1. Identification of the substance/preparation

Name of product	**Epsom Salt Ph Eur./ USP**
Manufacturer/distributor	Kali und Salz GmbH Friedrich-Ebert-Straße 160, D-34111 Kassel Postbox 10 20 29, D-34111 Kassel Phone (+49)561/301-0, Fax (+49)561/301-1436
Advice	Abt. COU Phone (+49)561/301-1604 Fax (+49)561/301-1436
Emergency advice	Abt. COU Phone (+49)561/301-1604

2. Composition/Information on ingredients

CAS-No. 010034-99-8 **Magnesium sulfate heptahydrate (MgSO4 x 7H2O)**
EEC-No (EINECS/ELINCS) 231-298-2

3. Special hazards information for man and environment

R-phrases
not applicable

Special hazards information for humans and environment
no

4. First aid measures

General information
In the event of persistent symptoms receive medical treatment

In case of inhalation
In the event of symptoms refer for medical treatment

In case of skin contact
In case of contact with skin wash off with water

In case of eye contact
In case of contact with eyes rinse thoroughly with water

In case of ingestion
Rinse out mouth and give plenty of water to drink.

5. Fire-fighting measures

Suitable extinguishing material
Product does not burn, fire-extinguishing activitys according to surrounding

Extinguishing material that may not be used for safety reasons
no

Special exposure hazards arising from the substance, combustiv products or resulting gases
In case of fire formation of dangerous gases possible
Sulphur dioxide (SO2)

Special protective equipment for firefighters
Do not inhale explosion and/or combustion gases

Additional information
Collect contaminated firefighting water separately must not be discharged into the drains

6. Accidental release measures

Personal precautions
Avoid dust formation

Environmental precautions
Do not discharge into the drains or bodies of water

Methods for cleaning up/taking up
Disposal according to regulations
Flush away residues with water.
Take up mechanically and send for disposal

Additional information
Informations for safe handling look up chapter 7
Informations for personal protective equipment look up chapter 8.
Informations for disposal look up chapter 13

7. Handling and storage

Advice on safe handling
No special measures necessary if used correctly
Take the usal precautions when handling with chemicals

Advice on protection against fire and explosion
The product is not combustible
No special measures necessary

Requirements for storage rooms and vessels
No special measures required

Advice on storage compatibility
Keep away from water.

Further information on storage conditions
Store in a dry place

Storage group 10-13

Information on storage stability
Unlimited stability

8. Exposure controls / personal protection

Additional advice on system design
no

Ingredients with occupational exposure limits to be monitored

CAS-No	Name	Code	[mg/m³]	[ml/m³]	Remark
	dust	MAK	6		general-ilmi(RFA)

Respiratory protection
In case of dust formation wear micro dust mask

Hand protection
Rubber gloves

Eye protection
tightly fitting goggles

Skin protection
no

General protective measures
no

Hygiene measures
Do not eat or drink when working.
Brush soiled clothing
After work wash thoroughly.

9 Physical and chemical properties

Form	Colour	Odour
crystalline	whitish	odourless

Data relevant for safety

	Value	Temperature	At	Method	Remark
pH value in delivery state	7	20°C	340 g/l	DIN 38404-5	g MgSO4 · H2O
boiling point (decomposition)	not determined				
starts to melt	at 48 °C				
Flash point	not applicable				
Flammable solid	no				
Flammable gas	no				
Combustion temperature	no				
Autoignition	no				
Lower explosion limit	no				
Upper explosion limit	no				
Vapour pressure	10,6 mbar	20 °C			H2O
Density	1 7 g/cm3	20 °C	1013 hPa		
Bulk density	approx 1000 kg/m3				
Solubility in water	340 g/l	20 °C	1013 hPa		g MgSO4 / l H2O
Solubility/other	not determined				
Partition coefficient (log pOW)	not determined				
Viscosity 1				not applicable	
Solvent separation test	not applicable				
Combustion value	-				

Oxidizing properties
no

Explosive properties
no

Additional information
Physical dates refer to pure product

10. Stability and reactivity

Conditions to avoid
No hazardous reactions known

Materials to avoid
No hazardous reactions known

Hazardous decomposition products
Toxic gases/vapours
Sulphurous oxides (SOx)

Thermal decomposition

Remark >700°C

11. Toxicological Information

Acute toxicity/Irritability/Sensitization

	Value/Validation	Species	Method	Remark
LD 50 acute oral	not determined			
LD 50 acute dermal	not determined			
LC 50 acute inhalation	not determined			
Irritability skin	no			experiences
Irritability eye	no			experiences
Sensitization skin	no			experiences
Sensitization respiratory system	no			experiences

Toxicity test (Additional information)
No experimental indication of genotoxic effects
Substance has no mutagen activity (Ames test)

Additional information
Toxical dates refer to pure product
Our dates are not enough for total texture toxic judgement Follow the usal hygenic directives for handling with chemicals

12 Ecological Information

Data on elimination (persistence and degradability)

	Elimination rate	Method of analysis	Method	Validation
Physico-chemical degradability			not applicable	
	Inorganic product cannot be eliminated from the water by biological purification processes.			
Biological degradability			not applicable	
	Inorganic product cannot be eliminated from the water by biological purification processes.			
Degradability			not applicable	
	Inorganic product, cannot be eliminated from the water by biological purification processes.			
Biological eliminability			not applicable	
	Inorganic product, cannot be eliminated from the water by biological purification processes			

Ecotoxicological effects

	Value	Species	Method	Validation
Fish	LC50 28570 mg/l (24 h	Leuciscus idus	DIN 38412 L15	Ref (1)
Daphnia	EC50 3450 mg/l (24 h)	Daphnia magna	DIN 38412 L11	Ref (1)

	Value	Species	Method	Validation
Algae	EC50 5530 mg/l (72 h)	Scenedesmus subspicatus	DIN 38412 L34	Ref. (1)
Bacteria	EC50 172000 mg/l (30 min)	Photobacterium phosphoreum	DIN 38412 L9	Ref. (1)

Behaviour in sewage plant
When low concentrations are discharged correctly into adapted biological sewage treatment plants, interference with the degradation activity of activated sludge is not likely

Additional ecological information

	Value	Method	Remark
AOX	not applicable		

General regulation
Product is not allowed to discharge into aquatic environment

13. Disposal considerations

Waste code No. 08 03 03
Name of waste solid salts containing sulphates, sulphites or sulphides

Recommendations for the product
In accordance with regulations for special waste, must be taken, after pretreatment, to an authorised special waste disposal site.

Recommendations for packaging
Uncontaminated packaging may be taken for recycling
Contaminated packaging should be emptied as far as possible and after appropriate cleansing may be taken for reuse.

Recommended cleansing agent
no

14. Transport information

Land and inland navigation transport (ADR/RID/GGVS/GGVE/ADNR)
Remarks
No hazardous material as defined by the prescriptions

15. Regulatory information

Remarks for classification
no

R-phrases
not applicable

S-phrases
not applicable

Special labelling for certain preparations
no

National regulations

Restriction of occupation
no

Decree for case of interference/ remarks not applicable

Classification according to VbF/ remarks VbF is not subject to decree for compostible liquids

German TA LUFT remarks
not applicable

Water hazard class 1 KBwS-classification

Other regulations, restrictions and prohibition regulations
no

16. Other information

Recommendend uses and restrictions
no

Further information
The information contained herein is based on our present knowledge and is not meant to guarantee product properties
Recipients of our product must take responsibility for observing existing laws and regulations.
Refer to product information paper.
All declerations of safety-data-sheet refer to pure substance
CAS-No. refers to pure substance

Sources of key data used
Ref (1): INNOLAB GmbH & CO KG, Niedervellmarsche Str 30, D-34233 Fuldatal, Project No : 04/826035, 1994