# SAFETY DATA SHEET
BN - BROMOTHANE S, SPECIALTY DEGREASING FLUID


## 1. Identification

### Product identifier

**Product name**: BN - BROMOTHANE S, SPECIALTY DEGREASING FLUID


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

### Application

Cleaning agent.

### 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: +1 860-827-8105
techsupport@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]

**Signal word**: Danger
**BN - BROMOTHANE S, SPECIALTY DEGREASING FLUID**

### 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-METHYLPROPAN-2-OL, 1,2-EPOXYBUTANE

### 3. Composition/information on ingredients

<table>
<thead>
<tr>
<th>Mixtures</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1-BROMOPROPANE</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>

| DIMETHOXYMETHANE  | 1-5%    |
| CAS number: 109-87-5 |         |
| **Classification**| Not Classified |

| 2-METHYLPROPAN-2-OL | 1-5% |
| CAS number: 75-65-0 |      |
| **Classification**|          |
| Flam. Liq. 2 - H225 |       |
| Acute Tox. 4 - H332 |        |
| Eye Irrit. 2A - H319 |       |
| STOT SE 3 - H335   |         |
BN - BROMOTHANE S, SPECIALTY DEGREASING FLUID

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

<table>
<thead>
<tr>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flam. Liq. 2 - H225</td>
</tr>
<tr>
<td>Acute Tox. 4 - H302</td>
</tr>
<tr>
<td>Acute Tox. 4 - H312</td>
</tr>
<tr>
<td>Acute Tox. 4 - H332</td>
</tr>
<tr>
<td>Skin Irrit. 2 - H315</td>
</tr>
<tr>
<td>Eye Irrit. 2A - H319</td>
</tr>
<tr>
<td>Carc. 2 - H351</td>
</tr>
<tr>
<td>STOT SE 3 - H335</td>
</tr>
</tbody>
</table>

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
Colorless to pale yellow liquid. The product is strongly irritating to eyes and skin. Prolonged contact may cause burns. Repeated exposure may cause chronic upper respiratory irritation. Harmful if swallowed. Keep out of the reach of children.

Inhalation
Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Keep affected person under observation. Get medical attention. Show this Safety Data Sheet to the medical personnel. If breathing stops, provide artificial respiration. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Consult a physician for specific advice.

Ingestion
Get medical attention.

Skin Contact
Remove contaminated clothing immediately and wash skin with soap and water. Remove contaminated clothing. Rinse with water.

Most important symptoms and effects, both acute and delayed

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

Indication of immediate medical attention and special treatment needed

Notes for the doctor
No specific recommendations. If in doubt, get medical attention promptly.

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media
Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use water to keep fire exposed containers cool and disperse vapors.

Special hazards arising from the substance or mixture

Specific hazards
The product is not flammable. Containers can burst violently or explode when heated, due to excessive pressure build-up. Vapors are heavier than air and may spread near ground and travel a considerable distance to a source of ignition and flash back.
BN - BROMOTHANE S, SPECIALTY DEGREASING FLUID

Advice for firefighters

Protective actions during firefighting
Warn everybody of potential hazards and evacuate if necessary. Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Containers close to fire should be removed or cooled with water. Closed containers can burst violently when heated, due to excess pressure build-up. Take precautionary measures against static discharges. Ground container and transfer equipment to eliminate sparks from static electricity.

Special protective equipment for firefighters
Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions
Warn everybody of potential hazards and evacuate if necessary. Follow precautions for safe handling described in this safety data sheet. Wear suitable protective equipment, including gloves, goggles/face shield, respirator, boots, clothing or apron, as appropriate.

Environmental precautions
Do not discharge into drains or watercourses or onto the ground. Contain spillage with sand, earth or other suitable non-combustible material.

Methods and material for containment and cleaning up

Methods for cleaning up
Wear suitable protective equipment, including gloves, goggles/face shield, respirator, boots, clothing or apron, as appropriate. No smoking, sparks, flames or other sources of ignition near spillage. Contain and absorb spillage with sand, earth or other non-combustible 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.

Reference to other sections
Wear protective clothing as described in Section 8 of this safety data sheet. See Section 11 for additional information on health hazards. For waste disposal, see section 13.

7. Handling and storage

Precautions for safe handling

Usage precautions
Good personal hygiene procedures should be implemented. Do not eat, drink or smoke when using the product. Avoid inhalation of vapors and spray/mists.

Conditions for safe storage, including any incompatibilities

Storage precautions
Do not store near heat sources or expose to high temperatures. Store in closed original container at temperatures between 8°C and 28°C. Keep container tightly closed.

Specific end uses(s)

Specific end use(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
A3

DIMETHOXYMETHANE
BN - BROMOTHANE S, SPECIALTY DEGREASING FLUID

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
A4
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

- 1-Bromopropane: 5 ppm (CAL PEL)

Exposure controls

Protective equipment

- Appropriate engineering controls: This product must not be handled in a confined space without adequate ventilation. Provide adequate ventilation. Avoid inhalation of vapors. Observe any occupational exposure limits for the product or ingredients.

- Eye/face protection: Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. The following protection should be worn: Chemical splash goggles or face shield.

- Hand protection: Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible.

- Other skin and body protection: Wear suitable protective clothing as protection against splashing or contamination.

- Hygiene measures: Promptly remove any clothing that becomes wet or contaminated. Eating, smoking and water fountains prohibited in immediate work area.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

- Appearance: Clear liquid.
- Color: Yellowish.
- Odor threshold: No information available.
- pH: No information available.
- Melting point: No information available.
- Initial boiling point and range: 70.9°C/159.6°F @ 101.3 kPa
- Flash point: Does not flash
- Evaporation rate: 6.05 (butyl acetate = 1)
- Evaporation factor: No information available.
- Flammability (solid, gas): Not applicable.
BN - BROMOTHANE S, SPECIALTY DEGREASING FLUID

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper/lower flammability or</td>
<td>Upper flammable/explosive limit: 7.5 % (V) Lower flammable/explosive</td>
</tr>
<tr>
<td>explosive limits</td>
<td>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>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>Flammability</td>
<td>The product is not flammable.</td>
</tr>
</tbody>
</table>

10. Stability and reactivity

Reactivity

The following materials may react with the product: Water

Stability

Stable at normal ambient temperatures and when used as recommended.

Possibility of hazardous reactions

Will not polymerize.

Conditions to avoid

The following materials may react strongly with the product: Strong acids. Strong alkalis. Organic compounds. Some metals. Avoid contact with the following materials: Acid anhydrides. Aluminum. Strong oxidizing agents. Strong acids.

Materials to avoid

Strong acids. Strong alkalis. Other halogenated organics.

Hazardous decomposition products

Oxides of carbon. Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.

11. Toxicological information

Information on toxicological effects

Acute toxicity - oral
### BN - BROMOTHANE S, SPECIALTY DEGREASING FLUID

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<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>Acute toxicity - inhalation</td>
<td></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>Irritating to skin.</td>
</tr>
<tr>
<td>Respiratory sensitization</td>
<td>No information available.</td>
</tr>
<tr>
<td>Skin sensitization</td>
<td>No information available.</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>No information available.</td>
</tr>
<tr>
<td>Genotoxicity - in vitro</td>
<td></td>
</tr>
<tr>
<td>Genotoxicity - in vivo</td>
<td></td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td></td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>Suspected of causing cancer.</td>
</tr>
<tr>
<td>Reproductive toxicity</td>
<td></td>
</tr>
<tr>
<td>Reproductive toxicity - fertility</td>
<td>May damage fertility.</td>
</tr>
</tbody>
</table>

**Inhalation**
Vapor from this product may be hazardous by inhalation. Vapors may irritate throat/respiratory system. Symptoms following overexposure may include the following: Headache. Dizziness. Drowsiness.

**Ingestion**
Liquid irritates mucous membranes and may cause abdominal pain if swallowed. May cause nausea, headache, dizziness and intoxication.

**Skin Contact**
Product has a defatting effect on skin. May cause allergic contact eczema.

**Eye contact**
May cause severe eye irritation.

**Toxicological information on ingredients.**

#### 1-BROMOPROPANE

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity - inhalation</td>
<td></td>
</tr>
<tr>
<td>Acute toxicity inhalation (LC₅₀ vapours mg/l)</td>
<td>40.0</td>
</tr>
<tr>
<td>ATE Inhalation (vapours mg/l)</td>
<td>40.0</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td></td>
</tr>
<tr>
<td>NTP carcinogenicity</td>
<td>Reasonably anticipated to be a human carcinogen.</td>
</tr>
</tbody>
</table>

#### 1,2-EPOXYBUTANE
BN - BROMOTHANE S, SPECIALTY DEGREASING FLUID

**Acute toxicity - oral**
ATE oral (mg/kg) 500.0

**Acute toxicity - dermal**
ATE dermal (mg/kg) 1,100.0

**Acute toxicity - inhalation**
Acute toxicity inhalation (LC₅₀ vapours mg/l) 6.3
ATE inhalation (vapours mg/l) 6.3

**Carcinogenicity**
IARC carcinogenicity IARC Group 2B Possibly carcinogenic to humans.

12. Ecological Information

**Ecotoxicity**
There are no data on the ecotoxicity of this product.

**Persistence and degradability**
The degradability of the product is not known.

**Bioaccumulative potential**
No data available on bioaccumulation.

**Ecological information on ingredients.**

1-BROMOPROPANE

**Partition coefficient**
Pow: 2.1

**Mobility in soil**
Avoid the spillage or runoff entering drains, sewers or watercourses.

**Other adverse effects**
The product contains a substance which has a photochemical ozone creation potential.

13. Disposal considerations

**Waste treatment methods**
Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

14. Transport information

**UN proper shipping name**
Not applicable. No information required.

**Transport hazard class(es)**
No transport warning sign required.
BN - BROMOTHANE S, SPECIALTY DEGREASING FLUID

**Packing group**
Not applicable. No information required.

**Environmental hazards**

**Environmentally Hazardous Substance**
No.

**Special precautions for user**
Not applicable. No information required.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**
Not applicable. No information required.

### 15. Regulatory information

#### US Federal Regulations

**SARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities**
Not listed.

**CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA)**

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

**SARA Extremely Hazardous Substances EPCRA Reportable Quantities**
Not listed.

**SARA 313 Emission Reporting**

1-**BROMOPROPANE**
0.1 %

2-**METHYLPROPAN-2-OL**
1.0 %

1,2-**EPOXYBUTANE**
0.1 %

**CAA Accidental Release Prevention**
Not listed.

**SARA (311/312) Hazard Categories**
None

**OSHA Highly Hazardous Chemicals**
Not listed.

#### US State Regulations

**California Proposition 65 Carcinogens and Reproductive Toxins**
Known to the State of California to cause developmental, female and male reproductive toxicity.

1-**BROMOPROPANE**
Known to the State of California to cause cancer.

**California Air Toxics "Hot Spots" (A-I)**
BN - BROMOTHANE S, SPECIALTY DEGREASING FLUID

2-METHYLPRO PAN-2-OL
Present.
1,2-EPOXYBUTANE
Present.

California Air Toxics "Hot Spots" (A-II)
Not listed.

California Directors List of Hazardous Substances
DIMETHOXYMETHANE
Present.
2-METHYLPRO PAN-2-OL
Present.

Massachusetts "Right To Know" List
1-BROMOPROPANE
Present.
DIMETHOXYMETHANE
Present.
2-METHYLPRO PAN-2-OL
Present.
1,2-EPOXYBUTANE
Present.

Rhode Island "Right To Know" List
DIMETHOXYMETHANE
Present.
2-METHYLPRO PAN-2-OL
Present.
1,2-EPOXYBUTANE
Present.

Minnesota "Right To Know" List
DIMETHOXYMETHANE
Present.
2-METHYLPRO PAN-2-OL
Present.
1,2-EPOXYBUTANE
Present.

New Jersey "Right To Know" List
1-BROMOPROPANE
Present.
DIMETHOXYMETHANE
Present.
2-METHYLPRO PAN-2-OL
Present.
BN - BROMOTHANE S, SPECIALTY DEGREASING FLUID

1,2-EPOXYBUTANE
Present.

Pennsylvania "Right To Know" List

1-BROMOPROPANE
Present.

DIMETHOXYMETHANE
Present.

2-METHYLPROPAN-2-OL
Present.

1,2-EPOXYBUTANE
Present.

Inventories

Canada - DSL/NDSL

1-BROMOPROPANE
DSL

DIMETHOXYMETHANE
DSL

2-METHYLPROPAN-2-OL
DSL

1,2-EPOXYBUTANE
DSL

US - TSCA
Yes

16. Other information

Revision comments
NOTE: Lines within the margin indicate significant changes from the previous revision.

Revision date
4/20/2018

Revision
22

Supersedes date
1/9/2018

SDS No.
BULK - BN

SDS status
Approved.

Hazard statements in full
H225 Highly flammable liquid and vapor.
H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
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.

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.