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

1.1. Product identifier

Product name

FOAM BAN® HP990

Material No.

8183

Historic Material No.

U2HP990

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]
This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [GHS]

2.2. Label Elements

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [GHS]

EUH210 - Safety data sheet available on request

2.3. Other hazards
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>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>
</tbody>
</table>

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

Substances for which there are Community workplace exposure limits. 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
Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.

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.

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>
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

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks/ Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Liquid</td>
<td></td>
</tr>
<tr>
<td>Appearance</td>
<td>Opaque, White</td>
<td></td>
</tr>
<tr>
<td>Odor</td>
<td>Mild</td>
<td></td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No information available</td>
<td></td>
</tr>
</tbody>
</table>

- pH: No information available
- Melting point: No information available
- Boiling point: No information available
- Flash Point: No information available
- Evaporation rate: No information available
- Flammability (solid, gas): No information available
- Flammability Limit in Air
  - Upper flammability limit: No information available
  - Lower flammability limit: No information available
- Vapor Pressure: No information available
- Vapor density: No information available
- Specific Gravity: No information available
- Water Solubility: No information available
- Solubility in other solvents: Dispersible
- Partition coefficient: n-octanol/water: No information available
- Autoignition temperature: No information available
- Decomposition temperature: No information available
- Viscosity: 2770 cP @ 25 °C Dynamic viscosity
- Explosive properties: No information available
- Oxidizing properties: No information available

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.

10.5. Incompatible materials
Incompatible Materials         Strong oxidizing agents.

Section 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects
Acute Toxicity

Product Information

<table>
<thead>
<tr>
<th></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>Polyalkylene glycol</td>
<td>= 5700 mg/kg (Rat) = 16 g/kg (Rat)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>= 320 mg/m³ (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  May cause harm to the unborn child. Possible risk of impaired fertility.
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>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>500: 96 h Brachydanio rerio mg/L LC50 static</td>
<td>7600: 48 h Ceriodaphnia dubia mg/L EC50</td>
</tr>
<tr>
<td>Polyalkylene 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  Not applicable.

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
Not regulated

IMDG/IMO
Not regulated

IATA
Not regulated

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 = 1 (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
H361f - Suspected of damaging fertility
H413 - May cause long lasting harmful effects to aquatic life
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: 2018-04-13
Revision Date: 2019-01-20
Reason for revision SDS sections updated, 3.

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

Disclaimer
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End of Safety Data Sheet