

## Section 1. Identification

**Product name** Braycote 602 EF  
**SDS #** 451169  
**Historic SDS #:** 25034  
**Code** 451169-US03

### Relevant identified uses of the substance or mixture and uses advised against

**Product use** Grease for industrial applications.  
 For specific application advice see appropriate Technical Data Sheet or consult our company representative.

**Supplier** Castrol Industrial North America, Inc.  
 150 W. Warrenville Road  
 Naperville, IL 60563  
 Product Information: +1-877-641-1600

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

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

## Section 2. Hazards identification

**OSHA/HCS status** This material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**Classification of the substance or mixture** Not classified.

### GHS label elements

**Signal word**  No signal word.

**Hazard statements** No known significant effects or critical hazards.

### Precautionary statements

**Prevention** Not applicable.

**Response** Not applicable.

**Storage** Not applicable.

**Disposal** Not applicable.

**Hazards not otherwise classified** Note: High Pressure Applications  
 Injections through the skin resulting from contact with the product at high pressure constitute a major medical emergency.  
 See 'Notes to physician' under First-Aid Measures, Section 4 of this Safety Data Sheet.  
 Thermal degradation products may include hydrogen fluoride gas. Possibility of corrosive damage from hydrofluoric acid and systemic fluoride toxicity should be considered where exposure has occurred to such degradation products.

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## Section 3. Composition/information on ingredients

**Substance/mixture** Mixture  
Synthetic lubricant and additives. Thickening agent.

Ingredient name	CAS number	%
Molybdenum disulfide	1317-33-5	≤10

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 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

<b>Eye contact</b>	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 if symptoms occur.
<b>Skin contact</b>	Wash skin thoroughly with soap and water or use recognized skin cleanser. 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. Get medical attention if symptoms occur.
<b>Protection of first-aiders</b>	No action shall be taken involving any personal risk or without suitable training.

### 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

<b>Notes to physician</b>	Treatment should in general be symptomatic and directed to relieving any effects. 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, discolored 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 minimize tissue loss and prevent or limit permanent damage. Note that high pressure may force the product considerable distances along tissue planes.
<b>Specific treatments</b>	No specific treatment.

## Section 5. Fire-fighting measures

### Extinguishing media

<b>Suitable extinguishing media</b>	In case of fire, use water fog, alcohol resistant foam, dry chemical or carbon dioxide extinguisher or spray.
<b>Unsuitable extinguishing media</b>	Do not use water jet.

### Specific hazards arising from the chemical

In a fire or if heated, a pressure increase will occur and the container may burst.

### Hazardous combustion products

Combustion products may include the following:  
carbon dioxide  
carbon monoxide  
sulfur oxides  
halogenated compounds  
metal oxide/oxides

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## Section 5. Fire-fighting measures

<b>Special protective actions for fire-fighters</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>Special protective equipment for fire-fighters</b>	Fire-fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.
<b>Special remarks on fire hazards</b>	Hazardous decomposition products: Carbonyl fluoride and Hydrogen fluoride (HF).

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

<b>For non-emergency personnel</b>	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. Put on appropriate personal protective equipment. Floors may be slippery; use care to avoid falling.
<b>For emergency responders</b>	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
<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).

### Methods and materials for containment and cleaning up

<b>Small spill</b>	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.
<b>Large spill</b>	Stop leak if without risk. Move containers from spill area. 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. If emergency personnel are unavailable, contain spilled material. Suction or scoop the spill into appropriate disposal or recycling vessels, then cover spill area with oil absorbent. Dispose of via a licensed waste disposal contractor.

## Section 7. Handling and storage

### Precautions for safe handling

<b>Protective measures</b>	Put on appropriate personal protective equipment (see Section 8).
<b>Advice on general occupational hygiene</b>	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.
<b>Conditions for safe storage, including any incompatibilities</b>	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. 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. Avoid excessive heat.

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## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits

Ingredient name	Exposure limits
Molybdenum disulfide	<p><b>ACGIH TLV (United States).</b>            TWA: 10 mg/m<sup>3</sup>, (as Mo) 8 hours. Issued/            Revised: 2/2001 Form: Inhalable fraction            TWA: 3 mg/m<sup>3</sup>, (as Mo) 8 hours. Issued/            Revised: 2/2001 Form: Respirable fraction  <b>OSHA PEL (United States).</b>            TWA: 15 mg/m<sup>3</sup>, (as Mo) 8 hours. Issued/            Revised: 6/1993 Form: Total dust</p>

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. 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.

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.

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 8. Exposure controls/personal protection

### 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.

### Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment.

For protection against metal working fluids, respiratory protection that is classified as "resistant to oil" (class R) or oil proof (class P) should be selected where appropriate. Depending on the level of airborne contaminants, an air-purifying, half-mask respirator (with HEPA filter) including disposable (P- or R-series) (for oil mists less than 50mg/m<sup>3</sup>), or any powered, air-purifying respirator equipped with hood or helmet and HEPA filter (for oil mists less than 125 mg/m<sup>3</sup>).

Where organic vapours are a potential hazard during metalworking operations, a combination particulate and organic vapour filter may be necessary.

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	Grease
Color	Dark Gray.
Odor	Odorless.
Odor threshold	Not available.
pH	Not available.
Melting point	Not available.
Boiling point	Not available.
Flash point	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable. Based on - Physical state
Lower and upper explosive (flammable) limits	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Density	>1000 kg/m <sup>3</sup> (>1 g/cm <sup>3</sup> ) at 20°C
Solubility	insoluble in water.
Partition coefficient: n-octanol/water	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.

## 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 excessive heat.
Incompatible materials	

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## Section 10. Stability and reactivity

Active metals, metal oxides at temperatures > 280 C, Lewis acid catalysts, strong or non-aqueous alkali.

### Hazardous decomposition products

When conditions to avoid and/or incompatible materials are met, the following decomposition products may occur: carbonyl difluoride, hydrogen fluoride (HF)

## Section 11. Toxicological information

### Information on toxicological effects

#### Information on the likely routes of exposure

Routes of entry anticipated: Dermal, Inhalation.

#### Potential acute health effects

##### Eye contact

No known significant effects or critical hazards.

##### Skin contact

No known significant effects or critical hazards.

##### Inhalation

Vapor inhalation under ambient conditions is not normally a problem due to low vapor pressure.

##### Ingestion

No known significant effects or critical hazards.

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

#### Eye contact

No specific data.

#### Skin contact

No specific data.

#### Inhalation

No specific data.

#### Ingestion

No specific data.

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

#### Short term exposure

##### Potential immediate effects

Not available.

##### Potential delayed effects

Not available.

#### Long term exposure

##### Potential immediate effects

Not available.

##### Potential delayed effects

Not available.

#### Potential chronic health effects

##### General

No known significant effects or critical hazards.

##### Carcinogenicity

No known significant effects or critical hazards.

##### Mutagenicity

No known significant effects or critical hazards.

##### Teratogenicity

No known significant effects or critical hazards.

##### Developmental effects

No known significant effects or critical hazards.

##### Fertility effects

No known significant effects or critical hazards.

### Numerical measures of toxicity

#### Acute toxicity estimates

Not available.

### Additional information

Inhalation of decomposition products (occurs if heated > 260 C) or of smoke from contaminated tobacco products may cause respiratory irritation and induce Polymer Fume Fever condition. Symptoms of exposure to decomposition products are: lung irritation, pulmonary edema, flu-like symptoms (example - fever chills).

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## Section 12. Ecological information

### Toxicity

No testing has been performed by the manufacturer.

### Persistence and degradability

Not expected to be rapidly degradable.

### Bioaccumulative potential

Not available.

### Mobility in soil

**Soil/water partition coefficient (K<sub>oc</sub>)** Not available.

**Mobility** Non-volatile. Grease. insoluble in water.

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

## 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. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

## Section 14. Transport information

	<b>DOT Classification</b>	<b>TDG Classification</b>	<b>IMDG</b>	<b>IATA</b>
<b>UN number</b>	Not regulated.	Not regulated.	Not regulated.	Not regulated.
<b>UN proper shipping name</b>	-	-	-	-
<b>Transport hazard class(es)</b>	-	-	-	-
<b>Packing group</b>	-	-	-	-
<b>Environmental hazards</b>	No.	No.	No.	No.
<b>Additional information</b>	<b>Special provisions</b> NOT REGULATED	-	-	-

**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 listed or exempted.

**TSCA 12(b) one-time export:** Polytetrafluoroethylene

### SARA 302/304

#### Composition/information on ingredients

No products were found.

### SARA 311/312

**Classification** Not applicable.

### SARA 313

**Form R - Reporting requirements** This product does not contain any hazardous ingredients at or above regulated thresholds.

**Supplier notification** This product does not contain any hazardous ingredients at or above regulated thresholds.

### State regulations

**Massachusetts** The following components are listed: MOLYBDENUM DISULFIDE

**New Jersey** None of the components are listed.

**Pennsylvania** The following components are listed: ETHENE, TETRAFLUORO-, HOMOPOLYMER

**California Prop. 65** No products were found.

### 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)** All components are listed or exempted.

**Philippines inventory (PICCS)** All components are listed or exempted.

**Taiwan Chemical Substances Inventory (TCSI)**  All components are listed or exempted.

**REACH Status** The company, as identified in Section 1, sells this product in the EU in compliance with the current requirements of REACH.

## Section 16. Other information

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



A NFPA health hazard rating of "3" is assigned due to toxicity of thermal decomposition products and fluorine (HF); otherwise, the material itself warrants a health hazard rating of "1".

### History

**Date of issue/Date of revision** 11/29/2016.

**Date of previous issue** 11/12/2014.

**Prepared by** Product Stewardship

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## Section 16. Other information

### 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  
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)  
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 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

▣ 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.*

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