1. Identification

1.1. Product identifier
Product Identity: Borofilm 100
Alternate Names: Borofilm 100

1.2. Relevant identified uses of the substance or mixture and uses advised against
Intended use: See Technical Data Sheet.
Application Method: See Technical Data Sheet.

1.3. Details of the supplier of the safety data sheet
Company Name: Emulsitone Chemicals, LLC
37 Willow Street
Washington, NJ 07882

Emergency
24 hour Emergency Telephone No.: 973-464-5579
Customer Service: Emulsitone Chemicals, LLC 973-386-0053

2. Hazard(s) identification

2.1. Classification of the substance or mixture
Acute Tox. 4;H302: Harmful if swallowed.
Acute Tox. 4;H312: Harmful in contact with skin.
Acute Tox. 3;H331: Toxic if inhaled.
Repr. 1B;H360FD: May damage fertility. May damage the unborn child.

2.2. Label elements
Using the Toxicity Data listed in section 11 and 12 the product is labeled as follows.

Danger
H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H331 Toxic if inhaled.
H360FD* May damage fertility. May damage the unborn child.

[Prevention]:

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P261 Avoid breathing dust / fume / gas / mist / vapors / spray.
P264 Wash thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves / eye protection / face protection.

[Response]:

P301+312 IF SWALLOWED: Call a POISON CENTER or doctor / physician if you feel unwell.
P302+352 IF ON SKIN: Wash with plenty of soap and water.
P304+312 IF INHALED: Call a POISON CENTER or doctor / physician if you feel unwell.
P308+313 IF exposed or concerned: Get medical advice / attention.
P311 Call a POISON CENTER or doctor / physician.
P311 Specific treatment (see information on this label).
P330 Rinse mouth.
P340 Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P363 Wash contaminated clothing before reuse.

[Storage]:

P403+233 Store in a well ventilated place. Keep container tightly closed.
P405 Store locked up.

[Disposal]:

P501 Dispose of contents / container in accordance with local / national regulations.

### 3. Composition/information on ingredients

This product contains the following substances that present a hazard within the meaning of the relevant State and Federal Hazardous Substances regulations.

<table>
<thead>
<tr>
<th>Ingredient/Chemical Designations</th>
<th>Weight %</th>
<th>GHS Classification</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Ethoxy-ethanol</td>
<td>50 - 75</td>
<td>Flam. Liq. 3;H226</td>
<td>[1][2]</td>
</tr>
<tr>
<td>CAS Number: 0000110-80-5</td>
<td></td>
<td>Repr. 1B;H360FD</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Acute Tox. 3;H331</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Acute Tox. 4;H312</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Acute Tox. 4;H302</td>
<td></td>
</tr>
<tr>
<td>Acetic acid ethenyl ester, polymer with ethenol</td>
<td>10 - 25</td>
<td>Eye Irrit. 2;H319</td>
<td>[1]</td>
</tr>
<tr>
<td>CAS Number: 0025213-24-5</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
4. First aid measures

4.1. Description of first aid measures

General
In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.

Inhalation
Immediately remove victim to fresh air. If victim has stopped breathing, give artificial respiration, preferably mouth-to-mouth. Get medical attention immediately.

Eyes
Irrigate copiously with clean water for at least 15 minutes, holding the eyelids apart and seek medical attention.

Skin
Immediately flush affected area for at least 15 minutes. Remove and clean or dispose of contaminated clothing in accordance with appropriate federal, state, and local regulations. Get medical attention immediately.

Ingestion
This product contains polyvinyl alcohol in solution. If victim is conscious and able to swallow, have victim drink water or milk to dilute. Never give anything by mouth if victim is unconscious or having convulsions. Call a physician or Poison Control Center immediately. Induce vomiting only if advised by physician or Poison Control Center.

4.2. Most important symptoms and effects, both acute and delayed

Overview
Inhalation: This Emulsitone product is considered to be non-hazardous. The solvent is water.

Ingestion: Symptoms are unknown. However, as with any non-food product, if ingested, contact a doctor or Poison Control Center immediately.

Eye Contact: Liquid or vapor may cause irritation.

Skin Contact: May cause irritation and defatting of skin on prolonged contact.

See section 2 for further details.

Inhalation
Toxic if inhaled.

Skin
Harmful in contact with skin.

Ingestion
Harmful if swallowed.

5. Fire-fighting measures
5.1. Extinguishing media
Non-flammable

5.2. Special hazards arising from the substance or mixture
Hazardous decomposition: No hazardous decomposition data available.
Avoid breathing dust / fume / gas / mist / vapors / spray.

5.3. Advice for fire-fighters
None

ERG Guide No. ----

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Put on appropriate personal protective equipment (see section 8).

6.2. Environmental precautions
Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

6.3. Methods and material for containment and cleaning up
This product is not flammable or poisonous. A spill may be collected with absorbent media or mopped up.
Ordinary trash removal for solids and sanitary sewers for liquid wastes.

7. Handling and storage

7.1. Precautions for safe handling
See section 2 for further details. - [Prevention]:

7.2. Conditions for safe storage, including any incompatibilities
Handle containers carefully to prevent damage and spillage.
Incompatible materials: Strong Oxidizers
See section 2 for further details. - [Storage]:

7.3. Specific end use(s); No data available

8. Exposure controls and personal protection

8.1. Control parameters
Exposure
<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Ingredient</th>
<th>Source</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>0000110-80-5</td>
<td>2-Ethoxy-ethanol</td>
<td>OSHA</td>
<td>TWA 200 ppm (740 mg/m3) [skin]</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ACGIH</td>
<td>TWA: 5 ppm Skin, R</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NIOSH</td>
<td>TWA 0.5 ppm (1.8 mg/m3) [skin]</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Supplier</td>
<td>No Established Limit</td>
</tr>
<tr>
<td>0025213-24-5</td>
<td>Acetic acid ethenyl ester, polymer with ethenol</td>
<td>OSHA</td>
<td>No Established Limit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ACGIH</td>
<td>No Established Limit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NIOSH</td>
<td>No Established Limit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Supplier</td>
<td>No Established Limit</td>
</tr>
<tr>
<td>0010043-35-3</td>
<td>Boric Acid</td>
<td>OSHA</td>
<td>No Established Limit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ACGIH</td>
<td>TWA: 2 mg/m3 STEL: 6 mg/m3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NIOSH</td>
<td>No Established Limit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Supplier</td>
<td>No Established Limit</td>
</tr>
</tbody>
</table>

Carcinogen Data

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Ingredient</th>
<th>Source</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>0000110-80-5</td>
<td>2-Ethoxy-ethanol</td>
<td>OSHA</td>
<td>Select Carcinogen: No</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NTP</td>
<td>Known: No; Suspected: No</td>
</tr>
<tr>
<td></td>
<td></td>
<td>IARC</td>
<td>Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;</td>
</tr>
<tr>
<td>0025213-24-5</td>
<td>Acetic acid ethenyl ester, polymer with ethenol</td>
<td>OSHA</td>
<td>Select Carcinogen: No</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NTP</td>
<td>Known: No; Suspected: No</td>
</tr>
<tr>
<td></td>
<td></td>
<td>IARC</td>
<td>Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;</td>
</tr>
<tr>
<td>0010043-35-3</td>
<td>Boric Acid</td>
<td>OSHA</td>
<td>Select Carcinogen: No</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NTP</td>
<td>Known: No; Suspected: No</td>
</tr>
<tr>
<td></td>
<td></td>
<td>IARC</td>
<td>Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;</td>
</tr>
</tbody>
</table>

8.2. Exposure controls

Respiratory Not necessary under normal conditions.

Eyes Protective safety glasses recommended

Skin Avoid skin contact. Use chemically resistant gloves.

Engineering Controls Not necessary under normal conditions.

Other Work Practices Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

See section 2 for further details. - [Prevention]:

9. Physical and chemical properties
**Safety Data Sheet**

**Borofilm 100**

**Appearance**
Clear Liquid

**Odor**
None

**Odor threshold**
Not Measured

**pH**
Not Measured

**Melting point / freezing point**
Not Measured

**Initial boiling point and boiling range**
212 F

**Flash Point**
> 200 F, Nonflammable

**Evaporation rate (Ether = 1)**
Not Measured

**Flammability (solid, gas)**
Not Applicable

**Upper/lower flammability or explosive limits**

- **Lower Explosive Limit**: Not Measured
- **Upper Explosive Limit**: Not Measured

**Vapor pressure (Pa)**
17.5 mmHg

**Vapor Density**
0.32 (Air = 1)

**Specific Gravity**
1.0 - 1.2 g/cc @ 25C

**Solubility in Water**
Soluble

**Partition coefficient n-octanol/water (Log Kow)**
Not Measured

**Auto-ignition temperature**
Not Measured

** Decomposition temperature**
Not Measured

**Viscosity (cP)**
16 – 20 cP @ 25C

9.2. Other information
No other relevant information.

---

### 10. Stability and reactivity

**10.1. Reactivity**
Hazardous Polymerization will not occur.

**10.2. Chemical stability**
Stable under normal circumstances.

**10.3. Possibility of hazardous reactions**
No data available.

**10.4. Conditions to avoid**
No data available.

**10.5. Incompatible materials**
Strong Oxidizers

**10.6. Hazardous decomposition products**
No hazardous decomposition data available.
11. Toxicological information

Acute toxicity

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Oral LD50, mg/kg</th>
<th>Skin LD50, mg/kg</th>
<th>Inhalation Vapor LC50, mg/L/4hr</th>
<th>Inhalation Dust/Mist LC50, mg/L/4hr</th>
<th>Inhalation Gas LC50, ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Ethoxy-ethanol - (110-80-5)</td>
<td>2,125.00, Rat - Category: 5</td>
<td>3,300.00, Rabbit - Category: 5</td>
<td>15.00, Rat - Category: 4</td>
<td>No data available</td>
<td>No data available</td>
</tr>
<tr>
<td>Acetic acid ethenyl ester, polymer with ethenol - (25213-24-5)</td>
<td>5,000.00, Rat - Category: 5</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
</tr>
<tr>
<td>Boric Acid - (10043-35-3)</td>
<td>2,660.00, Rat - Category: 5</td>
<td>2,000.00, Rabbit - Category: 4</td>
<td>No data available</td>
<td>2.00, Rat - Category: 4</td>
<td>No data available</td>
</tr>
</tbody>
</table>

Note: When no route specific LD50 data is available for an acute toxin, the converted acute toxicity point estimate was used in the calculation of the product's ATE (Acute Toxicity Estimate).

<table>
<thead>
<tr>
<th>Classification</th>
<th>Category</th>
<th>Hazard Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity (oral)</td>
<td>4</td>
<td>Harmful if swallowed.</td>
</tr>
<tr>
<td>Acute toxicity (dermal)</td>
<td>4</td>
<td>Harmful in contact with skin.</td>
</tr>
<tr>
<td>Acute toxicity (inhalation)</td>
<td>3</td>
<td>Toxic if inhaled.</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>---</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Serious eye damage/irritation</td>
<td>---</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Respiratory sensitization</td>
<td>---</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Skin sensitization</td>
<td>---</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>---</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>---</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Reproductive toxicity</td>
<td>1B</td>
<td>May damage fertility. May damage the unborn child.</td>
</tr>
<tr>
<td>STOT-single exposure</td>
<td>---</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>STOT-repeated exposure</td>
<td>---</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Aspiration hazard</td>
<td>---</td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>

12. Ecological information

12.1. Toxicity

No additional information provided for this product. See Section 3 for chemical specific data.

Aquatic Ecotoxicity
12.2. Persistence and degradability
There is no data available on the preparation itself.

12.3. Bioaccumulative potential
Not Measured

12.4. Mobility in soil
No data available.

12.5. Results of PBT and vPvB assessment
This product contains no PBT/vPvB chemicals.

12.6. Other adverse effects
No data available.

13. Disposal considerations

13.1. Waste treatment methods
Observe all federal, state and local regulations when disposing of this substance.

14. Transport information

DOT (Domestic Surface Transportation)  IMO / IMDG (Ocean Transportation)  ICAO/IATA
14.1. UN number  Not Applicable  Not Regulated  Not Regulated
14.2. UN proper shipping name  Not Regulated  Not Regulated  Not Regulated
14.3. Transport hazard class(es)  DOT Hazard Class: Not Applicable  IMDG: Not Applicable  Air Class: Not Applicable
14.4. Packing group  Not Applicable  Sub Class: Not Applicable  Not Applicable
14.5. Environmental hazards
IMDG  Marine Pollutant: No
14.6. Special precautions for user
Safety Data Sheet
Borofilm 100

15. Regulatory information

Regulatory Overview
The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented.

Toxic Substance Control Act (TSCA)
All components of this material are either listed or exempt from listing on the TSCA Inventory.

WHMIS Classification D1B

US EPA Tier II Hazards
- Fire: No
- Sudden Release of Pressure: No
- Reactive: No
- Immediate (Acute): Yes
- Delayed (Chronic): No

EPCRA 311/312 Chemicals and RQs (lbs):
  - 2-Ethoxy-ethanol (1,000.00)

EPCRA 302 Extremely Hazardous:
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

EPCRA 313 Toxic Chemicals:
  - 2-Ethoxy-ethanol

Proposition 65 - Carcinogens (>0.0%):
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Developmental Toxins (>0.0%):
  - 2-Ethoxy-ethanol

Proposition 65 - Female Repro Toxins (>0.0%):
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Male Repro Toxins (>0.0%):
  - 2-Ethoxy-ethanol

New Jersey RTK Substances (>1%):
  - 2-Ethoxy-ethanol

Pennsylvania RTK Substances (>1%):
  - 2-Ethoxy-ethanol

16. Other information

The information and recommendations contained herein are based upon data believed to be correct. However, no
guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

The full text of the phrases appearing in section 3 is:
H226 Flammable liquid and vapor.
H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H319 Causes serious eye irritation.
H331 Toxic if inhaled.
H360FD May damage fertility. Suspected of damaging the unborn child.

This is the first version in the GHS SDS format. Listings of changes from previous versions in other formats are not applicable.

For industrial use only. The information contained herein is accurate to the best of our knowledge. We do not suggest or guarantee that any hazards listed herein are the only ones that exist. Emulsitone Chemicals, LLC makes no warranty of any kind, express or implied, concerning the safe use of this material in your process or in combination with other substances. Effects can be aggravated by other materials and/or this material may aggravate or add to the effects of other materials. This material may be released from gas, liquid, or solid materials made directly or indirectly from it. User has the sole responsibility to determine the suitability of the materials for any use and the manner of use contemplated. User must meet all applicable safety and health standards. Material safety data sheets are provided on the Internet as a service for our customers. Possession of an Internet MSDS does not indicate that the possessor of the MSDS was a purchaser or use of the subject product. however, accuracy, suitability or completeness is not guaranteed and no warranties of any type either express or implied are provided. The information contained herein relates only to this specific product.

End of Document