SAFETY DATA SHEET
According to regulation (EC) No. 1907/2006

Revision Date 18.12.2018 Version 3.01

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifiers
Product code: 45-111-701
Product name: Iron oxide particles
Surface: phospholipid

1.2 Relevant identified uses of the substance or mixture and uses advised against
Material for particle supported analytical applications in Life Sciences and for process control. See further information of uses/applications at web page www.micromod.de.

1.3 Details of the supplier of safety data sheet
Company: micromod Partikeltechnologie GmbH
Friedrich-Barnewitz-Straße 4
D-18119 Rostock

Telephone: +49 381 / 54 34 56 10
Fax: +49 381 / 54 34 56 20
E-mail-address: info@micromod.de

1.4 Emergency telephone number
Emergency phone: +49 381 / 54 34 56 14

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
Not a hazardous substance or mixture according to regulation (EC) No. 1272/2008. This substance is not classified as dangerous according to Directive 67/548/EEC or 1999/45/EC.

2.2 Label elements
The product does not need to be labelled in accordance with EC directives or respective national laws.

2.3 Other hazards
The product does not fulfil the criteria for PBT or vPvB according to Annex XIII Regulation (EC) No. 1907/2006.

Powdery products could raise dust.

3. COMPOSITION /INFORMATION ON INGREDIENTS

Chemical nature: iron (II/III) oxide (Fe3O4, magnetite) [CAS: 1317-61-9]
phospholipid modified

Remarks: No disclosure requirement according to Regulation (EC) No. 1907/2006
4. FIRST AID MEASURES

4.1 Description of first aid measures
After inhalation: Fresh air
After skin contact: Wash with plenty of water. Remove contaminated clothing.
After eye contact: Rinse with plenty of water. Contact doctor preventively
After swallowing: Rinse mouth with water. Drink water. Consult doctor if feeling unwell.

4.2 Most important symptoms and effects, both acute and delayed
We have no description of any toxic symptoms.

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

5. FIREFIGHTING MEASURES

5.1 Extinguishing media
Suitable extinguishing media: dry chemical or carbon dioxide, water spray, alcohol-resistant foam

5.2 Special hazards arising from the substance or mixture
No information available

5.3 Advice for firefighters
In the event of fire, wear self-containing breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Do not breathe dust. Appropriate ventilation

6.2 Environmental precautions
No special precautionary necessary.

6.3 Methods and materials for containment and cleaning up
Product can diluted with water and removed by usual cleaning procedures.

6.4 Reference to other sections
For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling
Avoid generation of dust.

7.2 Conditions for safe storage, including any incompatibilities
Storage: Keep container tightly closed.
          2 - 8 °C
          Do not freeze.

7.3 Specific end uses
No data available.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters
Do not contain components with workplace control parameters.
8.2 Exposure controls
Appropriate engineering controls:
Appropriate working operations and technical measures

Personal protective equipment:
General industrial hygiene practice
Protective clothing needs to be selected specifically workplace.

Eye/face protection:
Safety glasses

Hand protection:
The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC.

Respiratory protection:
Respiratory protection is not required. Where protection from nuisance levels of dusts are requested, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Body Protection:
Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Dark brown particles in water</td>
</tr>
<tr>
<td>Odour</td>
<td>Odourless</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>Not applicable</td>
</tr>
<tr>
<td>pH</td>
<td>7.0 – 9.0 at 25 mg/ml (20 °C)</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point and boiling range</td>
<td>ca. 100 °C (for dispersion supplied in water)</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Upper/lower flammability or</td>
<td>Not applicable</td>
</tr>
<tr>
<td>explosive limits</td>
<td></td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapour density</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>1.1 – 1.5 g/cm³ (20 °C)</td>
</tr>
<tr>
<td>Water solubility</td>
<td>insoluble</td>
</tr>
<tr>
<td>Partition coefficient: n octanol/water</td>
<td>No data available</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>Not data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>
9.2 Other Data
No data available

10. STABILITY AND REACTIVITY
10.1 Reactivity
No reaction with water, further data not available, see 10.3
10.2 Chemical stability
The product is chemically stable at storage conditions.
10.3 Possibility of hazardous reactions
No data available
10.4 Conditions to avoid
No data available
10.5 Incompatible materials
No data available
10.6 Hazardous decomposition products
Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION
11.1 Information on toxicological effects
Acute toxicity: No data available
Skin corrosion/irritation: No data available
Serious eye damage/eye irritation: No data available
Respiratory or skin sensitization: No data available
Germ cell mutagenicity: No data available
Carcinogenicity: No data available
Reproductive toxicity: No data available
Specific target organ toxicity - single exposure: No data available
Specific target organ toxicity - repeated exposure: No data available
Aspiration hazard: No data available

12. ECOLOGICAL INFORMATION
12.1 Toxicity
No data available
12.2 Persistence and degradability
No data available
12.3 Bioaccumulative potential
No data available
12.4 Mobility in soil
No data available
12.5 Results of PBT and vPvB assessment
No data available
12.6 Other adverse effects
No data available

13. DISPOSAL CONSIDERATIONS
13.1 Waste treatment methods
Product
Offer surplus and non-recyclable solutions to a licensed disposal company.
Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

Land transport (ADR/RID): Not classified as dangerous in the meaning of transport regulations
14.1 – 14.6

Inland waterway transport (ADN): Not classified as dangerous in the meaning of transport regulations
14.1 – 14.6:

Air transport (IATA): Not classified as dangerous in the meaning of transport regulations
14.1 – 14.6:

Sea transport (IMDG): Not classified as dangerous in the meaning of transport regulations
14.1 – 14.6:

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not relevant

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
No information available.

15.2 Chemical Safety Assessment
For this product a chemical safety assessment was not carried out.

16. OTHER INFORMATION

Training advice
Provide adequate information, instruction and training for operators.

Further information
Copyright 2012: micromod Partikeltechnologie GmbH.
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Micromod Partikeltechnologie GmbH shall not be held liable for any damage resulting from handling or from contact with the above product. See further information at www.micromod.de and/or on invoices or packing slips for additional terms and conditions of sale.