



**Safety data sheet
according to UK REACH**

Printing date 18.09.2025

Version number 6.0 (replaces version 5.1)

Revision: 18.09.2025

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

- **1.1 Product identifier**
- **Trade name:** Reaktionstrennmittel FL 22
- **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 Processing aids such as pH-regulators, flocculants, precipitants, neutralization 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.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the GB CLP regulation.

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· Hazard pictograms



GHS05

· Signal word Danger

· Hazard-determining components of labelling:

Aluminium sulfate 14-hydrate

calcium dihydroxide

· Hazard statements

H315 Causes skin irritation.

H318 Causes serious eye damage.

· Precautionary statements

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER/doctor.

P332+P313 If skin irritation occurs: Get medical advice/attention.

· 2.3 Other hazards

· Results of PBT and vPvB assessment

· PBT: Not applicable.

· vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

· 3.2 Mixtures

· Description: Mix of the substances listed below including additives not requiring identification.

· Dangerous components:

CAS: 16828-12-9 EINECS: 233-135-0 Reg.nr.: 01-2119531538-36-xxxx	Aluminium sulfate 14-hydrate ⚠ Eye Dam. 1, H318	≥10-<50%
CAS: 1305-62-0 EINECS: 215-137-3 Reg.nr.: 01-2119475151-45-xxxx	calcium dihydroxide ⚠ Eye Dam. 1, H318; ⚠ Skin Irrit. 2, H315; STOT SE 3, H335	≥10-<20%

· 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 Instantly wash with water and soap and rinse thoroughly.

· After eye contact Rinse opened eye for several minutes under running water. Then consult doctor.

· After swallowing

Rinse mouth.

In case of persistent symptoms consult doctor.

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- **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.
Extinguishing powder, foam or water jet. Fight larger fires with water jet or alcohol-resistant foam.
- **For safety reasons unsuitable extinguishing agents** Water with a full water jet.
- **5.2 Special hazards arising from the substance or mixture**
Formation of toxic gases is possible during heating or in case of fire.
- **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.
- **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:** Collect mechanically.
- **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**
Prevent formation of dust.
Avoid contact with eyes and skin.
- **Information about protection against explosions and fires:** No special measures required.
- **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.
- **Storage class** 13
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**
- **Components with limit values that require monitoring at the workplace:**

1305-62-0 calcium dihydroxide

WEL Short-term value: 4* mg/m³
Long-term value: 5 1* mg/m³
*respirable fraction

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· **DNELs****16828-12-9 Aluminium sulfate 14-hydrate**

Dermal	Worker - Long term - Systemic effects	3.8 mg/kg bw/day
	General population - long term - systemic effects	1.9 mg/kg bw/day
Inhalative	Worker - Long term - Systemic effects	13.4 mg/m ³
	Consumer - Long term - Systemic effects	3.3 mg/m ³

1305-62-0 calcium dihydroxide

Inhalative	Worker - Long term - Local effects	1 mg/m ³
	Consumer - Long term - Local effects	1 mg/m ³
	Worker - Acute - Local effects	4 mg/m ³
	Consumer - Acute - Local effects	4 mg/m ³

· **PNECs****1305-62-0 calcium dihydroxide**

PNEC aqua (freshwater)	0.49 mg/l
PNEC Soil	1,080 mg/kg

· **Additional information:** The lists that were valid during the compilation were used as basis.· **8.2 Exposure controls**· **Appropriate engineering controls** No further data; see section 7.· **Individual protection measures, such as personal protective equipment**· **General protective and hygienic measures**

Keep away from foodstuffs, beverages and food.

Avoid contact with the eyes and skin.

Wash hands during breaks and at the end of the work.

Take off immediately all contaminated clothing

· **Breathing equipment:**

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.

Filter P2

· **Hand protection**

Protective gloves

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves** NR, ≥ 0.5 mm thick.· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye/face 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**· **Colour:**

Beige

· **Odour:**

odourless

· **Melting point/freezing point:**

Not determined

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· Boiling point or initial boiling point and boiling range	Not determined
· Flash point:	Not applicable
· pH at 20 °C	6-9
· Viscosity:	
· Kinematic viscosity	Not applicable.
· dynamic:	Not applicable.
· Solubility	
· Water:	Partly soluble.
· Vapour pressure:	Not applicable.
· Density and/or relative density	
· Density at 20 °C	2.2 g/cm ³
· Settled apparent density	950 kg/m ³
· 9.2 Other information	No further relevant information available.
· Appearance:	
· Form:	Powder
· Important information on protection of health and environment, and on safety.	
· Self-inflammability:	Product is not selfigniting.
· Explosive properties:	Product is not explosive.
· Information with regard to physical hazard classes	
· Explosives	Void
· Flammable gases	Void
· Aerosols	Void
· Oxidising gases	Void
· Gases under pressure	Void
· Flammable liquids	Void
· Flammable solids	Void
· Self-reactive substances and mixtures	Void
· Pyrophoric liquids	Void
· Pyrophoric solids	Void
· Self-heating substances and mixtures	Void
· Substances and mixtures, which emit flammable gases in contact with water	Void
· Oxidising liquids	Void
· Oxidising solids	Void
· Organic peroxides	Void
· Corrosive to metals	Void
· Desensitised explosives	Void

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 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.

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10.6 Hazardous decomposition products:

None in case of intended use and storage in compliance with instructions.

SECTION 11: Toxicological information**11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008****Acute toxicity** Based on available data, the classification criteria are not met.**LD/LC50 values that are relevant for classification:****16828-12-9 Aluminium sulfate 14-hydrate**

Oral	LD50	>2,000 mg/kg (Rat) (OECD TG 401)
Dermal	LD50	>5,000 mg/kg (rabbit) (OECD TG 402)
Inhalative	LC50/4 h	>5 mg/l (Rat) (OECD TG 403)

1305-62-0 calcium dihydroxide

Oral	LD50	>2,000 mg/kg (Rat) (OECD 425)
Dermal	LD50	>2,500 mg/kg (rabbit) (OECD TG 402)

Primary irritant effect:**Skin corrosion/irritation**

Causes skin irritation.

Serious eye damage/irritation

Causes serious eye damage.

Respiratory or skin sensitisation Based on available data, the classification criteria are not met.**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.**11.2 Information on other hazards****Endocrine disrupting properties**

None of the ingredients is listed.

SECTION 12: Ecological information**12.1 Toxicity****Aquatic toxicity:****16828-12-9 Aluminium sulfate 14-hydrate**

EC50 (48 h)	>160 mg/l (Daphnia magna) (OECD TG 202)
LC50 (96 h)	>1,000 mg/l (Danio rerio) (OECD TG 203)

1305-62-0 calcium dihydroxide

EC50 (72 h)	184.57 mg/l (algae)
EC50 (48 h)	49.1 mg/l (Daphnia magna)
LC50 (96 h)	158 mg/l (Daphnia magna)
	50.6 mg/l (fish)
	160 mg/l (Gambusia affinis) (IUCLID)
NOEC (72 h)	48 mg/l (algae)

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.

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· 12.5 Results of PBT and vPvB assessment

· **PBT:** Not applicable.· **vPvB:** Not applicable.

· 12.6 Endocrine disrupting properties

The product does not contain substances with endocrine disrupting properties.

· **12.7 Other adverse effects** 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.

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.

· 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 or ID number

· **ADR/RID/ADN, IMDG, IATA** Void

· 14.2 UN proper shipping name

· **ADR/RID/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 Maritime transport in bulk according to IMO instruments** Not applicable.· **Transport/Additional information:** Not dangerous according to the above specifications.· **UN "Model Regulation":** Void

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

SECTION 16: Other information

Because the formulation was not available, the material safety data sheet is based on the information of the material safety data sheet of the supplier.

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**

H315 Causes skin irritation.

H318 Causes serious eye damage.

H335 May cause respiratory irritation.

- **Department issuing data specification sheet:**

The safety data sheets were drawn up in cooperation with the Umweltkanzlei Beratungs- und Prüfgesellschaft mbH, Phone: +49 511 228514-0.

- **Abbreviations and acronyms:**

ADR: Accord relatif au transport international 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)

DNEL: Derived No-Effect Level (UK REACH)

PNEC: Predicted No-Effect Concentration (UK REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

- *** Data compared to the previous version altered.**