Section 1. Identification

Product name: Castrol Brake Fluid DOT 4
SDS #: 466630
Code: 466630-US65

Relevant identified uses of the substance or mixture and uses advised against
Product use: Brake fluids. For specific application advice see appropriate Technical Data Sheet or consult our company representative.

Supplier: BP Lubricants USA Inc.
1500 Valley Road
Wayne, NJ 07470
Telephone: (973) 633-2200

EMERGENCY HEALTH INFORMATION:
1 (800) 447-8735
Outside the US: +1 703-527-3887 (CHEMTREC)

EMERGENCY SPILL INFORMATION:
1 (800) 424-9300 CHEMTREC (USA)

Section 2. Hazards identification

OSHA/HCS status: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Classification of the substance or mixture: TOXIC TO REPRODUCTION (Unborn child) - Category 2

GHS label elements

Hazard pictograms

Signal word: Warning
Hazard statements: Suspected of damaging the unborn child.

Precautionary statements
General: Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.
Prevention: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear eye or face protection. Wear protective clothing.
Response: IF exposed or concerned: Get medical attention.
Storage: Store locked up.
Disposal: Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazard not otherwise classified: Defatting to the skin.
Section 3. Composition/information on ingredients

Substance/mixture  Mixture
polyethylene glycol Proprietary performance additives.

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-[2-(2-butoxyethoxy)ethoxy]ethanol</td>
<td>143-22-6</td>
<td>≥10 - ≤25</td>
</tr>
<tr>
<td>2,2'-oxybisethanol</td>
<td>111-46-6</td>
<td>&lt;10</td>
</tr>
<tr>
<td>Di-isopropanolamine</td>
<td>110-97-4</td>
<td>≤10</td>
</tr>
</tbody>
</table>

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

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 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

Eye contact  In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Check for and remove any contact lenses. Get medical attention.

Skin contact  In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention.

Inhalation  If inhaled, remove to fresh air. 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. Get medical attention.

Ingestion  Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Get medical attention.

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.

Most important symptoms/effects, acute and delayed

See Section 11 for more detailed information on health effects and symptoms.

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

Notes to physician  Treatment should in general be symptomatic and directed to relieving any effects. 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.

Specific treatments  No specific treatment.

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media  In case of fire, use foam, dry chemical or carbon dioxide extinguisher or spray.

Unsuitable extinguishing media  Do not use water jet.

Specific hazards arising from the chemical

Hazardous combustion products  Combustion products may include the following: carbon oxides (CO, CO₂) (carbon monoxide, carbon dioxide) nitrogen oxides (NO, NO₂ etc.)

Special protective actions for fire-fighters  No action shall be taken involving any personal risk or without suitable training. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire.
### Section 5. Fire-fighting measures

**Special protective equipment for fire-fighters**  
Fire-fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.

### Section 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures**

| For non-emergency personnel | Contact emergency personnel. 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 spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Put on appropriate personal protective equipment. Floors may be slippery; use care to avoid falling. |
| For emergency responders | Entry into a confined space or poorly ventilated area contaminated with vapor, mist or fume is extremely hazardous without the correct respiratory protective equipment and a safe system of work. Wear self-contained breathing apparatus. Wear a suitable chemical protective suit. Chemical resistant boots. See also the information in "For non-emergency personnel". |
| Environmental precautions | 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). |

**Methods and materials for containment and cleaning up**

| Small spill | Stop leak if without risk. Move containers from spill area. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor. |
| Large spill | Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. 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. Contaminated absorbent material may pose the same hazard as the spilled product. Dispose of via a licensed waste disposal contractor. |

### Section 7. Handling and storage

**Precautions for safe handling**

| Protective measures | Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. 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. |
| Advice on general occupational hygiene | Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Wash thoroughly after handling. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures. |

| Conditions for safe storage, including any incompatibilities | Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Store and use only in equipment/containers designed for use with this product. 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. DO NOT ADD NITRITES TO THIS FLUID. |
| Not suitable | Prolonged exposure to elevated temperature |
Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Exposure limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-[2-(2-butoxyethoxy)ethoxy]ethanol</td>
<td>None.</td>
</tr>
<tr>
<td>2,2'-oxybisethanol</td>
<td>None.</td>
</tr>
<tr>
<td>Di-isopropanolamine</td>
<td>None.</td>
</tr>
</tbody>
</table>

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.

Appropriate engineering controls

All activities involving chemicals should be assessed for their risks to health, to ensure exposures are adequately controlled. Personal protective equipment should only be considered after other forms of control measures (e.g. engineering controls) have been suitably evaluated. Personal protective equipment should conform to appropriate standards, be suitable for use, be kept in good condition and properly maintained.

Your supplier of personal protective equipment should be consulted for advice on selection and appropriate standards. For further information contact your national organisation for standards.

Provide exhaust ventilation or other engineering controls to keep the relevant airborne concentrations below their respective occupational exposure limits.

The final choice of protective equipment will depend upon a risk assessment. It is important to ensure that all items of personal protective equipment are compatible.

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.

Eye/face protection

Safety glasses with side shields.

Skin protection

Hand protection

Wear protective gloves if prolonged or repeated contact is likely. Wear chemical resistant gloves. Recommended: Butyl gloves. Neoprene gloves. 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.

Body protection

Use of protective clothing is good industrial practice.

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.

Cotton or polyester/cotton overalls will only provide protection against light superficial contamination that will not soak through to the skin. Overalls should be laundered on a regular basis. When the risk of skin exposure is high (e.g. when cleaning up spillages or if there is a risk of splashing) then chemical resistant aprons and/or impervious chemical suits and boots will be required.

Other skin protection

Appropriate footwear and any additional skin protection measures 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 8. Exposure controls/personal protection

Respiratory protection
In case of insufficient ventilation, wear suitable respiratory equipment. The correct choice of respiratory protection depends upon the chemicals being handled, the conditions of work and use, and the condition of the respiratory equipment. Safety procedures should be developed for each intended application. Respiratory protection equipment should therefore be chosen in consultation with the supplier/manufacturer and with a full assessment of the working conditions.

Section 9. Physical and chemical properties

Appearance
- Physical state: Liquid.
- Color: Yellow.
- Odor: Characteristic.
- Odor threshold: Not available.
- pH: 7.5 to 9
- Melting point: <-70°C (<-94°F)
- Boiling point: >260°C (>500°F)
- Flash point: Closed cup: >125°C (>257°F) [Pensky-Martens.]
- Evaporation rate: Not available.
- Flammability (solid, gas): Not applicable. Based on - Physical state
- Lower and upper explosive (flammable) limits: Lower: 1.5%
- Vapor pressure: <0.13 kPa (<1 mm Hg) [20°C (68°F)]
- Vapor density: Not available.
- Density: >1000 kg/m³ (>1 g/cm³) at 20°C
- Solubility: Miscible in water.
- Partition coefficient: n-octanol/water: Not available.
- Auto-ignition temperature: Not available.
- Decomposition temperature: Not available.
- Viscosity: Kinematic: 16 mm²/s (16 cSt) at 20°C

Section 10. Stability and reactivity

Reactivity
No specific test data available for this product. Refer to Conditions to avoid and Incompatible materials for additional information.

Chemical stability
The product is stable.

Possibility of hazardous reactions
Under normal conditions of storage and use, hazardous reactions will not occur.
Under normal conditions of storage and use, hazardous polymerization will not occur.

Conditions to avoid
Avoid all possible sources of ignition (spark or flame).

Incompatible materials
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.
Section 11. Toxicological information

Information on toxicological effects

Information on the likely routes of exposure

Potential acute health effects

Eye contact

Skin contact

Inhalation

Ingestion

Diethylene glycol: Ingestion of diethylene glycol can cause metabolic acidosis, kidney damage, central nervous system depression, and convulsions. The estimated human lethal dose is approximately 100 ml (3.4 ounces for an adult).

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact

Skin contact

Inhalation

Ingestion

Adverse symptoms may include the following:
- irritation
- dryness
- cracking
- reduced fetal weight
- increase in fetal deaths
- skeletal malformations

Potential chronic health effects

General

Carcinogenicity

Mutagenicity

Teratogenicity

Developmental effects

Fertility effects

Numerical measures of toxicity

Acute toxicity estimates

<table>
<thead>
<tr>
<th>Route</th>
<th>ATE value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>5050.51 mg/kg</td>
</tr>
</tbody>
</table>

Routes of entry anticipated: Dermal, Inhalation.

Inhalation

Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Potential acute health effects

Eye contact

Skin contact

Inhalation

Ingestion

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Routes of entry anticipated: Dermal, Inhalation.
Section 11. Toxicological information

**Additional information**
Alkanolamine: This product contains an alkanolamine. In all metalworking fluids containing amines, there is a potential for forming nitrosamines which are animal carcinogens. Therefore, no nitrates or related nitrosating agents should be added to such compositions.

Section 12. Ecological information

**Toxicity**
No testing has been performed by the manufacturer.

**Persistence and degradability**
Expected to be biodegradable.

**Bioaccumulative potential**
This product is not expected to bioaccumulate through food chains in the environment.

**Mobility in soil**
- Soil/water partition coefficient (Koc) Not available.
- Mobility Spillages may penetrate the soil causing ground water contamination.

**Other adverse effects**
No known significant effects or critical hazards.

**Other ecological information**
Miscible in water.

Section 13. Disposal considerations

**Disposal methods**
The generation of waste should be avoided or minimized wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. 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. 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 orliners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

<table>
<thead>
<tr>
<th></th>
<th>DOT Classification</th>
<th>TDG Classification</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
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<tbody>
<tr>
<td>UN proper shipping name</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<tr>
<td>Transport hazard class(es)</td>
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<td>-</td>
<td>-</td>
<td>-</td>
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<td>Packing group</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<tr>
<td>Environmental hazards</td>
<td>No.</td>
<td>No.</td>
<td>No.</td>
<td>No.</td>
</tr>
<tr>
<td>Additional information</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
Section 14. Transport information

Special precautions for user: Not available.

Transport in bulk according to Annex II of MARPOL and the IBC Code: Not available.

Section 15. Regulatory information

U.S. Federal regulations

| United States inventory (TSCA 8b) | All components are active or exempted. |
| SARA 302/304 |
| **Composition/information on ingredients** |
| No products were found. |
| SARA 311/312 |
| **Classification** |
| TOXIC TO REPRODUCTION (Unborn child) - Category 2 |
| SARA 313 |
| **Product name** | **CAS number** | **Concentration** |
| Form R - Reporting requirements | 2-[2-(2-butoxyethoxy)ethoxy]ethanol | 143-22-6 | 10 - 19.9 |
| Supplier notification | 2-[2-(2-butoxyethoxy)ethoxy]ethanol | 143-22-6 | 10 - 19.9 |

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

| Massachusetts | The following components are listed: DIISOPROPA NOLAMINE |
| New Jersey | The following components are listed: GLYCOL ETHERS |
| Pennsylvania | The following components are listed: ETHANOL, 2,2'-OXYBIS-; 2-PROPANOL, 1,1'-IMINOBIS- |

California Prop. 65

This product does not require a Safe Harbor warning under California Prop. 65.

Other regulations

| Australia inventory (AICS) | All components are listed or exempted. |
| Canada inventory | At least one component is not listed in DSL but all such components are listed in NDSL. |
| China inventory (IECSC) | All components are listed or exempted. |
| Japan inventory (ENCS) | All components are listed or exempted. |
| Korea inventory (KECI) | At least one component is not listed. |
| Philippines inventory (PICCS) | All components are listed or exempted. |
| Taiwan Chemical Substances Inventory (TCSI) | All components are listed or exempted. |

REACH Status

For the REACH status of this product please consult your company contact, as identified in Section 1.

Section 16. Other information

**National Fire Protection Association (U.S.A.)**

**Flammability**

1: High
2: Moderate
3: Low
4: No

**Health**

1: High
2: Moderate
3: Low
4: No

**Instability/Reactivity**

1: High
2: Moderate
3: Low
4: No

**Special**

1: High
2: Moderate
3: Low
4: No

**History**

<table>
<thead>
<tr>
<th>Product name</th>
<th>Castrol Brake Fluid DOT 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product code</td>
<td>466630-US65</td>
</tr>
<tr>
<td>Version</td>
<td>2.01</td>
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<tr>
<td>Date of issue</td>
<td>08/05/2019.</td>
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<tr>
<td>Format</td>
<td>US</td>
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<tr>
<td>Language</td>
<td>ENGLISH</td>
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</table>
Section 16. Other information

Date of issue/Date of revision 08/05/2019.

Date of previous issue 07/25/2019.

Prepared by Product Stewardship

Key to abbreviations
ACGIH = American Conference of Industrial Hygienists
ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
CAS Number = Chemical Abstracts Service Registry Number
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
OEL = Occupational Exposure Limit
SDS = Safety Data Sheet
STEL = Short term exposure limit
TWA = Time weighted average
UN = United Nations
UN Number = United Nations Number, a four digit number assigned by the United Nations Committee of Experts on the Transport of Dangerous Goods.
Varies = may contain one or more of the following 64741-88-4, 64741-89-5, 64741-95-3,
64741-96-4, 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, 64742-65-0,
64742-70-7, 72623-85-9, 72623-86-0, 72623-87-1

🌿 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.

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.

It is the user’s obligation to evaluate and use this product safely and to comply with all applicable laws and regulations. The BP Group shall not be responsible for any damage or injury resulting from use, other than the stated product use of the material, from any failure to adhere to recommendations, or from any hazards inherent in the nature of the material. Purchasers of the product for supply to a third party for use at work, have a duty to take all necessary steps to ensure that any person handling or using the product is provided with the information in this sheet. Employers have a duty to tell employees and others who may be affected of any hazards described in this sheet and of any precautions that should be taken. You can contact the BP Group to ensure that this document is the most current available. Alteration of this document is strictly prohibited.

Product name Castrol Brake Fluid DOT 4
Product code 466630-US65
Version 2.01 Date of issue 08/05/2019.
Format US Language ENGLISH