Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product name  FOAM BAN® HP970

Material No.  8197
Historic Material No.  U2HP970

1.2. Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses  Anti-foaming agent (defoamer)
Uses advised against  Consumer use

1.3. Details of the supplier of the safety data sheet

Manufacturer  Munzing - Ultra Additives LLC.
1455 Broad Street
Bloomfield NJ  07003
United States

Email: info@munzing.us
Phone: 1-973-279-1306

Supplier  Münzing Chemie GmbH
Münzingstrasse 2
74232 Abstatt
Germany

Email: info@munzing.com
Phone: +49 (0) 7131/987-0

Emergency Telephone

Emergency telephone  CHEMTREC: +1 703 741 5970

Section 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

<table>
<thead>
<tr>
<th>Hazard Class</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin Corrosion/Irritation</td>
<td>Category 2 - (H315)</td>
</tr>
<tr>
<td>Acute aquatic toxicity</td>
<td>Category 1 - (H400)</td>
</tr>
<tr>
<td>Chronic aquatic toxicity</td>
<td>Category 3 - (H412)</td>
</tr>
</tbody>
</table>

2.2. Label Elements
Signal Word
Warning

Hazard Statements
H315 - Causes skin irritation
H400 - Very toxic to aquatic life
H412 - Harmful to aquatic life with long lasting effects

Precautionary Statements - EU (§28, 1272/2008)
P321 - Specific treatment (see supplemental first aid instructions on this label)

2.3. Other hazards
No information available.

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>EC No.</th>
<th>CAS No.</th>
<th>Weight-%</th>
<th>Classification according to Regulation (EC) No. 1272/2008 [CLP]</th>
<th>REACH No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohols, C12-15-branch./linear, EO/PO~</td>
<td>639-733-1</td>
<td>120313-48-6</td>
<td>50 - 75</td>
<td>Skin Irrit. 2 (H315); Aquatic Acute 1 (H400); Aquatic Chronic 2 (H411)</td>
<td>-</td>
</tr>
<tr>
<td>Decamethylcyclopentasiloxane</td>
<td>208-764-9</td>
<td>541-02-6</td>
<td>&lt;0.30</td>
<td></td>
<td>-</td>
</tr>
<tr>
<td>Octamethylcyclotetrasiloxane</td>
<td>209-136-7</td>
<td>556-67-2</td>
<td>&lt;0.30</td>
<td>Repr. 2 (H361f) Aquatic Chronic 4 (H413) Flamm. Liq. 3 (H226)</td>
<td>-</td>
</tr>
<tr>
<td>Modified Silica</td>
<td>Listed</td>
<td>-</td>
<td>3 - &lt;5</td>
<td></td>
<td>-</td>
</tr>
<tr>
<td>Oxirane, methyl-, polymer with oxirane, mono-2-propenyl ether</td>
<td>618-549-5</td>
<td>9041-33-2</td>
<td>3 - &lt;5</td>
<td>Skin Irrit. 2 (H315) Eye Irrit. 2 (H319)</td>
<td>-</td>
</tr>
</tbody>
</table>

Full text of H- and EUH-phrases: see section 16

This product contains one or more candidate substance(s) of very high concern (Regulation (EC) No. 1907/2006 (REACH), Article 59)

Section 4: FIRST AID MEASURES

4.1. Description of first aid measures

Eye Contact
Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

Skin Contact
IF ON SKIN: Wash with plenty of soap and water. Get medical attention if symptoms occur. Take off contaminated clothing and wash before reuse.
Inhalation  Move victim to fresh air.

Ingestion  Clean mouth with water and drink afterwards plenty of water.

Self-Protection of the First Aider  Use personal protection equipment.

4.2. Most important symptoms and effects, both acute and delayed  
Most important symptoms and effects  No information available.

4.3. Indication of any immediate medical attention and special treatment needed  
Notes to Physician  Treat symptomatically.

---

**Section 5: FIRE FIGHTING MEASURES**

5.1. Extinguishing media  
Suitable extinguishing media  Water spray. Carbon dioxide (CO2). Dry chemical. Alcohol resistant foam. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media  No information available.

5.2. Special hazards arising from the substance or mixture  
Hazardous combustion products  Thermal decomposition can lead to release of irritating and toxic gases and vapors. Carbon monoxide. Carbon dioxide (CO2). Silicon dioxide. Formaldehyde.

5.3. Advice for firefighters  
Advice for fire-fighters  As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

---

**Section 6: ACCIDENTAL RELEASE MEASURES**

6.1. Personal precautions, protective equipment and emergency procedures  
Personal precautions  Use personal protection equipment. Avoid contact with skin, eyes or clothing.

Protective precautions  Use personal protection equipment.

6.2. Environmental precautions  
Environmental Precautions  Avoid release to the environment.

6.3. Methods and material for containment and cleaning up  
Methods for Containment  Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

Methods for Clean-Up  Take up mechanically, placing in appropriate containers for disposal.

6.4. Reference to other sections  
Reference to other sections  See Sections 5 & 7 for additional information.
Section 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Handling
Use personal protection equipment. Avoid contact with skin, eyes or clothing. Handle in accordance with good industrial hygiene and safety practice.

General Hygiene Considerations
Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions
Keep container tightly closed in a dry and well-ventilated place. Keep in properly labeled containers.

7.3. Specific end use(s)

Specific Uses
No information available.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Exposure limits

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Italy</th>
<th>Portugal</th>
<th>Netherlands</th>
<th>Finland</th>
<th>Denmark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Modified Silica</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>TWA: 5 mg/m³</td>
<td>-</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Austria</th>
<th>Switzerland</th>
<th>Poland</th>
<th>Norway</th>
<th>Ireland</th>
</tr>
</thead>
<tbody>
<tr>
<td>Modified Silica</td>
<td>TWA: 4 mg/m³</td>
<td>-</td>
<td>-</td>
<td>TWA: 1.5 mg/m³</td>
<td>TWA: 6 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>STEL: 18 mg/m³</td>
<td>STEL: 7.2 mg/m³</td>
</tr>
</tbody>
</table>

Derived No Effect Level (DNEL)
No information available.

Predicted No Effect Concentration (PNEC)
No information available.

8.2. Exposure controls

Engineering Controls
Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

Eye/Face Protection
Tight sealing safety goggles.

Skin protection
Wear suitable protective clothing and gloves. Wear protective nitrile rubber gloves. Glove thickness > 0.4 mm. Ensure that the breakthrough time of the glove material is not exceeded. Refer to glove supplier for information on breakthrough time for specific gloves.

Respiratory protection
In case of mist, spray or aerosol exposure wear suitable personal respiratory protection and protective suit.

Environmental exposure controls
No information available.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical State
Liquid
Appearance
Opaque, White

Odor
No information available

Odor threshold
Mild

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks/ Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH</td>
<td>No information available</td>
<td>No information available</td>
</tr>
<tr>
<td>Melting point</td>
<td>No information available</td>
<td>No information available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>No information available</td>
<td>No information available</td>
</tr>
<tr>
<td>Flash Point</td>
<td>No information available</td>
<td>No information available</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No information available</td>
<td>No information available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No information available</td>
<td>No information available</td>
</tr>
<tr>
<td>Flammability Limit in Air</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper flammability limit</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Lower flammability limit</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>No information available</td>
<td>No information available</td>
</tr>
<tr>
<td>Vapor density</td>
<td>No information available</td>
<td>No information available</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>0.95</td>
<td>No information available</td>
</tr>
<tr>
<td>Water Solubility</td>
<td>No information available</td>
<td>No information available</td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td>Dispersible in water</td>
<td>No information available</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>No information available</td>
<td>No information available</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>No information available</td>
<td>No information available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No information available.</td>
<td>No information available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>1300 . cPs</td>
<td>No information available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No information available</td>
<td></td>
</tr>
</tbody>
</table>

Section 10: STABILITY AND REACTIVITY

10.1. Reactivity
Reactivity Stable under normal conditions.

10.2. Chemical stability
Chemical Stability Stable under normal conditions.

10.3. Possibility of hazardous reactions
Possibility of Hazardous Reactions None under normal processing.

Hazardous Polymerization Hazardous polymerization does not occur.

10.4. Conditions to avoid
Conditions to Avoid Heat, flames and sparks. Avoid moisture.

10.5. Incompatible materials

Hazardous decomposition products
Hazardous decomposition products Thermal decomposition can lead to release of irritating and toxic gases and vapors.

Section 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute Toxicity

Product Information
Eyes
Contact with eyes may cause irritation. Avoid contact with eyes.

Skin
Irritating to skin. Avoid contact with skin.

Inhalation
Health injuries are not known or expected under normal use.

Ingestion
Health injuries are not known or expected under normal use.

Unknown acute toxicity
Not applicable.

ATEmix (oral) 16,196.00 mg/kg
ATEmix (dermal) 5,051.00 mg/kg
ATEmix (inhalation-dust/mist) 366.00 mg/L

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Octamethylcyclotetrasiloxane</td>
<td>&gt; 4800 mg/kg (Rat)</td>
<td>&gt; 2000 mg/kg (Rabbit)</td>
<td>= 36 mg/L (Rat) 4 h</td>
</tr>
<tr>
<td>Organosiloxane</td>
<td>&gt; 24 g/kg (Rat) &gt; 17 g/kg (Rat)</td>
<td>&gt; 2 g/kg (Rabbit)</td>
<td></td>
</tr>
<tr>
<td>Modified Silica</td>
<td>= 7900 mg/kg (Rat)</td>
<td>&gt; 2000 mg/kg (Rabbit)</td>
<td>&gt; 2.2 mg/L (Rat) 1 h</td>
</tr>
<tr>
<td>Polyalylene glycol</td>
<td>= 5700 mg/kg (Rat) = 16 g/kg (Rat)</td>
<td></td>
<td>= 320 mg/m^3 (Rat) 4 h</td>
</tr>
</tbody>
</table>

Skin Corrosion/Irritation
No information available.

Eye damage/irritation
No information available.

Sensitization
No information available.

Mutagenic effects
No information available.

Reproductive Effects
Possible risk of impaired fertility. Possible risk of harm to the unborn child.

STOT - single exposure
No information available.

STOT - repeated exposure
No information available.

Aspiration Hazard
No information available.

Carcinogenic effects
No information available.

Section 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecotoxicity

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Algae</th>
<th>Fish</th>
<th>Daphnia magna</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohols, C12-15-branch./linear, EO/PO~</td>
<td>EC50 (72h) &gt;0.1 - &lt;1 mg/l Scenedesmus subspicatus</td>
<td>LC50 (96 h) &gt; 1 - &lt; 10 mg/l, Leuciscus idus</td>
<td>EC50 (48 h) 1 mg/l, NOEC (21 d) &gt;0.1 - &lt; 1mg/l</td>
</tr>
<tr>
<td>Octamethylcyclotetrasiloxane</td>
<td>-</td>
<td>1000: 96 h Lepomis macrochirus mg/L LC50 500: 96 h Brachydanio rerio mg/L LC50</td>
<td>25.2: 24 h Daphnia magna mg/L EC50</td>
</tr>
<tr>
<td>Modified Silica</td>
<td>440: 72 h Pseudokirchneriella subcapitata mg/L EC50</td>
<td>5000: 96 h Brachydanio rerio mg/L LC50 static</td>
<td>7600: 48 h Ceriodaphnia dubia mg/L EC50</td>
</tr>
<tr>
<td>Polyalylene glycol</td>
<td>EC50, 48 hr: &gt;100 mg/L</td>
<td>LC50: &gt;100 mg/l (Golden orfe), 96 hr</td>
<td>EC50 (48 h): &gt; 100 mg/l</td>
</tr>
</tbody>
</table>

Unknown Aquatic Toxicity
44.4175% of the mixture consists of components(s) of unknown hazards to the aquatic environment.
Persistence and degradability

Persistence and degradability . No information available.

12.3. Bioaccumulative potential

Bioaccumulation/Accumulation .

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Partition coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Octamethylcyclotetrasiloxane</td>
<td>5.1</td>
</tr>
</tbody>
</table>

12.4. Mobility in soil

Mobility in Environmental Media . No information available.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment . Not applicable.

12.6. Other adverse effects

Other adverse effects . No information available.

Section 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste from residues/unused products Contain and dispose of waste according to local regulations.

Contaminated packaging Empty remaining contents.

Waste codes / waste designations according to EWC / AVV Not applicable.

Section 14: TRANSPORT INFORMATION

ADR/RID

14.1 UN-No UN3082 ,
14.2 Proper Shipping Name Environmentally hazardous substance, liquid, n.o.s
Technical Description (Alcohols, C12-15-branch./linear, EO/PO~)
14.3 Hazard Class 9
14.4 Packing Group III
14.5 Environmental hazard yes
14.6 Special Provisions Marine Pollutant Yes
EmS No. Not sensitive F-A, S-F
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code No information available

IMDG/IMO

14.1 UN-No UN3082
14.2 Proper Shipping Name Environmentally hazardous substance, liquid, n.o.s
Technical Description (Alcohols, C12-15-branch./linear, EO/PO~)
14.3 Hazard Class 9
14.4 Packing Group III
14.5 Environmental hazard yes Marine Pollutant Yes
14.6 Special Provisions EmS No. Not sensitive F-A, S-F
Section 15: REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

International Inventories

US TSCA  Complies
Australia (AICS)  Complies
Canada (DSL)  Complies
China (IECSC)  Complies
Europe (EINECS/ELINCS/NLP)  Complies
Japan (ENCS)  Complies
South Korea (KECL)  Complies
Philippines (PICCS)  Complies
New Zealand  Complies
Taiwan (TCSI)  Complies

Legend
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

Germany

WGK Classification (AwSV)  Water endangering class = 2 (self estimation)

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Authorizations and/or restrictions on use:
This product does not contain substances subject to authorization (Regulation (EC) No. 1907/2006 (REACH), Annex XIV). This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII).

Persistent Organic Pollutants
Not applicable

Ozone-depleting substances (ODS) regulation (EC) 1005/2009
Not applicable

15.2. Chemical safety assessment

No information available

Section 16: OTHER INFORMATION
Key or legend to abbreviations and acronyms used in the safety data sheet

Full text of H-Statements referred to under section 3
H315 - Causes skin irritation
H319 - Causes serious eye irritation
H400 - Very toxic to aquatic life
H411 - Toxic to aquatic life with long lasting effects
H413 - May cause long lasting harmful effects to aquatic life
H361 - Suspected of damaging fertility or the unborn child if inhaled
H226 - Flammable liquid and vapor

Legend
SVHC: Substances of Very High Concern for Authorization:
TWA - TWA (time-weighted average)
STEL - STEL (Short Term Exposure Limit)
Ceiling - Maximum limit value
* - Skin designation

Classification procedure Minimum classification

Issue Date: 2019-02-01
Revision Date: 2019-04-25
Reason for revision SDS sections updated, 15.

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The 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, unless specified in the text.

End of Safety Data Sheet