SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

Revision Date 22.04.2014 Version 1.1

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

1.1 Product identifier

Catalogue No.	105134
Product name	Potassium sulfide small lumps for analysis EMSURE®
REACH Registration Number	A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.
CAS-No.	39365-88-3

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

Identified uses	Reagent for analysis For additional information on uses please refer to the Merck Chemicals portal (www.merck-chemicals.com).

1.3 Details of the supplier of the safety data sheet

Company	Merck KGaA * 64271 Darmstadt * Germany * Phone:+49 6151 72-0
Responsible Department	EHS Manager *+61 (3) 8727 6300 * Monday through Friday, 8:00am to 5:00pm (EST)
Regional representation	Merck Pty. Limited ABN 80 001 239 818 Ground Floor, Building 1 885 Mountain Highway Bayswater VIC 3153 Australia www.merckmillipore.com

1.4 Emergency telephone number

+61 (3) 8727 6300
After hours: CHEMCALL +64 4 917 9888
Poisons Information Centre: 13 1126

SECTION 2. Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Skin corrosion, Category 1B, H314
Acute aquatic toxicity, Category 1, H400

For the full text of the H-Statements mentioned in this Section, see Section 16.

Classification (67/548/EEC or 1999/45/EC)

		R31
C	Corrosive	R34
N	Dangerous for the environment	R50

For the full text of the R-phrases mentioned in this Section, see Section 16.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms

Signal word
Danger

Hazard statements
H314 Causes severe skin burns and eye damage.
H400 Very toxic to aquatic life.
EUH031 Contact with acids liberates toxic gas.

Precautionary statements
Prevention
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P273 Avoid release to the environment.
Response
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P310 IF exposed or concerned: immediately call a POISON CENTER or doctor/ physician.

Reduced labelling (≤125 ml)

Hazard pictograms

Signal word
Danger

Hazard statements
H314 Causes severe skin burns and eye damage.

Precautionary statements
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P311 IF exposed or concerned: Call a POISON CENTER or doctor/ physician.

CAS-No. 39365-88-3

2.3 Other hazards

None known.

SECTION 3. Composition/information on ingredients

3.1 Substance

Formula $(l*K_2S)(m*K_2S_x)(n*K_2S_2O_3)$ $(l*K_2S)(m*K_2S_x)(n*K_2S_2O_3)$
(Hill)

Hazardous components (REGULATION (EC) No 1272/2008)
Chemical Name (Concentration)
CAS-No. Registration number Classification
thiosulfuric acid dipotassium salt, mixture with potassium sulfide *(<= 100 %)*
39365-88-3 *)
Skin corrosion, Category 1B, H314
Acute aquatic toxicity, Category 1, H400

*) A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

For the full text of the H-Statements mentioned in this Section, see Section 16.

Hazardous components (1999/45/EC)
Chemical Name (Concentration)
CAS-No. Classification
thiosulfuric acid dipotassium salt, mixture with potassium sulfide *(<= 100 %)*
39365-88-3 R31
C, Corrosive; R34
N, Dangerous for the environment; R50

For the full text of the R-phrases mentioned in this Section, see Section 16.

3.2 Mixture
not applicable

SECTION 4. First aid measures

4.1 Description of first aid measures
General advice
First aider needs to protect himself.

After inhalation: fresh air. Call in physician.

After skin contact: wash off with plenty of water. Remove contaminated clothing. Call a physician immediately.

After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist.

After swallowing: make victim drink water (two glasses at most), avoid vomiting (risk of perforation). Call a physician immediately. Do not attempt to neutralise.

4.2 Most important symptoms and effects, both acute and delayed
Irritation and corrosion, Cough, Shortness of breath, Nausea, Vomiting
Risk of blindness!
The following applies to sulfides in general: release of hydrogen sulfide (CNS disorders, impaired locomotor coordination, cardiovascular disorders) in the stomach possible after swallowing.

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

SECTION 5. Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water, Carbon dioxide (CO2), Foam, Dry powder

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Combustible.
Risk of dust explosion.
Development of hazardous combustion gases or vapours possible in the event of fire.
Fire may cause evolution of:
Sulphur oxides

5.3 Advice for firefighters

Special protective equipment for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

Further information

Suppress (knock down) gases/vapours/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid substance contact. Avoid inhalation of dusts. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders: Protective equipment see section 8.

6.2 Environmental precautions

Do not empty into drains.

6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills.
Observe possible material restrictions (see sections 7 and 10).
Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

6.4 Reference to other sections

Indications about waste treatment see section 13.

SECTION 7. Handling and storage

7.1 Precautions for safe handling

Advice on safe handling

Observe label precautions.

Hygiene measures

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Tightly closed. Dry.

Recommended storage temperature see product label.

7.3 Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8. Exposure controls/personal protection

8.1 Control parameters
Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Engineering measures
Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

See section 7.1.

Individual protection measures
Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

Eye/face protection
Tightly fitting safety goggles

Hand protection

full contact:

Glove material:	Nitrile rubber
Glove thickness:	0.11 mm
Break through time:	> 480 min

splash contact:

Glove material:	Nitrile rubber
Glove thickness:	0.11 mm
Break through time:	> 480 min

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374, for example KCL 741 Dermatril® L (full contact), KCL 741 Dermatril® L (splash contact).
The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types.
This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Other protective equipment
protective clothing

Respiratory protection
required when dusts are generated.
Recommended Filter type: Filter P 2 (acc. to DIN 3181) for solid and liquid particles of harmful substances
The entrepeneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be

properly documented.

Environmental exposure controls
Do not empty into drains.

SECTION 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form	solid
Colour	red brown
Odour	characteristic
Odour Threshold	No information available.
pH	13 at 10 g/l 20 °C
Melting point	200 - 250 °C
Boiling point	No information available.
Flash point	No information available.
Evaporation rate	No information available.
Flammability (solid, gas)	No information available.
Lower explosion limit	No information available.
Upper explosion limit	No information available.
Vapour pressure	No information available.
Relative vapour density	No information available.
Density	1.65 g/cm³ at 20 °C
Relative density	No information available.
Water solubility	500 g/l at 20 °C
Partition coefficient: n-octanol/water	No information available.
Auto-ignition temperature	No information available.
Decomposition temperature	> 460 °C
Viscosity, dynamic	No information available.

Explosive properties	Not classified as explosive.
Oxidizing properties	none

9.2 Other data

Bulk density	1,000 - 1,200 kg/m³

SECTION 10. Stability and reactivity

10.1 Reactivity
Risk of dust explosion.

10.2 Chemical stability
The product is chemically stable under standard ambient conditions (room temperature) .

10.3 Possibility of hazardous reactions
Risk of explosion/exothermic reaction with:

potassium dichromate

Exothermic reaction with:

Fluorine, Water

Risk of ignition or formation of inflammable gases or vapours with:

nitrogen oxides

Generates dangerous gases or fumes in contact with:

Oxidizing agents, Acids

10.4 Conditions to avoid
no information available

10.5 Incompatible materials
no information available

10.6 Hazardous decomposition products
in the event of fire: See section 5.

SECTION 11. Toxicological information

11.1 Information on toxicological effects

Acute oral toxicity
Symptoms: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the oesophagus and the stomach., Nausea, Vomiting

Acute inhalation toxicity

Symptoms: mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract

Acute dermal toxicity
This information is not available.

Skin irritation
Causes burns.

Eye irritation
Causes serious eye damage.
Risk of blindness!

Sensitisation
This information is not available.

Germ cell mutagenicity
This information is not available.

Carcinogenicity
This information is not available.

Reproductive toxicity
This information is not available.

Teratogenicity
This information is not available.

Specific target organ toxicity - single exposure
This information is not available.

Specific target organ toxicity - repeated exposure
This information is not available.

Aspiration hazard
This information is not available.

11.2 Further information
The following applies to sulfides in general: release of hydrogen sulfide (CNS disorders, impaired locomotor coordination, cardiovascular disorders) in the stomach possible after swallowing.
Other dangerous properties can not be excluded.
Handle in accordance with good industrial hygiene and safety practice.

SECTION 12. Ecological information

12.1 Toxicity
No information available.

12.2 Persistence and degradability
No information available.

12.3 Bioaccumulative potential
No information available.

12.4 Mobility in soil
No information available.

12.5 Results of PBT and vPvB assessment
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

12.6 Other adverse effects
Additional ecological information
Forms corrosive mixtures with water even if diluted.
Discharge into the environment must be avoided.

SECTION 13. Disposal considerations

Waste treatment methods

Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

SECTION 14. Transport information

Land transport (ADR/RID)

14.1 UN number	UN 3262
14.2 Proper shipping name	CORROSIVE SOLID, BASIC, INORGANIC, N.O.S. (POTASSIUM(POLY)SULFIDE)
14.3 Class	8
14.4 Packing group	II
14.5 Environmentally hazardous	yes
14.6 Special precautions for user	yes
Tunnel restriction code	E

Inland waterway transport (ADN)

Not relevant

Air transport (IATA)

14.1 UN number	UN 3262
14.2 Proper shipping name	CORROSIVE SOLID, BASIC, INORGANIC, N.O.S. (POTASSIUM(POLY)SULFIDE)
14.3 Class	8
14.4 Packing group	II
14.5 Environmentally hazardous	yes
14.6 Special precautions for user	no

Sea transport (IMDG)

14.1 UN number	UN 3262
14.2 Proper shipping name	CORROSIVE SOLID, BASIC, INORGANIC, N.O.S. (POTASSIUM(POLY)SULFIDE)
14.3 Class	8
14.4 Packing group	II
14.5 Environmentally hazardous	yes
14.6 Special precautions for user	yes
EmS	F-A S-B

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

Other regulations
Hazchem Code 2X

SECTION 15. Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

National legislation
Storage class 8A

15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out.

SECTION 16. Other information

Full text of H-Statements referred to under sections 2 and 3.

H314	Causes severe skin burns and eye damage.
H400	Very toxic to aquatic life.

Full text of R-phrases referred to under sections 2 and 3

R31	Contact with acids liberates toxic gas.
R34	Causes burns.
R50	Very toxic to aquatic organisms.

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

Labelling (67/548/EEC or 1999/45/EC)

Symbol(s)	 C	Corrosive
	 N	Dangerous for the environment
R-phrase(s)	31-34-50	Contact with acids liberates toxic gas. Causes burns. Very toxic to aquatic organisms.
S-phrase(s)	26-36/37/39-45-61	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing, gloves and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Avoid release to the environment. Refer to special instructions/ Safety data sheets.

Reduced labelling (≤125 ml)

Symbol(s)	 C	Corrosive
	 N	Dangerous for the environment
R-phrase(s)	34	Causes burns.
S-phrase(s)	26-36/37/39-45	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing, gloves and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Key or legend to abbreviations and acronyms used in the safety data sheet
Used abbreviations and acronyms can be looked up at www.wikipedia.org.

The information contained herein is based on the present state of our knowledge. It characterises the product with regard to the appropriate safety precautions. It does not represent a guarantee of any properties of the product.