inventory (ENCS)</b>	<input checked="" type="checkbox"/> All components are listed or exempted.
<b>Korea inventory (KECI)</b>	All components are listed or exempted.
<b>Philippines inventory (PICCS)</b>	All components are listed or exempted.
<b>Taiwan Chemical Substances Inventory (TCSI)</b>	All components are listed or exempted.

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					(Canada)
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					(ENGLISH)

16. Other information

Label requirements	WARNING !  MAY CAUSE RESPIRATORY TRACT, EYE AND SKIN IRRITATION. POSSIBLE REPRODUCTIVE HAZARD - MAY IMPAIR FERTILITY POSSIBLE RISK OF HARM TO THE UNBORN CHILD.
Other special considerations	
History	
Date of issue	04/26/2016.
Date of previous issue	05/26/2015.
Prepared by	Product Stewardship
Key to abbreviations	Varies = may contain one or more of the following 101316-69-2, 101316-70-5, 101316-71-6, 101316-72-7, 64741-88-4, 64741-89-5, 64741-95-3, 64741-96-4, 64741-97-5, 64742-01-4, 64742-44-5, 64742-45-6, 64742-52-5, 64742-53-6, 64742-54-7, 64742-55-8, 64742-56-9, 64742-57-0, 64742-58-1, 64742-62-7, 64742-63-8, 64742-64-9, 64742-65-0, 64742-70-7, 72623-85-9, 72623-86-0, 72623-87-1, 74869-22-0, 90669-74-2

Notice to reader

Indicates information that has changed from previously issued version.

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.

The data and advice given apply when the product is sold for the stated application or applications. You should not use the product other than for the stated application or applications without seeking advice from BP Group.

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