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

1.1. Product identifier

Product name: DEE FO® 1015

Material No.: 5412

Historic Material No.: U11015

Contains Petroleum distillates, solvent dewaxed heavy paraffinic, Petroleum distillates, solvent dewaxed light paraffinic

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

Chemical nature of the product: Petroleum oil-based mixture

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>EC No.</th>
<th>CAS No.</th>
<th>Weight-%</th>
<th>Classification</th>
<th>REACH No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Modified Silica</td>
<td>Listed</td>
<td>-</td>
<td>1 - &lt;3</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, also under the eyelids. If symptoms persist, call 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.

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. In case of insufficient ventilation, wear suitable respiratory equipment. Ensure adequate ventilation.

General Hygiene Considerations: Take off contaminated clothing and wash before reuse. Handle in accordance with good industrial hygiene and safety practice. Do not get in eyes, on skin, or on clothing. Slippery, can cause falls if walked on.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions: Keep containers tightly closed in a cool, well-ventilated place. Keep at temperatures below 60°C.

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 TWA: 2.4 mg/m³ STEL: 18 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. In case of insufficient ventilation, wear suitable respiratory equipment.

Personal protective equipment

Eye/Face Protection  Safety glasses with side-shields. If splashes are likely to occur, wear: Goggles.
Skin protection  Lightweight protective clothing. For operations where prolonged or repeated skin contact may occur, impervious gloves should be worn. Neoprene, PVC, PVA.
Respiratory protection  If exposure limits are likely to be exceeded or if irritation or other symptoms are experienced, NIOSH/MSHA or EN 136 approved respiratory protection should be worn.

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>

<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>No information available</td>
</tr>
<tr>
<td>Lower flammability limit</td>
<td>No information available</td>
<td>No information available</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>0.86</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>insoluble</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>&gt;2000 cps@20C</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.

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. Silicon dioxide.

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) 5,161.00 mg/kg
ATEmix (dermal) 5,141.00 mg/kg
ATEmix (inhalation-dust/mist) 7.20 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>Synthetic wax</td>
<td>&gt; 5000 mg/kg (Rat)</td>
<td>&gt; 20,000 mg/kg (Rabbit)</td>
<td>&gt; 6.3 mg/L (Rat)</td>
</tr>
<tr>
<td>Polyalkylene glycol</td>
<td>3750 mg/kg (Rat) &gt; 2 g/kg (Rat)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Petroleum distillates, solvent</td>
<td>&gt; 5000 mg/kg (Rat)</td>
<td>&gt; 5000 mg/kg (Rabbit)</td>
<td>&gt; 5399 mg/m³ (Rat) 4 h</td>
</tr>
<tr>
<td>dewaxed light paraffinic</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Petroleum distillates, solvent</td>
<td>5000 mg/kg (Rat)</td>
<td>2000 mg/kg (Rabbit)</td>
<td>&gt; 2400 mg/m³ (Rat) 4 h</td>
</tr>
<tr>
<td>dewaxed heavy paraffinic</td>
<td></td>
<td></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>
</tbody>
</table>
Section 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecotoxicity

Discharge into the environment must be avoided. Aquatic toxicity is unlikely due to low solubility.

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Algae</th>
<th>Fish</th>
<th>Daphnia magna</th>
</tr>
</thead>
<tbody>
<tr>
<td>Synthetic wax</td>
<td>-</td>
<td>LC50 (96 h): &gt;1000 mg/l</td>
<td>EC50 (48 h): 140 mg/l</td>
</tr>
<tr>
<td></td>
<td>(Rainbow trout)</td>
<td>(Daphnia)</td>
<td></td>
</tr>
<tr>
<td>Polyalkylene glycol</td>
<td>-</td>
<td>LC50 (96h): &gt;100 mg/L</td>
<td>EC50 (48 h): &gt; 100 mg/l</td>
</tr>
<tr>
<td></td>
<td>(Rainbow trout)</td>
<td>(Daphnia)</td>
<td></td>
</tr>
<tr>
<td>Synthetic wax</td>
<td>-</td>
<td>-</td>
<td>EC50 (48 h): 140 mg/l</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Daphnia)</td>
<td></td>
</tr>
<tr>
<td>Petroleum distillates, solvent dewaxed light paraffinic</td>
<td>-</td>
<td>5000: 96 h Oncorhynchus mykiss mg/L LC50</td>
<td>1000: 48 h Daphnia magna mg/L EC50</td>
</tr>
<tr>
<td></td>
<td></td>
<td>7600: 48 h Ceriodaphnia dubia mg/L EC50</td>
<td></td>
</tr>
<tr>
<td>Petroleum distillates, solvent dewaxed heavy paraffinic</td>
<td>-</td>
<td>5000: 96 h Oncorhynchus mykiss mg/L LC50</td>
<td>1000: 48 h Daphnia magna mg/L EC50</td>
</tr>
<tr>
<td></td>
<td></td>
<td>7600: 48 h Ceriodaphnia dubia mg/L EC50</td>
<td></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>
</tbody>
</table>

Unknown Aquatic Toxicity Not applicable.

Persistence and degradability

Persistence and degradability Not readily biodegradable.

12.3. Bioaccumulative potential

Bioaccumulation/Accumulation Not likely to bioaccumulate.

12.4. Mobility in soil

Mobility in Environmental Media The product is insoluble and floats on water. 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 containers should be taken for local recycling, recovery or waste disposal. Do not burn, or use a cutting torch on, the empty drum.

Waste codes / waste designations according to EWC / AVV

070608 - other still bottoms and reaction residues.

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 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:** 2009-01-09
**Revision Date:** 2018-12-27
**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