1.1. Product identifier

Product name: DEE FO® PI-320
Material No.: 5840
Historic Material No.: U1PI320

Contains Propylene oxide ethylene oxide polymer monobutyl ether

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
2.2. Label Elements

Signal Word
Danger

Hazard Statements
H330 - Fatal if inhaled
H335 - May cause respiratory irritation

Precautionary Statements - EU (§28, 1272/2008)
P260 - Do not breathe dust/fume/gas/mist/vapors/spray
P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing
P310 - Immediately call a POISON CENTER or doctor
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed

2.3. Other hazards
No information available.

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Chemical nature of the product      Polymer dispersion

<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>Propylene oxide ethylene oxide polymer monobutyl ether</td>
<td>618-542-7</td>
<td>9038-95-3</td>
<td>75 - 100</td>
<td>Acute Tox. 2 (H330) STOT SE 3 (H335)</td>
<td>-</td>
</tr>
</tbody>
</table>

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

Section 4: FIRST AID MEASURES

4.1. Description of first aid measures

General Advice       Take off immediately all contaminated clothing.
Eye Contact          Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician.
Skin Contact         Wash with soap and water.
Inhalation           IF INHALED: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Call a physician or poison control center immediately.
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

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Water spray, carbon dioxide (CO2), dry chemical, alcohol-resistant foam. Water mist may be used to cool closed containers.

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 oxides. Vapors may form explosive mixtures with air. Phosgene.

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
Take off contaminated clothing and wash before reuse. Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Slippery, can cause falls if walked on.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions
Keep container tightly closed in a dry and well-ventilated place. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity).

7.3. Specific end use(s)
Specific Uses
No information available.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters
Exposure limits
This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

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
Safety glasses with side-shields. If splashes are likely to occur, wear: Tight sealing safety goggles.

Skin protection
Wear suitable protective clothing and gloves.

Respiratory protection
In case of insufficient ventilation, wear suitable respiratory equipment. Use NIOSH-approved air-purifying respirator with organic vapor cartridge or canister, as appropriate.

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>Viscous, 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>
<tr>
<td>pH</td>
<td>7.8</td>
<td>No information available</td>
</tr>
<tr>
<td>Melting point</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
Temperatures above 150 °C.

10.5. Incompatible materials
Incompatible Materials
Strong oxidizing agents.

Hazardous decomposition products
Hazardous decomposition products
Thermal decomposition can lead to release of irritating and toxic gases and vapors. Carbon oxides. Formaldehyde. Silicon dioxide.

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
Substance may cause slight skin irritation. Avoid contact with skin.

Inhalation
May be fatal if inhaled. Irritating to respiratory system. Avoid breathing vapors or mists.
Ingestion

Health injuries are not known or expected under normal use.

Unknown acute toxicity

8.75% of the mixture consists of ingredient(s) of unknown toxicity.

Acute inhalation toxicity - dust/mist

8.75% of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

ATEmix (oral) 494,545.00 mg/kg
ATEmix (dermal) 58,473.00 mg/kg
ATEmix (inhalation-dust/mist) 0.33 mg/L

Component Information

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organosiloxane polymer</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>Propylene oxide ethylene oxide polymer monobutyl ether</td>
<td>&gt; 21,753 mg/kg (Rat)</td>
<td>&gt; 21,120 mg/kg (Rabbit)</td>
<td>0.33 mg/L Aerosol (Rat, 4H)</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

No information available.

STOT - single exposure

Respiratory system.

STOT - repeated exposure

No information available.

Aspiration Hazard

No information available.

Carcinogenic effects

No information available.

Section 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecotoxicity

Information given is based on data on the components and the ecotoxicology of similar products.

Unknown Aquatic Toxicity

Not applicable.

Persistence and degradability

Persistance and degradability

No information available.

12.3. Bioaccumulative potential

Bioaccumulation/Accumulation

No information available.

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
H304 - May be fatal if swallowed and enters airways
H335 - May cause respiratory irritation

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: 2009-01-19
Revision Date: 2018-12-20
Reason for revision SDS sections updated, 2, 15.

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

Disclaimer
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End of Safety Data Sheet