1 Identification of the Substance / Mixture and the Supplier

1.1 Product Identifier

<table>
<thead>
<tr>
<th>Product- / Trade name:</th>
<th>Rapeseed Oil, crude</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product Shape:</td>
<td>Substance</td>
</tr>
</tbody>
</table>

1.2 Relevant identified usages of the substance or mixture and dissuaded usages

1.2.1 Relevant identified usages

Animal Feed, preliminary product for foodstuff manufacturing, raw material for technical use.

1.2.2 Dissuaded usages

Strong thermal heating. Possible formation of Acrolein above a temperature of 290°C.

1.3 Details of the supplier that provides the safety data sheet

<table>
<thead>
<tr>
<th>Supplier / Manufacturer:</th>
<th>O. &amp; L. Sels GmbH &amp; Co. KG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Street:</td>
<td>Düsseldorfer Straße 99 – 101</td>
</tr>
<tr>
<td>Country code/zip code/city:</td>
<td>D – 41460 Neuss</td>
</tr>
<tr>
<td>Contact for technical information:</td>
<td>Quality Management / Laboratory</td>
</tr>
<tr>
<td>Phone:</td>
<td>+49 2131 / 2799 - 0</td>
</tr>
<tr>
<td>Telefax:</td>
<td>+49 2131 / 275432</td>
</tr>
<tr>
<td>E-Mail:</td>
<td><a href="mailto:QM@sels.de">QM@sels.de</a></td>
</tr>
</tbody>
</table>

1.4 Emergency Number

Universitätsklinikum Bonn +49 228 / 19240

2 Hazards Identification

2.1 Classification of the substance or mixture

Not necessary. Not a dangerous product according to regulation (EG) no. 1272/2008.

2.2 Labelling elements

| Labelling elements due to VO (EG) No. 1272/2008: | none |
| Pictogram:                                        | none |
| Signalword:                                       | none |
| Hazard determining components for labelling:      | none |

2.3 Other hazards

Results of the PBT- and vPvB-assessment:

- PBT: Not applicable.
- vPvB: Not applicable.

3 Composition / Information on Ingredients

3.1 Substances

Main component of the substance: Rapeseed Oil

<table>
<thead>
<tr>
<th>Chemical Composition:</th>
<th>Triglycerides of various fatty acids (predominant oleic acid)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS</td>
<td>8002-13-9</td>
</tr>
<tr>
<td>EINECS</td>
<td>232-299-0</td>
</tr>
</tbody>
</table>

4 First Aid Measures

4.1 Description of first aid measures

General instructions: No particular substance-specific measures required.

4.2 Most important acute and delayed symptoms and effects

No further relevant information available.

4.3 Indications for any immediate medical attention or special treatment

No further relevant information available.

5 Fire-Fighting Measures

5.1 Extinguishants

Suitable extinguishants: foam, carbon dioxide, extinguishing powder, sand

Unsuitable extinguishants due to safety reasons: water
5.2 Specific hazards caused by the substance or mixture

Special hazards caused by the mixture or its products of combustion:
Thermal decomposition. Danger of formation of acrolein above a temperature of 290° C.
Carbon monoxide, carbon dioxide and acrolein are produced in case of fire.

5.3 Information on firefighting

For initial fires: Use fire extinguishers of fire class B.
Alert the fire brigade immediately in case of fire-spread. Access into the danger zone only with full protective clothing and self-contained breathing apparatus.
Endangered containers in the surrounding should be cooled with spray-water.
Defeat escaping vapours with water. Avoid fire-extinguishing water from contaminating surface or ground waters and soil.

6 Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency measures

6.1.1 Information for non-emergency personnel

Danger of slipping on moistered surfaces.

6.1.2 Information for emergency forces.

Avoid contamination of soil, surface and ground waters and sewage system. Absorb the released product with bonding agents.

6.2 Environmental measures

Avoid contamination of soil, surface and ground waters and sewage system. Absorb the released product with bonding agents.

6.3 Methods and material for retention and cleaning up

For larger quantities:
Pump out the released product.

For smaller quantities and remains:
Absorb the released product with bonding agents. Dispose properly.

6.4 Reference to other sections

Note information in sections no. 7, 8 and 13.

7 Handling and Storage

7.1 Precautions for safe handling

Ignition risk when working with fire (welding, grinding etc.) on filled, empty or empty, uncleaned containers.

When hot, risk of splashing in combination with water.

When using rapeseed oil as fuel, there is a significantly higher risk for cancer in comparison to Diesel engine exhaust fumes.

7.2 Conditions for safe storage under consideration of incompatibilities

Requirements on storage rooms and containers: Avoid contamination of soil / water.

Storage category (according to VCI): LGK 10 – Combustible liquids

Information on storage with other products: High affinity for lipophilic solvents.

7.3 Specific end use

Animal feed. Preliminary product for food stuff manufacturing, raw material for technical use.

8 Exposure Controls / Personal Protection Measures

8.1 Monitored parameters

Not necessary. No hazardous substance.

8.2 Exposure Controls

Not necessary. No hazardous substance.

9 Physical and Chemical Characteristics

9.1 Information on basic physical and chemical characteristics

State of aggregation: up to -5° C liquid

Colour: brown-yellow

Odour: neutral to characteristic

Odour threshold: not specified

pH-value: not necessary

Melting point/freezing point: < 0° C

DGF C-IV 3a
Boiling point and boiling range: > 350° C under decomposition
Flashpoint: > 121° C
Evaporation rate: not specified
Inflammability: not specified
Upper/lower inflammability- or explosion limits: explosion limits not definable bcs. decomposition starts before
Vapour pressure (20 °C): < 1 mbar
Vapour density: not specified
Relative density: not specified
Solubility in lipophilic solvents: unlimited
In water: not specified
Partition coefficient: n-Octanol/Water: not specified
Auto-ignition temperature: auto-ignition possible, when finely distributed in bleaching earth, insulating or likewise material
Decomposition temperature: approx. 350° C
Viscosity (20 °C): 72 - 82 mPa*s
Explosive characteristics: not specified
Oxidizing characteristics: not specified

Definitions:
DGF C-IV Nr. stays for:
DGF: Deutsche Gesellschaft für Fettwissenschaft
C: Fats
IV: Physical testing
2: Density
3a: Melting point / Freezing point
7: Viscosity
8: Flashpoint

9.2 Other information
Ignition point: 410° C
Temperature classification: T2
Density (20 °C): 912 – 918 kg / m³
Solidification point: -5 °C – -8 °C

10 Stability and Reactivity

10.1 Reactivity
When properly used for the purpose intended, no hazardous reactivities are known.

10.2 Chemical stability
Under normal environmental conditions the product is chemically stable.

10.3 Possible hazardous reactions
Thermal decomposition when heating is above the decomposition temperature.

10.4 Conditions to avoid
Strong heating.

10.5 Incompatible materials
No relevant information available.

10.6 Hazardous decomposition products
Acrolein

11 Toxicological Information

11.1 Information on toxicological effects
Acute toxicity: not specified
Skin irritation/corrosivity: not specified
Severe eye irritation/damage: not specified
Respiratory/skin sensitisation: not specified
Germ-cell mutagenicity: not specified
Carcinogenicity: not specified
Reproductive toxicity: not specified
Specific target organ systemic toxicity (single exposure): not specified
Specific target organ systemic toxicity (repeated exposure): not specified
Aspiration hazard: not specified

12 Ecological Information

12.1 Toxicity
Aquatic toxicity: Lethalitly of Goldorfen [lat.: Leuciscus idus] non reached in 48 h.

12.2 Persistence and degradability
Product is completely bio-degradable.

12.3 Bioaccumulation potential
No relevant information available.

12.4 Mobility in soil
Note the waste water limit values.

12.5 Results of the PBT- and vPvB assessment
Results of the PBT- and vPvB assessment:
PBT: not specified
vPvB: not specified

12.6 Other hazardous effects
No relevant information available.

13 Disposal Considerations

13.1 Waste treatment processes
The waste can be recycled and thermally recovered. Waste requires no particularly monitoring. Can be disposed of along with the domestic waste in accordance with the local regulations.
Waste entry according to list of waste (AVV): 20 01 25
Uncleaned packagings: disposal according to AVV 15 01

14 Transport Information

ADR, ADN, IATA; ICAO; IMO; IMDG, RID: Not necessary. The product is not a hazardous material according to transport regulations.

14.1 UN-number
Not applicable.

14.2 Proper UN-shipping name
Not applicable.

14.3 Transport hazard class
Not applicable.

14.4 Packing group
Not applicable.

14.5 Environmental Hazards
Not applicable.

14.6 Precautionary measures for the user
Not applicable.

14.7 Bulk transport according to appendix II of the MARPOL-Agreement and to the IBC-Code
Not applicable.
15 Regulatory Information

15.1 Regulations for safety, health and environment / specific legislation for the substance / mixture

15.1.1 EU-Regulations

Regulation (EG) No. 1907/2006 (REACH-regulation)
Applicable when determined as an educt for further chemical products.

15.1.2 National regulations

Major Accident Ordinance: not mentioned
Water pollution class (according to AwSV): none (animal feed, food)

15.2 Chemical safety assessment

For this product no chemical safety assessment has been carried out.

16 Other Information

For this product, a safety data sheet is not legally required. The information given in this material safety data sheet are no contractually committed product characteristics and based on our current state of knowledge. They are no product specifications. This material safety data sheet has specifically been created for the mentioned product and its use. Since the user’s conditions for the correct use of the product are beyond the producer’s control, the user himself has to take care that the relevant legislation has been complied with, when using the product.

List of abbreviations, acronyms and definitions:

- ADN: Europäisches Abkommen über die internationale Beförderung gefährlicher Güter auf Binnenwasserstraßen (European Agreement Concerning the International Carriage of Dangerous Goods by Inland Waterways)
- ADR: Europäisches Abkommen über die internationale Beförderung gefährlicher Güter auf der Straße (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
- AwSV: Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen (German regulation on facilities for the handling of substances hazardous to water)
- CAS: Chemical Abstract Service
- EG-Nr: Key identifier of a substance
- IATA: International Air Transport Association
- ICAO: International Civil Aviation Organization
- IMDG: International Maritime Code for Dangerous Goods
- i.S.: im Sinne (according to)
- LGK: Lagerklasse (Storage Category)
- MARPOL: International Convention for Prevention of Marine Pollution from Ships
- PBT: Persistent Bioakkumulierend, Toxisch (persistent, bioaccumulative and toxic)
- REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals
- RID: Regelung zur internationalen Beförderung gefährlicher Güter im Schienenverkehr (Regulation Concerning the International Carriage of Dangerous Goods by Rail)
- UN-Nummer: Kennnummer für gefährliche Stoffe (Identification No. for Dangerous Goods)
- vPvB: sehr persistent, sehr bioakkumulativ (very persistent, very bioaccumulative)

Literature References and Data Sources:
1. http://gestis.itrust.de