**SECTION 1: Identification of the substance/mixture and of the company/undertaking**

- **1.1 Product identifier**
  - Trade name: DEE FO® 2020E/50

- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
  - No further relevant information available.

- **1.3 Details of the supplier of the safety data sheet**
  - Manufacturer/Supplier:
    - MÜNZING CHEMIE GmbH
    - Münzingstrasse 2
    - 74232 Abstatt, Germany
    - E-Mail: info@munzing.com
    - Tel.: +49 7131 987-100

  - Further information obtainable from:
    - Product Safety Department
    - E-mail (MSDS): msds@munzing.com

- **1.4 Emergency telephone number:** For Chemical Emergencies: 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
    - The product is not classified as hazardous, according to the CLP regulation.

- **2.2 Label elements**
  - Labelling according to Regulation (EC) No 1272/2008 Void
  - Hazard pictograms Void
  - Signal word Void
  - Hazard statements Void

- **2.3 Other hazards**
  - Results of PBT and vPvB assessment
    - PBT: None.
    - vPvB: None.

**SECTION 3: Composition/information on ingredients**

- **3.2 Chemical characterisation: Mixtures**
  - Description: Mixture of substances listed below with nonhazardous additions.

  - **Dangerous components:**
    - CAS: 64742-55-8
    - EINECS: 265-138-7
    - Reg.nr.: 01-2119487077-29
    - Distillates (petroleum), hydrotreated light paraffinic
    - Asp. Tox. 1, H304

  - **Additional information:** For the wording of the listed hazard phrases refer to section 16.

**SECTION 4: First aid measures**

- **4.1 Description of first aid measures**
  - General information: Immediately remove any clothing soiled by the product.

(Contd. on page 2)
After inhalation:
Take affected persons into fresh air and keep quiet. Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist. In case of unconsciousness place patient stably in side position for transportation.

After skin contact:
Immediately wash with water and soap and rinse thoroughly.

After eye contact:
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

After swallowing:
Do not induce vomiting; call for medical help immediately.

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

4.3 Indication of any immediate medical attention and special treatment needed
No further relevant information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media
Suitable extinguishing agents:
CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam. Use fire extinguishing methods suitable to surrounding conditions.

For safety reasons unsuitable extinguishing agents: Water with full jet

5.2 Special hazards arising from the substance or mixture
Can form explosive gas-air mixtures.

5.3 Advice for firefighters
Protective equipment:
Do not inhale explosion gases or combustion gases.

Additional information
Cool endangered receptacles with water spray. Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Use respiratory protective device against the effects of fumes/dust/aerosol. Keep away from ignition sources. Wear protective clothing.

6.2 Environmental precautions:
Do not allow to enter sewers/surface or ground water.

6.3 Methods and material for containment and cleaning up:
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

6.4 Reference to other sections
See Section 7 for information on safe handling. See Section 8 for information on personal protection equipment. See Section 13 for disposal information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Store in cool, dry place in tightly closed receptacles. Ensure good ventilation/exhaustion at the workplace. Prevent formation of aerosols.

Information about fire - and explosion protection:
Keep ignition sources away - Do not smoke. Protect from heat. Fumes can combine with air to form an explosive mixture.
Trade name: DEE FO® 2020E/50

(Contd. of page 2)

7.2 Conditions for safe storage, including any incompatibilities

- **Storage:**
  - Requirements to be met by storerooms and receptacles: Store in a cool location.
  - Information about storage in one common storage facility: Store away from oxidising agents.
- **Further information about storage conditions:** Store in cool, dry conditions in well sealed receptacles.

7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **8.1 Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:**
  - CAS: 64742-55-8 Distillates (petroleum), hydrotreated light paraffinic
  - ACGIH - TWA Long-term value: 5 mg/m³ mineral oil mist

- **Additional information:** The lists valid during the making were used as basis.
- **8.2 Exposure controls**
  - **Personal protective equipment:**
    - **General protective and hygienic measures:**
      Keep away from foodstuffs, beverages and feed.
      Immediately remove all soiled and contaminated clothing.
      Wash hands before breaks and at the end of work.
      Avoid contact with the eyes and skin.
    - **Respiratory protection:**
      In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
    - **Protection of hands:**
      Protective gloves
      The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
      Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.
    - **Material of gloves**
      Butyl rubber, BR
      Neoprene gloves
      Recommended thickness of the material: ≥ 0.5 mm
      The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
    - **Penetration time of glove material**
      For the mixture of chemicals mentioned below the penetration time has to be at least 480 minutes (Permeation according to EN 16523-1:2015: Level 6).
      The determined penetration times according to EN 16523-1:2015 are not performed under practical conditions. Therefore a maximum wearing time, which corresponds to 50% of the penetration time, is recommended.
    - **Eye protection:** Tightly sealed goggles
    - **Body protection:** Protective work clothing

(Contd. on page 4)
### SECTION 9: Physical and chemical properties

#### 9.1 Information on basic physical and chemical properties

- **General Information**
  - **Form:** Fluid
  - **Colour:** White
  - **Odour:** Mild
  - **Odour threshold:** Not determined.
  - **pH-value (20 g/l) at 20 °C:** ≈ 6.0 (DIN ISO 976)

- **Change in condition**
  - **Melting point/freezing point:** Undetermined.
  - **Initial boiling point and boiling range:** >100 °C

- **Flash point:** >100 °C (DIN EN ISO 2719)

- **Flammability (solid, gas):** Not applicable.

- **Ignition temperature:** Not determined.

- **Decomposition temperature:** Not determined.

- **Auto-ignition temperature:** Product is not self-igniting.

- **Explosive properties:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Explosion limits:</strong></td>
<td></td>
</tr>
<tr>
<td>Lower</td>
<td>Not determined</td>
</tr>
<tr>
<td>Upper</td>
<td>Not determined</td>
</tr>
<tr>
<td><strong>Oxidising properties:</strong></td>
<td>None.</td>
</tr>
<tr>
<td><strong>Vapour pressure:</strong></td>
<td>Not determined</td>
</tr>
<tr>
<td><strong>Density at 20 °C:</strong></td>
<td>≈ 0.85 g/cm³ (DIN EN ISO 2811-1)</td>
</tr>
<tr>
<td><strong>Relative density:</strong></td>
<td>Not determined</td>
</tr>
<tr>
<td><strong>Vapour density:</strong></td>
<td>Not determined</td>
</tr>
<tr>
<td><strong>Evaporation rate:</strong></td>
<td>Not determined</td>
</tr>
<tr>
<td><strong>Solubility in / Miscibility with water:</strong></td>
<td>Insoluble.</td>
</tr>
<tr>
<td><strong>Partition coefficient: n-octanol/water:</strong></td>
<td>Not determined.</td>
</tr>
<tr>
<td><strong>Viscosity:</strong></td>
<td></td>
</tr>
<tr>
<td>Dynamic at 20 °C:</td>
<td>≈ 2500 mPas (DIN EN ISO 3219)</td>
</tr>
<tr>
<td>Kinematic at 40 °C:</td>
<td>&gt;20.5 mm²/s (DIN EN ISO 51562)</td>
</tr>
<tr>
<td><strong>Solvent separation test:</strong></td>
<td>Not determined</td>
</tr>
<tr>
<td><strong>9.2 Other information:</strong></td>
<td>No further relevant information available.</td>
</tr>
</tbody>
</table>

### SECTION 10: Stability and reactivity

#### 10.1 Reactivity
No further relevant information available.

#### 10.2 Chemical stability

- **Thermal decomposition / conditions to be avoided:**
  No decomposition if used and stored according to specifications.
\textbf{10.3 Possibility of hazardous reactions}
Flammable vapour-air mixtures may develop if stored in large receptacles and above room temperature.

\textbf{10.4 Conditions to avoid}
No further relevant information available.

\textbf{10.5 Incompatible materials:}
No further relevant information available.

\textbf{10.6 Hazardous decomposition products:}
No dangerous decomposition products known.

\section*{SECTION 11: Toxicological information}
\textbf{11.1 Information on toxicological effects}
\textbf{Acute toxicity}
Based on available data, the classification criteria are not met.

\begin{tabular}{|l|l|}
\hline
\textbf{LD/LC50 values relevant for classification:} & \\
\hline
\textbf{CAS: 64742-55-8 Distillates (petroleum), hydrotreated light paraffinic} & \\
Oral & LD50 >5,000 mg/kg (rat) \\
Dermal & LD50 >5,000 mg/kg (rabbit) \\
\hline
\end{tabular}

\textbf{Primary irritant effect:}
\textbf{Skin corrosion/irritation}
Based on available data, the classification criteria are not met.

\textbf{Serious eye damage/irritation}
Based on available data, the classification criteria are not met.

\textbf{Respiratory or skin sensitisation}
Based on available data, the classification criteria are not met.

\textbf{CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)}
\textbf{Germ cell mutagenicity}
Based on available data, the classification criteria are not met.

\textbf{Carcinogenicity}
Based on available data, the classification criteria are not met.

\textbf{Reproductive toxicity}
Based on available data, the classification criteria are not met.

\textbf{STOT-single exposure}
Based on available data, the classification criteria are not met.

\textbf{STOT-repeated exposure}
Based on available data, the classification criteria are not met.

\textbf{Aspiration hazard}
Based on available data, the classification criteria are not met.

\section*{SECTION 12: Ecological information}
\textbf{12.1 Toxicity}
\textbf{Aquatic toxicity:}
No further relevant information available.

\textbf{12.2 Persistence and degradability}
The single components are biodegradable

\textbf{Other information:}
The product is biodegradable.

\textbf{12.3 Bioaccumulative potential}
No further relevant information available.

\textbf{12.4 Mobility in soil}
No further relevant information available.

\textbf{Ecotoxical effects:}
\textbf{Behaviour in sewage processing plants:}
Inhibition of degradation activity in activated sludge is not to be anticipated during correct introduction of low concentrations. Do not release untreated into natural waters.

\textbf{Additional ecological information:}

\textbf{General notes:}
Due to available data on eliminability/decomposition and bioaccumulation potential a prolonged damage of the environment is unlikely.

According to the criteria of the EU-classification and labelling "dangerous for environment"(93/21/EWG) the substance/ the product has to be classified as non-hazardous for the environment.

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

\textbf{12.5 Results of PBT and vPvB assessment}
According to Annex XIV of Regulation (EC) No.1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH): The product does not contain a substance fulfilling the PBT (persistent/bioaccumulative/toxic) criteria or the vPvB (very persistent/very bioaccumulative) criteria. Self-classification.
12.6 Other adverse effects No further relevant information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods
Recommendation
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

European waste catalogue
16 03 05* organic wastes containing dangerous substances

Uncleaned packaging:
Recommendation: Disposal must be made according to official regulations.
Recommended cleansing agents: Water, if necessary together with cleansing agents.

SECTION 14: Transport information

14.1 UN-Number
ADR/RID/ADN, ADN, IMDG, IATA Void

14.2 UN proper shipping name
ADR/RID/ADN, ADN, IMDG, IATA Void

14.3 Transport hazard class(es)
ADR/RID/ADN, ADN, IMDG, IATA
Class Void

14.4 Packing group
ADR/RID/ADN, IMDG, IATA Void

14.5 Environmental hazards:
Marine pollutant: No

14.6 Special precautions for user
Not applicable.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code
Not applicable.

Transport/Additional information: Not a dangerous good to the above specifications.

UN "Model Regulation": Void

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
Directive 2012/18/EU
Named dangerous substances - ANNEX I None of the ingredients is listed.
National regulations:
Information about limitation of use:
Employment restrictions concerning juveniles must be observed.
Employment restrictions concerning pregnant and lactating women must be observed.
Waterhazard class: Water hazard class I (German AwSV, Self-assessment): slightly hazardous for water.
50.1.0

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Relevant phrases
H304 May be fatal if swallowed and enters airways.

Department issuing SDS:
Product Safety Department
E-Mail: msds@munzing.com

Abbreviations and acronyms:
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Asp. Tox. 1: Aspiration hazard – Category 1

* Data compared to the previous version altered.