SAFETY DATA SHEET
BN - BROMOTHANE S, SPECIALTY DEGREASING FLUID

1. Identification

Product identifier

Product name
BN - BROMOTHANE S, SPECIALTY DEGREASING FLUID

Product number

Synonyms; trade names
PSBND, BN2CT, M2S-BN2D, M2S-BN2G, M2S-BN2P, M2S-BN2L, M2S-BN2GL, M2S-BN2GG

Recommended use of the chemical and restrictions on use

Application
Cleaning agent.

Uses advised against
No specific uses advised against are identified.

Details of the supplier of the safety data sheet

Supplier
MICROCARE CORPORATION

Manufacturer
MICROCARE CORPORATION
595 John Downey Drive
New Britain, CT 06051
United States of America
CAGE: OATV9
Tel: +1 800 638 0125, +1 860-827-0626
Fax: +1 860-893-1930
technicalsupport@microcare.com

Emergency telephone number

Emergency telephone
CHEMTREC 1-800-424-9300 (within the U.S.)
+1 703-741-5970 (from anywhere in the world)

2. Hazard(s) identification

Classification of the substance or mixture

OSHA Regulatory Status
This Product is Hazardous under the OSHA Hazard Communication Standard.

Physical hazards
Not Classified

Health hazards
Skin Irrit. 2 - H315 Eye Irrit. 2A - H319 Carc. 2 - H351 Repr. 1B - H360FD STOT SE 3 - H335 STOT RE 2 - H373

Human health
See Section 11 for additional information on health hazards.

Label elements

Pictogram

![Pictogram Image]
BN - BROMOTHANE S, SPECIALTY DEGREASING FLUID

Signal word
Danger

Hazard statements
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H351 Suspected of causing cancer.
H360FD May damage fertility. May damage the unborn child.
H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary statements
P261 Avoid breathing vapor/ spray.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P302+P352 If on skin: Wash with plenty of water.
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P314 Get medical advice/ attention if you feel unwell.
P332+P313 If skin irritation occurs: Get medical advice/ attention.
P337+P313 If eye irritation persists: Get medical advice/ attention.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P501 Dispose of contents/ container in accordance with national regulations.

Supplemental label information
Safety data sheet available on request. For use in industrial installations only.

Contains
1-BROMOPROPANE, 2-METHYLPROPA-2-OL, 1,2-EPOXYBUTANE

Other hazards
This product does not contain any substances classified as PBT or vPvB.

### 3. Composition/information on ingredients

<table>
<thead>
<tr>
<th>Mixtures</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1-BROMOPROPANE</strong></td>
<td>60-100%</td>
</tr>
<tr>
<td>CAS number: 106-94-5</td>
<td></td>
</tr>
<tr>
<td><strong>Classification</strong></td>
<td></td>
</tr>
<tr>
<td>Flam. Liq. 2 - H225</td>
<td></td>
</tr>
<tr>
<td>Skin Irrit. 2 - H315</td>
<td></td>
</tr>
<tr>
<td>Eye Irrit. 2A - H319</td>
<td></td>
</tr>
<tr>
<td>Repr. 1B - H360FD</td>
<td></td>
</tr>
<tr>
<td>STOT SE 3 - H335</td>
<td></td>
</tr>
<tr>
<td>STOT RE 2 - H373</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>DIMETHOXYMETHANE</strong></th>
<th>1-5%</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS number: 109-87-5</td>
<td></td>
</tr>
<tr>
<td><strong>Classification</strong></td>
<td>Not Classified</td>
</tr>
</tbody>
</table>
BN - BROMOTHANE S, SPECIALTY DEGREASING FLUID

2-METHYLPROPAN-2-OL
CAS number: 75-65-0

1-5%

Classification
Flam. Liq. 2 - H225
Acute Tox. 4 - H332
Eye Irrit. 2A - H319
STOT SE 3 - H335

1,2-EPOXYBUTANE
CAS number: 106-88-7

<1%

Classification
Flam. Liq. 2 - H225
Acute Tox. 4 - H302
Acute Tox. 4 - H312
Acute Tox. 4 - H332
Skin Irrit. 2 - H315
Eye Irrit. 2A - H319
Carc. 2 - H351
STOT SE 3 - H335

The full text for all hazard statements is displayed in Section 16.

Composition comments
TSCA: The ingredients of this product are on the TSCA Inventory. The exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of CFR 1900.1200

Composition

4. First-aid measures

Description of first aid measures

General information
Get medical attention if any discomfort continues. Show this Safety Data Sheet to the medical personnel.

Inhalation
Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Maintain an open airway. Loosen tight clothing such as collar, tie or belt. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Get medical attention. Place unconscious person on their side in the recovery position and ensure breathing can take place.

Ingestion
Rinse mouth thoroughly with water. Give a few small glasses of water or milk to drink. Stop if the affected person feels sick as vomiting may be dangerous. Never give anything by mouth to an unconscious person. Place unconscious person on their side in the recovery position and ensure breathing can take place. Keep affected person under observation. Get medical attention if symptoms are severe or persist.

Skin Contact
Rinse with water.

Eye contact
Rinse with water. Do not rub eye. Remove any contact lenses and open eyelids wide apart. Get medical attention if any discomfort continues.

Protection of first aiders
First aid personnel should wear appropriate protective equipment during any rescue.

Most important symptoms and effects, both acute and delayed
BN - BROMOTHANE S, SPECIALTY DEGREASING FLUID

General information

The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

Inhalation

A single exposure may cause the following adverse effects: Irritation of nose, throat and airway. Difficulty in breathing. Coughing. Vapors may cause headache, fatigue, dizziness and nausea. Central nervous system depression. Prolonged or repeated exposure may cause the following adverse effects: Suspected of causing cancer.

Ingestion

May cause irritation. Prolonged or repeated exposure may cause the following adverse effects: Suspected of causing cancer.

Skin contact

Redness. Irritating to skin. Prolonged or repeated exposure may cause the following adverse effects: Suspected of causing cancer.

Eye contact

Irritating to eyes.

Indication of immediate medical attention and special treatment needed

Notes for the doctor

Treat symptomatically.

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

The product is not flammable. Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.

Unsuitable extinguishing media

Do not use water jet as an extinguisher, as this will spread the fire.

Special hazards arising from the substance or mixture

Specific hazards

Containers can burst violently or explode when heated, due to excessive pressure build-up.

Hazardous combustion products

Thermal decomposition or combustion products may include the following substances: Harmful gases or vapors.

Advice for firefighters

Protective actions during firefighting

Avoid breathing fire gases or vapors. Evacuate area. Keep upwind to avoid inhalation of gases, vapors, fumes and smoke. Ventilate closed spaces before entering them. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. If a leak or spill has not ignited, use water spray to disperse vapors and protect men stopping the leak. Control run-off water by containing and keeping it out of sewers and watercourses. If risk of water pollution occurs, notify appropriate authorities.

Special protective equipment for firefighters

Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Standard Firefighter's clothing including helmets, protective boots and gloves will provide a basic level of protection for chemical incidents.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions

Wear protective clothing as described in Section 8 of this safety data sheet. No action shall be taken without appropriate training or involving any personal risk. Do not touch or walk into spilled material. Avoid inhalation of vapors and spray/mists. Use suitable respiratory protection if ventilation is inadequate.

Environmental precautions

Avoid discharge into drains or watercourses or onto the ground. Avoid discharge to the aquatic environment.
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**Methods and material for containment and cleaning up**

**Methods for cleaning up**

Wear protective clothing as described in Section 8 of this safety data sheet. Clear up spills immediately and dispose of waste safely. Small Spillages: Collect spillage. Large Spillages: Absorb spillage with non-combustible, absorbent material. The contaminated absorbent may pose the same hazard as the spilled material. Collect and place in suitable waste disposal containers and seal securely. Label the containers containing waste and contaminated materials and remove from the area as soon as possible. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. For waste disposal, see Section 13.

**Reference to other sections**

For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

### 7. Handling and storage

**Precautions for safe handling**

**Usage precautions**

Read and follow manufacturer's recommendations. Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from food, drink and animal feeding stuffs. Handle all packages and containers carefully to minimize spills. Keep container tightly sealed when not in use. Avoid the formation of mists. Suspected of causing cancer. May damage fertility. May damage the unborn child. Pregnant or breastfeeding women should not work with this product if there is any risk of exposure. Do not handle until all safety precautions have been read and understood. Do not handle broken packages without protective equipment. Do not reuse empty containers.

**Advice on general occupational hygiene**

Wash promptly if skin becomes contaminated. Take off contaminated clothing and wash before reuse. Wash contaminated clothing before reuse.

**Conditions for safe storage, including any incompatibilities**

**Storage precautions**

Store away from incompatible materials (see Section 10). Keep only in the original container. Keep container tightly closed, in a cool, well ventilated place. Keep containers upright. Protect containers from damage.

**Storage class**

Chemical storage.

**Specific end uses(s)**

The identified uses for this product are detailed in Section 1.

**Reference to other sections**

Store away from incompatible materials (see Section 10).

### 8. Exposure controls/Personal protection

**Control parameters**

**Occupational exposure limits**

**1-BROMOPROPANE**

Long-term exposure limit (8-hour TWA): ACGIH 0.1 ppm 0.5 mg/m³

**DIMETHOXYMETHANE**

Long-term exposure limit (8-hour TWA): OSHA 1000 ppm 3100 mg/m³
Long-term exposure limit (8-hour TWA): ACGIH 1000 ppm 3110 mg/m³

**2-METHYLPROPAN-2-OL**

Long-term exposure limit (8-hour TWA): OSHA 100 ppm 300 mg/m³
Long-term exposure limit (8-hour TWA): ACGIH 100 ppm 303 mg/m³
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ACGIH = American Conference of Governmental Industrial Hygienists.
OSHA = Occupational Safety and Health Administration.
A3 = Confirmed Animal Carcinogen with Unknown Relevance to Humans.
A4 = Not Classifiable as a Human Carcinogen.

Additional Occupational Exposure Limits

<table>
<thead>
<tr>
<th>Substance</th>
<th>Exposure Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-Bromopropane</td>
<td>5 ppm (CAL PEL)</td>
</tr>
</tbody>
</table>

Exposure controls

**Protective equipment**

Appropriate engineering controls

Provide adequate general and local exhaust ventilation. Ensure the ventilation system is regularly maintained and tested. Good general ventilation should be adequate to control worker exposure to airborne contaminants. Observe any occupational exposure limits for the product or ingredients.

Eye/face protection

Wear tight-fitting, chemical splash goggles or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Hand protection

Wear protective gloves. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. To protect hands from chemicals, gloves should comply with OSHA 1910.138 and be demonstrated to be impervious to the chemical and resist degradation. Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected. Frequent changes are recommended.

Other skin and body protection

Wear appropriate clothing to prevent any possibility of skin contact.

Hygiene measures

Wash after use and before eating, smoking and using the toilet. Do not eat, drink or smoke when using this product.

Respiratory protection

Ensure all respiratory protective equipment is suitable for its intended use and is NIOSH approved. Check that the respirator fits tightly and the filter is changed regularly. Gas and combination filter cartridges should comply with OSHA 1910.134. Full face mask respirators with replaceable filter cartridges should comply with OSHA 1910.134. Half mask and quarter mask respirators with replaceable filter cartridges should comply with OSHA 1910.134.

Environmental exposure controls

Keep container tightly sealed when not in use. 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.

9. Physical and chemical properties

Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Clear liquid.</td>
</tr>
<tr>
<td>Color</td>
<td>Yellowish.</td>
</tr>
<tr>
<td>Odor</td>
<td>Strong. Characteristic.</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No information available.</td>
</tr>
<tr>
<td>pH</td>
<td>No information available.</td>
</tr>
<tr>
<td>Melting point</td>
<td>No information available.</td>
</tr>
</tbody>
</table>
# BN - BROMOTHANE S, SPECIALTY DEGREASING FLUID

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial boiling point and range</td>
<td>70.9°C/159.6°F @ 101.3 kPa</td>
</tr>
<tr>
<td>Flash point</td>
<td>Does not flash</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>6.05 (butyl acetate = 1)</td>
</tr>
<tr>
<td>Evaporation factor</td>
<td>No information available.</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Upper/lower flammability or explosive limits</td>
<td>Upper flammable/explosive limit: 7.5 %(V) Lower flammable/explosive limit: 3.8 %(V)</td>
</tr>
<tr>
<td>Other flammability</td>
<td>No information available.</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>148 hPa @ 20°C</td>
</tr>
<tr>
<td>Vapor density</td>
<td>4.25</td>
</tr>
<tr>
<td>Relative density</td>
<td>(Specific Gravity H2O=1) 1.3 @ 20°C</td>
</tr>
<tr>
<td>Bulk density</td>
<td>No information available.</td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td>.25g/100 ml @ 20°C Slightly soluble in water.</td>
</tr>
<tr>
<td>Partition coefficient</td>
<td>No information available.</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No information available.</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>No information available.</td>
</tr>
<tr>
<td>Viscosity</td>
<td>0.57 mPa s @ 20°C/68°F Kinematic viscosity, no data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No information available.</td>
</tr>
<tr>
<td>Global Warming Potential (GWP)</td>
<td>No information available.</td>
</tr>
<tr>
<td>Refractive index</td>
<td>No information available.</td>
</tr>
<tr>
<td>Particle size</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Molecular weight</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Volatility</td>
<td>100%</td>
</tr>
<tr>
<td>Saturation concentration</td>
<td>No information available.</td>
</tr>
<tr>
<td>Critical temperature</td>
<td>No information available.</td>
</tr>
<tr>
<td>Volatile organic compound</td>
<td>No information available.</td>
</tr>
<tr>
<td><strong>10. Stability and reactivity</strong></td>
<td></td>
</tr>
<tr>
<td>Reactivity</td>
<td>See the other subsections of this section for further details.</td>
</tr>
<tr>
<td>Stability</td>
<td>Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.</td>
</tr>
<tr>
<td>Possibility of hazardous reactions</td>
<td>No potentially hazardous reactions known.</td>
</tr>
<tr>
<td>Conditions to avoid</td>
<td>There are no known conditions that are likely to result in a hazardous situation.</td>
</tr>
</tbody>
</table>
**BN - BROMOTHANE S, SPECIALTY DEGREASING FLUID**

**Materials to avoid**  
No specific material or group of materials is likely to react with the product to produce a hazardous situation.

**Hazardous decomposition products**  
Does not decompose when used and stored as recommended. Thermal decomposition or combustion products may include the following substances: Harmful gases or vapors.

### 11. Toxicological information

<table>
<thead>
<tr>
<th>Information on toxicological effects</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Acute toxicity - oral</strong></td>
<td></td>
</tr>
<tr>
<td>Acute toxicity oral (LD₅₀ mg/kg)</td>
<td>5,708.0</td>
</tr>
<tr>
<td>Species</td>
<td>Rabbit</td>
</tr>
<tr>
<td>Notes (oral LD₅₀)</td>
<td>Based on available data the classification criteria are not met.</td>
</tr>
<tr>
<td><strong>Acute toxicity - dermal</strong></td>
<td></td>
</tr>
<tr>
<td>Acute toxicity (dermal LD₅₀)</td>
<td></td>
</tr>
<tr>
<td>Notes (dermal LD₅₀)</td>
<td>Based on available data the classification criteria are not met.</td>
</tr>
<tr>
<td><strong>Acute toxicity - inhalation</strong></td>
<td></td>
</tr>
<tr>
<td>Acute toxicity (inhalation LC₅₀)</td>
<td></td>
</tr>
<tr>
<td>Notes (inhalation LC₅₀)</td>
<td>Based on available data the classification criteria are not met.</td>
</tr>
<tr>
<td>ATE inhalation (gases ppm)</td>
<td>225,000.0</td>
</tr>
<tr>
<td>ATE inhalation (vapours mg/l)</td>
<td>550.0</td>
</tr>
<tr>
<td>ATE inhalation (dusts/mists mg/l)</td>
<td>75.0</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td></td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Irritating to skin.</td>
</tr>
<tr>
<td>Animal data</td>
<td>Irritating.</td>
</tr>
<tr>
<td><strong>Serious eye damage/irritation</strong></td>
<td></td>
</tr>
<tr>
<td>Serious eye damage/irritation</td>
<td>Causes serious eye irritation.</td>
</tr>
<tr>
<td><strong>Respiratory sensitization</strong></td>
<td></td>
</tr>
<tr>
<td>Respiratory sensitization</td>
<td>Based on available data the classification criteria are not met.</td>
</tr>
<tr>
<td>Skin sensitization</td>
<td>Based on available data the classification criteria are not met.</td>
</tr>
<tr>
<td><strong>Germ cell mutagenicity</strong></td>
<td></td>
</tr>
<tr>
<td>Genotoxicity - in vitro</td>
<td>Based on available data the classification criteria are not met.</td>
</tr>
<tr>
<td>Genotoxicity - in vivo</td>
<td>No information available.</td>
</tr>
<tr>
<td><strong>Carcinogenicity</strong></td>
<td></td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>Suspected of causing cancer.</td>
</tr>
<tr>
<td>IARC carcinogenicity</td>
<td>Contains a substance which may be potentially carcinogenic. IARC Group 2B Possibly carcinogenic to humans.</td>
</tr>
<tr>
<td><strong>Reproductive toxicity</strong></td>
<td></td>
</tr>
<tr>
<td>Reproductive toxicity - fertility</td>
<td>May damage fertility.</td>
</tr>
<tr>
<td>Reproductive toxicity - development</td>
<td>May damage the unborn child.</td>
</tr>
<tr>
<td>Specific target organ toxicity - single exposure</td>
<td></td>
</tr>
</tbody>
</table>
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**STOT - single exposure**
STOT SE 3 - H335, H336 May cause respiratory irritation. May cause drowsiness or dizziness.

**Target organs**
Respiratory system, lungs Central nervous system

**Specific target organ toxicity - repeated exposure**

**STOT - repeated exposure**
STOT RE 2 - H373 May cause damage to organs through prolonged or repeated exposure.

**Aspiration hazard**
Based on available data the classification criteria are not met.

**General information**
Avoid contact during pregnancy/while nursing. May damage fertility. May cause cancer after repeated exposure. Risk of cancer depends on duration and level of exposure. The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

**Inhalation**
A single exposure may cause the following adverse effects: Irritation of nose, throat and airway. Difficulty in breathing. Coughing. Vapors may cause headache, fatigue, dizziness and nausea. Central nervous system depression.

**Ingestion**
May cause irritation.

**Skin Contact**
Redness. Irritating to skin.

**Eye contact**
Irritating to eyes.

**Route of exposure**
Ingestion Inhalation Skin and/or eye contact

**Target Organs**
Central nervous system Respiratory system, lungs

**Toxicological information on ingredients.**

**1-BROMOPROPANE**

**Acute toxicity - inhalation**

<table>
<thead>
<tr>
<th>Toxicity</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity inhalation</td>
<td>40.0</td>
</tr>
<tr>
<td>(LC₅₀ vapours mg/l)</td>
<td></td>
</tr>
<tr>
<td>ATE inhalation (vapours mg/l)</td>
<td>40.0</td>
</tr>
</tbody>
</table>

**Carcinogenicity**

**NTP carcinogenicity**
Reasonably anticipated to be a human carcinogen.

**1,2-EPOXYBUTANE**

**Acute toxicity - oral**

<table>
<thead>
<tr>
<th>Toxicity</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATE oral (mg/kg)</td>
<td>500.0</td>
</tr>
</tbody>
</table>

**Acute toxicity - dermal**

<table>
<thead>
<tr>
<th>Toxicity</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATE dermal (mg/kg)</td>
<td>1,100.0</td>
</tr>
</tbody>
</table>

**Acute toxicity - inhalation**

<table>
<thead>
<tr>
<th>Toxicity</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity inhalation</td>
<td>6.3</td>
</tr>
<tr>
<td>(LC₅₀ vapours mg/l)</td>
<td></td>
</tr>
<tr>
<td>ATE inhalation (vapours mg/l)</td>
<td>6.3</td>
</tr>
</tbody>
</table>

**Carcinogenicity**


**BN - BROMOTHANE S, SPECIALTY DEGREASING FLUID**

<table>
<thead>
<tr>
<th>IARC carcinogenicity</th>
<th>IARC Group 2B  Possibly carcinogenic to humans.</th>
</tr>
</thead>
</table>

### 12. Ecological information

<table>
<thead>
<tr>
<th>Ecotoxicity</th>
<th>Not regarded as dangerous for the environment. However, large or frequent spills may have hazardous effects on the environment.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toxicity</td>
<td>Based on available data the classification criteria are not met.</td>
</tr>
</tbody>
</table>

#### Persistence and degradability

<table>
<thead>
<tr>
<th>Persistence and degradability</th>
<th>The degradability of the product is not known.</th>
</tr>
</thead>
</table>

#### Bioaccumulative potential

<table>
<thead>
<tr>
<th>Bio-Accumulative Potential</th>
<th>No data available on bioaccumulation.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Partition coefficient</td>
<td>No information available.</td>
</tr>
</tbody>
</table>

**Ecological information on ingredients.**

#### 1-BROMOPROPANE

<table>
<thead>
<tr>
<th>Partition coefficient</th>
<th>Pow: 2.1</th>
</tr>
</thead>
</table>

#### Mobility in soil

<table>
<thead>
<tr>
<th>Mobility</th>
<th>No data available.</th>
</tr>
</thead>
</table>

#### Other adverse effects

<table>
<thead>
<tr>
<th>Other adverse effects</th>
<th>None known.</th>
</tr>
</thead>
</table>

### 13. Disposal considerations

#### Waste treatment methods

**General information**

The generation of waste should be minimized or avoided wherever possible. Reuse or recycle products wherever possible. This material and its container must be disposed of in a safe way. When handling waste, the safety precautions applying to handling of the product should be considered. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. Empty containers or liners may retain some product residues and hence be potentially hazardous.

**Disposal methods**

Do not empty into drains. Dispose of surplus products and those that cannot be recycled via a licensed waste disposal contractor. Waste, residues, empty containers, discarded work clothes and contaminated cleaning materials should be collected in designated containers, labeled with their contents. Incineration or landfill should only be considered when recycling is not feasible.

### 14. Transport information

**General**

The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, DOT).

**UN Number**

**UN No. (International)** Not applicable.

**UN No. (DOT)** Not applicable.

**UN proper shipping name**

**Proper shipping name (International)** Not applicable.
BN - BROMOTHANE S, SPECIALTY DEGREASING FLUID

Proper shipping name (DOT)  Not applicable.

Transport hazard class(es)

Transport Labels
No transport warning sign required.

DOT transport labels
No transport warning sign required.

Packing group

Packing group (International)  Not applicable.

DOT packing group  Not applicable.

Environmental hazards

Environmentally Hazardous Substance
No.

Special precautions for user
Not applicable.

DOT reportable quantity  Not applicable.

DOT TIH Zone  Not applicable.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable.

15. Regulatory information

US Federal Regulations

SARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities
None of the ingredients are listed or exempt.

CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA)
The following ingredients are listed or exempt:

1,2-EPOXYBUTANE
Final CERCLA RQ: 100(45.4) pounds (Kilograms)

SARA Extremely Hazardous Substances EPCRA Reportable Quantities
None of the ingredients are listed or exempt.

SARA 313 Emission Reporting
The following ingredients are listed or exempt:

1-BROMOPROPANE
0.1 %

1,2-EPOXYBUTANE
0.1 %

2-METHYLPROPAN-2-OL
1.0 %

CAA Accidental Release Prevention
None of the ingredients are listed or exempt.
BN - BROMOTHANE S, SPECIALTY DEGREASING FLUID

FDA - Essential Chemical
None of the ingredients are listed or exempt.

FDA - Precursor Chemical
None of the ingredients are listed or exempt.

SARA (311/312) Hazard Categories
None of the ingredients are listed or exempt.

OSHA Highly Hazardous Chemicals
None of the ingredients are listed or exempt.

US State Regulations
California Proposition 65 Carcinogens and Reproductive Toxins
The following ingredients are listed or exempt:
1-BROMOPROPANE
Carcinogen.

California Air Toxics "Hot Spots" (A-I)
The following ingredients are listed or exempt:
1,2-EPOXYBUTANE
2-METHYLPROPAN-2-OL

California Air Toxics "Hot Spots" (A-II)
None of the ingredients are listed or exempt.

California Directors List of Hazardous Substances
The following ingredients are listed or exempt:
DIMETHOXYMETHANE
2-METHYLPROPAN-2-OL

Massachusetts "Right To Know" List
All the ingredients are listed or exempt.
1-BROMOPROPANE
Present.
1,2-EPOXYBUTANE
Present.
DIMETHOXYMETHANE
Present.
2-METHYLPROPAN-2-OL
Present.

Rhode Island "Right To Know" List
The following ingredients are listed or exempt:
1,2-EPOXYBUTANE
DIMETHOXYMETHANE
2-METHYLPROPAN-2-OL

Minnesota "Right To Know" List
The following ingredients are listed or exempt:
1,2-EPOXYBUTANE
BN - BROMOTHANE S, SPECIALTY DEGREASING FLUID

DIMETHOXYMETHANE
2-METHYLPROPAN-2-OL

New Jersey "Right To Know" List
All the ingredients are listed or exempt.
1-BROMOPROPANE
Present.
1,2-EPOXYBUTANE
Present.
DIMETHOXYMETHANE
Present.
2-METHYLPROPAN-2-OL
Present.

Pennsylvania "Right To Know" List
All the ingredients are listed or exempt.
1-BROMOPROPANE
Present.
1,2-EPOXYBUTANE
Present.
DIMETHOXYMETHANE
Present.
2-METHYLPROPAN-2-OL
Present.

Inventories
Canada - DSL/NDSL
1-BROMOPROPANE
DSL
1,2-EPOXYBUTANE
DSL
DIMETHOXYMETHANE
DSL
2-METHYLPROPAN-2-OL
DSL

US - TSCA
All the ingredients are listed or exempt.

US - TSCA 12(b) Export Notification
None of the ingredients are listed or exempt.

16. Other information

Classification abbreviations and acronyms
Carc. = Carcinogenicity
Eye Irrit. = Eye irritation
Repr. = Reproductive toxicity
Skin Irrit. = Skin irritation
STOT RE = Specific target organ toxicity-repeated exposure
STOT SE = Specific target organ toxicity-single exposure
BN - BROMOTHANE S, SPECIALTY DEGREASING FLUID

<table>
<thead>
<tr>
<th>Training advice</th>
<th>Only trained personnel should use this material.</th>
</tr>
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<tbody>
<tr>
<td>Revision comments</td>
<td>NOTE: Lines within the margin indicate significant changes from the previous revision.</td>
</tr>
<tr>
<td>Revision date</td>
<td>8/17/2018</td>
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<tr>
<td>Revision</td>
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<tr>
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<td>8/15/2018</td>
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<td>SDS No.</td>
<td>BULK - BN</td>
</tr>
<tr>
<td>SDS status</td>
<td>Approved.</td>
</tr>
<tr>
<td>Hazard statements in full</td>
<td>H225 Highly flammable liquid and vapor.</td>
</tr>
<tr>
<td></td>
<td>H302 Harmful if swallowed.</td>
</tr>
<tr>
<td></td>
<td>H312 Harmful in contact with skin.</td>
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<tr>
<td></td>
<td>H315 Causes skin irritation.</td>
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<tr>
<td></td>
<td>H319 Causes serious eye irritation.</td>
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<tr>
<td></td>
<td>H332 Harmful if inhaled.</td>
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<td></td>
<td>H335 May cause respiratory irritation.</td>
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<td></td>
<td>H351 Suspected of causing cancer.</td>
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<td>H360FD May damage fertility. May damage the unborn child.</td>
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<tr>
<td></td>
<td>H373 May cause damage to organs through prolonged or repeated exposure.</td>
</tr>
</tbody>
</table>

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.