SAFETY DATA SHEET

Section 1. Identification

Product name: Brayco 1624
SDS #: 458035
Historic SDS #: 27066
Code: 458035-US03

Relevant identified uses of the substance or mixture and uses advised against
Product use: Lubricant
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: +1-888-CASTROL
Product Information: +1-877-641-1600

EMERGENCY HEALTH INFORMATION:
+1-800-447-8735

EMERGENCY SPILL INFORMATION:
+1-800-424-9300 (CHEMTREC USA)
+1-703-527-3887 (CHEMTREC outside the US)

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: Defatting to the skin.
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.

Section 3. Composition/information on ingredients

Substance/mixture: Substance
Fluorochemical derivative.

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-propene, 1,1,2,3,3-hexafluoro-, oxidized, polymd</td>
<td>69991-67-9</td>
<td>95-100</td>
</tr>
</tbody>
</table>

Any concentration shown as a range is to protect confidentiality or is due to batch variation.
Section 3. Composition/information on ingredients

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

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
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.

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

Ingestion
Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Protection of first-aiders
No action shall be taken involving any personal risk or without suitable training.

Section 5. Fire-fighting measures

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

Suitable extinguishing media
Do not use water jet.

Unsuitable extinguishing media

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: halogenated compounds, carbon oxides (CO, CO_2) (carbon monoxide, carbon dioxide)

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.

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
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.

For emergency responders
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".

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Section 6. Accidental release measures

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. 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. 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).

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. 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.

Not suitable
Prolonged exposure to elevated temperature

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

1-propene, 1,1,2,3,3,3-hexafluoro-, oxidized, polymd

None.

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.
Section 8. Exposure controls/personal protection

Eye/face protection
- Safety glasses with side shields.

Skin protection

Hand protection
- Wear suitable 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.
- 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.

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: Clear, Colorless.
- 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/m³ (>1 g/cm³) at 20°C
- Solubility: Insoluble in water.
- Partition coefficient: n-octanol/water: Not available.
- Auto-ignition temperature: Not available.
- Decomposition temperature: Not available.
- Viscosity: Kinematic: 65 to 940 mm²/s (65 to 940 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 excessive heat.

**Incompatible materials**
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**
  Adverse symptoms may include the following:
  - irritation
  - dryness
  - cracking

- **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.
Section 11. Toxicological information

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).

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. Liquid. 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

<table>
<thead>
<tr>
<th>DOT Classification</th>
<th>TDG Classification</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN proper shipping name</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<tr>
<td>Packing group</td>
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</tbody>
</table>

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Environmental hazards | No. | No. | No. | No. |
--- | --- | --- | --- | --- |
Additional information | Special provisions 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)
  
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
  
- New Jersey
  
- Pennsylvania
  
- 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
  All components are listed or exempted.
- 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.)

Health 3 0 Flammability
Instability/Reactivity
Special

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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".

**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.