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

1.1. Product identifier

Product name

DEE FO® 718

Material No.

5488

Historic Material No.

U1718

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

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

Chemical nature of the product: Solvent mixture

<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>Dipropylene glycol monomethyl ether</td>
<td>252-104-2</td>
<td>34590-94-8</td>
<td>50 - 75</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

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

Substance with a Community workplace exposure limit.

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. If breathing is difficult, give oxygen.

Ingestion: Clean mouth with 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.

Unsuitable Extinguishing Media: Do not use a solid water stream as it may scatter and spread fire.

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**
Handle in accordance with good industrial hygiene and safety practice. Keep away from open flames, hot surfaces and sources of ignition. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment.

**General Hygiene Considerations**
Handle in accordance with good industrial hygiene and safety practice. Take off contaminated clothing and wash before reuse.

7.2. Conditions for safe storage, including any incompatibilities

**Storage Conditions**
Keep in a dry, cool 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**

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>EU</th>
<th>United Kingdom</th>
<th>France</th>
<th>Spain</th>
<th>Germany</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dipropylene glycol monomethyl ether</td>
<td></td>
<td></td>
<td>TWA: 50 ppm</td>
<td>Skin TWA: 50 ppm TWA: 308 mg/m³</td>
<td></td>
</tr>
<tr>
<td>Dipropylene glycol</td>
<td></td>
<td></td>
<td>TWA: 300 mg/m³</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<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>Dipropylene glycol</td>
<td>TWA: 50 ppm</td>
<td>STEL: 150 ppm</td>
<td>TWA: 300 mg/m³</td>
<td>TWA: 50 ppm</td>
<td>TWA: 50 ppm</td>
</tr>
</tbody>
</table>
monomethyl ether

<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>Dipropylene glycol monomethyl ether</td>
<td>Skin</td>
<td>TWA: 50 ppm TWA: 308 mg/m³</td>
<td>STEL: 50 ppm STEL: 300 mg/m³ TWA: 50 ppm TWA: 300 mg/m³</td>
<td>STEL: 480 mg/m³ TWA: 240 mg/m³</td>
<td>TWA: 50 ppm TWA: 300 mg/m³ Skin TWA: 50 ppm STEL: 150 ppm STEL: 924 mg/m³ Skin</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**
Safety glasses with side-shields. If splashes are likely to occur, wear: Tight sealing safety goggles.

**Skin protection**
Lightweight protective clothing. Wear protective 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>No information available</td>
</tr>
<tr>
<td>Appearance</td>
<td>Yellow, Transparent</td>
<td></td>
</tr>
<tr>
<td>Odor threshold</td>
<td>Slight ether-like</td>
<td>No information available</td>
</tr>
</tbody>
</table>

<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>&gt; 79 °C</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>No information available</td>
<td>No information available</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>0.98</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>&lt;200 cps@25C</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 Keep away from open flames, hot surfaces and sources of ignition. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors).

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>Eyes</th>
<th>Contact with eyes may cause irritation. Avoid contact with eyes.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin</td>
<td>Substance may cause slight skin irritation. Avoid contact with skin.</td>
</tr>
<tr>
<td>Inhalation</td>
<td>Health injuries are not known or expected under normal use.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>Health injuries are not known or expected under normal use.</td>
</tr>
</tbody>
</table>

Unknown acute toxicity Not applicable.

ATEmix (oral) 5,410.00 mg/kg
ATEmix (dermal) 9,400.00 mg/kg
ATEmix (inhalation-dust/mist) No data available

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>Dipropylene glycol monomethyl ether</td>
<td>= 5.35 g/kg (Rat)</td>
<td>= 9500 mg/kg (Rabbit)</td>
<td>3.35 mg/l (3.350 mg/m²)(7 h, Aerosol, Rat) No deaths occurred at this concentration.</td>
</tr>
<tr>
<td>Polypropylene glycol, monobutyl ether</td>
<td>= 9100 mg/kg (Rat) = 5840 mg/kg (Rat)</td>
<td>= 21200 µL/kg (Rabbit) = 13340 mg/kg (Rabbit)</td>
<td></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  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  Discharge into the environment must be avoided.

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Algae</th>
<th>Fish</th>
<th>Daphnia magna</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dipropylene glycol monomethyl ether</td>
<td>EC50: &gt;969 mg/l (Selenastrum capricornutum)</td>
<td>LC50: &gt;150 mg/l (Notropis atherinoides)</td>
<td>LD50: &gt;10000 mg/l (Pimephales promelas)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>LC50: 1919 mg/l (Daphnia magna)</td>
</tr>
<tr>
<td>Polypropylene glycol, monobutyl ether</td>
<td>-</td>
<td>LC50: 20.6 mg/l (Pimphales promelas)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>LC50 (96h): &gt; 500 m/L (golden orfe)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>LC50 (96h): 104 mg/L (Brachydanio rerio)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>EC50: 450 mg/l (Daphnia magna)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>EC50 (48 h): &gt;100 mg/l (Daphnia magna)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>LC50: 9.8 mg/l (Daphnia magna)</td>
</tr>
</tbody>
</table>

Unknown Aquatic Toxicity  Not applicable.

Persistence and degradability

Persistence and degradability  Not readily biodegradable.

12.3. Bioaccumulative potential

Bioaccumulation/Accumulation

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Partition coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dipropylene glycol monomethyl ether</td>
<td>-0.064</td>
</tr>
</tbody>
</table>

12.4. Mobility in soil

Mobility in Environmental Media  Is not likely mobile in the environment due its low water solubility.

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
07 02 99 - wastes not otherwise specified.

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

<table>
<thead>
<tr>
<th>Country</th>
<th>Compliance</th>
</tr>
</thead>
<tbody>
<tr>
<td>US TSCA</td>
<td>Complies</td>
</tr>
<tr>
<td>Australia (AICS)</td>
<td>Complies</td>
</tr>
<tr>
<td>Canada (DSL)</td>
<td>Complies</td>
</tr>
<tr>
<td>China (IECSC)</td>
<td>Complies</td>
</tr>
<tr>
<td>Europe (EINECS/ELINCS/NLP)</td>
<td>Complies</td>
</tr>
<tr>
<td>Japan (ENCS)</td>
<td>Complies</td>
</tr>
<tr>
<td>South Korea (KECL)</td>
<td>Complies</td>
</tr>
<tr>
<td>Philippines (PICCS)</td>
<td>Complies</td>
</tr>
<tr>
<td>New Zealand</td>
<td>Complies</td>
</tr>
<tr>
<td>Taiwan (TCSI)</td>
<td>Complies</td>
</tr>
</tbody>
</table>

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 classification)

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
No information available

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: 2016-07-06
Reason for revision SDS sections updated, 2, 11, 15, 16.

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