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

1.1 Product identifier

Trade name: Reaktionstrennmittel FL 11

1.2 Relevant identified uses of the substance or mixture and uses advised against

Sector of Use: SU23 Electricity, steam, gas water supply and sewage treatment

Product category:
PC20 Products such as ph-regulators, flocculants, precipitants, neutralisation agents

Application of the substance / the mixture: Agent for reaction separation.

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:
BEKO TECHNOLOGIES GMBH
Im Taubental 7
D - 41468 Neuss
Tel.: +49 (0) 2131 988-0
Fax: +49 (0) 2131 988-900
E-Mail: msds@beko-technologies.com

www.beko-technologies.com

Informing department:
Information available by telephone number for respective country given above.

1.4 Emergency telephone number:
Informationszentrale gegen Vergiftungen Bonn Tel. +49 (0) 228 / 19240

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

GHS05 corrosion

Eye Dam. 1 H318 Causes serious eye damage.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

Hazard pictograms

GHS05

(Contd. on page 2)
**SECTION 3: Composition/information on ingredients**

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

<table>
<thead>
<tr>
<th>Dangerous components:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS: 10043-01-3</td>
<td>aluminium sulphate</td>
</tr>
<tr>
<td>EINECS: 233-135-0</td>
<td></td>
</tr>
<tr>
<td>Reg.nr.: 01-2119531538-36-xxxx</td>
<td></td>
</tr>
<tr>
<td>Eye Dam. 1, H318</td>
<td>5-&lt;10%</td>
</tr>
<tr>
<td>CAS: 497-19-8</td>
<td>sodium carbonate</td>
</tr>
<tr>
<td>EINECS: 207-838-8</td>
<td></td>
</tr>
<tr>
<td>Reg.nr.: 01-2119485498-19-xxxx</td>
<td></td>
</tr>
<tr>
<td>Eye Irrit. 2, H319</td>
<td>5-&lt;10%</td>
</tr>
</tbody>
</table>

- **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**
  Instantly remove any clothing soiled by the product.
  Contaminated work clothing should not be allowed out of the workplace.
  Wash contaminated clothing before reuse.
- **After inhalation** Supply fresh air; consult doctor in case of symptoms.
- **After skin contact**
  Generally the product does not irritate the skin.
  Instantly wash with water and soap and rinse thoroughly.
- **After eye contact**
  Rinse opened eye for several minutes under running water. If symptoms persist, consult doctor.
- **After swallowing**
  Rinse mouth.
  In case of persistent symptoms consult doctor.

- **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
    The product itself does not burn. Use fire fighting measures that suit the environment.
  - For safety reasons unsuitable extinguishing agents Water with a full water jet.
- 5.2 Special hazards arising from the substance or mixture
  - Can be released in case of fire
    Carbon monoxide (CO)
    Sulphur dioxide (SO2)
- 5.3 Advice for firefighters
  - Protective equipment: Wear self-contained breathing apparatus.

SECTION 6: Accidental release measures

- 6.1 Personal precautions, protective equipment and emergency procedures
  - Avoid formation of dust.
  - Avoid contact with eyes and skin.
  - Wear protective clothing.
  - Ensure adequate ventilation
- 6.2 Environmental precautions: Do not allow to enter drainage system, surface or ground water.
- 6.3 Methods and material for containment and cleaning up:
  - Send for recovery or disposal in suitable containers.
- 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 information on disposal.

SECTION 7: Handling and storage

- 7.1 Precautions for safe handling
  - Avoid contact with eyes and skin.
  - Prevent formation of dust.
- 7.2 Conditions for safe storage, including any incompatibilities
  - Storage
    - Requirements to be met by storerooms and containers:
      - Store cool and dry in tightly closed receptacles.
    - Information about storage in one common storage facility: Not required.
    - Further information about storage conditions: Keep container tightly sealed.
- 7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

- Additional information about design of technical systems: No further data; see item 7.
- 8.1 Control parameters
  - Components with limit values that require monitoring at the workplace:
    10043-01-3 aluminium sulphate
    WEL Long-term value: 2 mg/m³
8.2 Exposure controls
- Personal protective equipment
- General protective and hygienic measures
  Keep away from foodstuffs, beverages and food.
  Take off immediately all contaminated clothing.
  Wash hands during breaks and at the end of the work.
  Avoid contact with the eyes and skin.
- Breathing equipment:
  Filter P2
  In case of brief exposure or low pollution use breathing filter apparatus. In case of intensive or
  longer exposure use breathing apparatus that is independent of circulating air.
- Protection of hands:
  Selection of the glove material on consideration of the penetration times, rates of diffusion
  and the degradation.
- Material of gloves
  Nitrile rubber, NBR
  Recommended thickness of the material: ≥ 0.4 mm
- Penetration time of glove material
  The exact breakthrough time has to be found out by the manufacturer of the protective gloves
  and has to be observed.
- Eye protection:
  Tightly sealed safety glasses.
- Body protection:
  Protective work clothing.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties
- General Information
  - Form: Powder
  - Colour: Beige
  - Odour: Undistinguishable.
- pH-value (5 g/l) at 20 °C: 7.5 - 8
- Change in condition
  - Melting point/Melting range: Not determined
  - Boiling point/Boiling range: Not determined
- Flash point: Not applicable
- Self-inflammability: Product is not selfigniting.
- Danger of explosion: Product is not explosive.
- Density: Not determined
- Settled apparent density at 20 °C ca. 780 kg/m³
- Solubility in / Miscibility with
  - Water: Slightly soluble.
- Solvent content:
  - VOC (EC) 0.00 %
- Other information
  No further relevant information available.
SECTION 10: Stability and reactivity

10.1 Reactivity  No further relevant information available.
10.2 Chemical stability  No decomposition if used according to specifications.
10.3 Possibility of hazardous reactions  No dangerous reactions known
10.4 Conditions to avoid  No further relevant information available.
10.5 Incompatible materials  No further relevant information available.
10.6 Hazardous decomposition products  No dangerous decomposition products known

SECTION 11: Toxicological information

11.1 Information on toxicological effects  No further relevant information available.

Acute toxicity  Based on available data, the classification criteria are not met.

LD/LC50 values that are relevant for classification:

10043-01-3 aluminium sulphate
Oral  LD50  6207 mg/kg (Rat)

Primary irritant effect:  No further relevant information available.
Skin corrosion/irritation  Based on available data, the classification criteria are not met.
Serious eye damage/irritation  Causes serious eye damage.
Respiratory or skin sensitisation  Based on available data, the classification criteria are not met.
CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)  No further relevant information available.
Germ cell mutagenicity  Based on available data, the classification criteria are not met.
Carcinogenicity  Based on available data, the classification criteria are not met.
Reproductive toxicity  Based on available data, the classification criteria are not met.
STOT-single exposure  Based on available data, the classification criteria are not met.
STOT-repeated exposure  Based on available data, the classification criteria are not met.
Aspiration hazard  Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

12.1 Toxicity  No further relevant information available.

Aquatic toxicity:

10043-01-3 aluminium sulphate
LC50/96 h  36.1 mg/l (Gambusia affinis) (Stockmeier)

12.2 Persistence and degradability  No further relevant information available.
12.3 Bioaccumulative potential  No further relevant information available.
12.4 Mobility in soil  No further relevant information available.

Additional ecological information:
General notes:  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 bodies or sewage system.
12.5 Results of PBT and vPvB assessment  Not applicable.
PBT:  Not applicable.
vPvB:  Not applicable.
12.6 Other adverse effects  No further relevant information available.
**SECTION 13: Disposal considerations**

- **13.1 Waste treatment methods**  
  Recommendation  
  Must not be disposed of together with household garbage. Do not allow product to reach sewage system.  
  The waste code numbers mentioned are recommendations based on the probable use of the product.

- **European waste catalogue**  
  19 08 14  
  Sludges from other treatment of industrial waste water other than those mentioned in 19 08 13

- **Uncleaned packagings:**  
  Recommendation:  
  Empty contaminated packagings thoroughly. They may be recycled after thorough and proper cleaning.  
  Dispose of packaging according to regulations on the disposal of packagings.

- **Recommended cleaning agent:**  
  Water, if necessary with cleaning agent.

**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)**  
  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 dangerous according 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.
SECTION 16: Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- Relevant phrases
  H318 Causes serious eye damage.
  H319 Causes serious eye irritation.

- Department issuing data specification sheet:
The safety data sheets were drawn up in cooperation with the Umweltkanzlei Dr. Rhein Beratungs- und Prüfungsgesellschaft mbH, Phone: +49 5066 900990.

- 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)
  VOC: Volatile Organic Compounds (USA, EU)
  LC50: Lethal concentration, 50 percent
  LD50: Lethal dose, 50 percent
  PBT: Persistent, Bioaccumulative and Toxic
  vPvB: very Persistent and very Bioaccumulative
  Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1
  Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2

- * Data compared to the previous version altered.