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

Revision Date 31.01.2011  Version 8.1

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

1.1 Product identifier
- Catalogue No. 105153
- Product name: Potassium sulfate for analysis EMSURE® ACS, ISO, Reag. Ph Eur
- 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.

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: EQ-RS * e-mail: prodsafe@merck.de

1.4 Emergency telephone number
Please contact the regional Merck representation in your country.

2. Hazards identification

2.1 Classification of the substance or mixture
- This substance is not classified as dangerous according to European Union legislation.

2.2 Label elements
- Labelling (REGULATION (EC) No 1272/2008)
  Not a dangerous substance according to GHS.

  CAS-No. 7778-80-5

- Labelling (67/548/EEC or 1999/45/EC)
  The product does not need to be labelled in accordance with EC directives or respective national laws.
  EC-No. 231-915-5

2.3 Other hazards
- None known.

3. Composition/information on ingredients
- Formula: K₂SO₄, K₂O₄S (Hill)
- CAS-No.: 7778-80-5
- EC-No.: 231-915-5
Molar mass 174.26 g/mol

4. First aid measures

4.1 Description of first aid measures
After inhalation: fresh air.
After skin contact: wash off with plenty of water. Remove contaminated clothing.
After eye contact: rinse out with plenty of water.
After swallowing: make victim drink water (two glasses at most). 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. Fire-fighting measures

5.1 Extinguishing media
Suitable extinguishing media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

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

5.2 Special hazards arising from the substance or mixture
Not combustible.
Ambient fire may liberate hazardous vapours.
Fire may cause evolution of:
Sulphur oxides

5.3 Advice for firefighters
Special protective equipment for fire-fighters
In the event of fire, wear self-contained breathing apparatus.

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.

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 7.2 and 10.5).
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.

7. Handling and storage
7.1 Precautions for safe handling
Observe label precautions.

7.2 Conditions for safe storage, including any incompatibilities
Tightly closed. Dry.
Storage temperature: no restrictions.

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

8. Exposure controls/personal protection
8.1 Control parameters

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.

Hygiene measures
Change contaminated clothing. Wash hands after working with substance.

Eye/face protection
Safety glasses

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).

*Respiratory protection*
required when dusts are generated.
Recommended Filter type: Filter P 1 (acc. to DIN 3181) for solid particles of inert substances
The entrepreneur 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.

### 9. Physical and chemical properties
#### 9.1 Information on basic physical and chemical properties
- **Form**: solid
- **Colour**: colourless
- **Odour**: odourless
- **Odour Threshold**: No information available.
- **pH**: 5.5 - 8.5
  - at 50 g/l
  - 20 °C
- **Melting point**: 1.069 °C
- **Boiling point/boiling range**: 1.689 °C
  - at 1.013 hPa
- **Flash point**: not applicable
- **Evaporation rate**: No information available.
- **Flammability (solid, gas)**: No information available.
- **Lower explosion limit**: not applicable
- **Upper explosion limit**: not applicable
- **Vapour pressure**: not applicable
- **Relative vapour density**: No information available.
- **Relative density**: 2.66 g/cm³
  - at 20 °C
- **Water solubility**: 111 g/l
  - at 20 °C
Partition coefficient: n-octanol/water  
Autoignition temperature  No information available.
Decomposition temperature  No information available.
Viscosity, dynamic  No information available.
Explosive properties  No information available.
Oxidizing properties  No information available.

9.2 Other data
Ignition temperature  not applicable
Bulk density  ca.800 kg/m³

10. Stability and reactivity
10.1 Reactivity
See section 10.3.

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

10.3 Possibility of hazardous reactions
increased reactivity with:
Aluminium
Risk of explosion with:
sodium, acetylidene
magnesium

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 chapter 5.

11. Toxicological information
11.1 Information on toxicological effects
Acute oral toxicity
LD50 rat
Dose: 6.600 mg/kg
(RTECS)

Specific target organ toxicity - single exposure
The substance or mixture is not classified as specific target organ toxicant, single exposure.
Specific target organ toxicity - repeated exposure
The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Aspiration hazard
Based on available data the classification criteria are not met.

11.2 Further information
Further information
After uptake of large quantities:
Symptoms in:
Gastrointestinal tract
Further data:
Handle in accordance with good industrial hygiene and safety practice.

12. Ecological information

12.1 Toxicity
Toxicity to fish
LC50
Species: Pimephales promelas (fathead minnow)
Dose: 680 mg/l
Exposure time: 96 h
(ECOTOX Database)

Toxicity to daphnia and other aquatic invertebrates.
EC50
Species: Daphnia magna (Water flea)
Dose: 890 mg/l
Exposure time: 48 h
(IUCLID)

Toxicity to algae
IC50
Species: Desmodesmus subspicatus (green algae)
Dose: 2,900 mg/l
Exposure time: 72 h
(IUCLID)

12.2 Persistence and degradability
No information available.

12.3 Bioaccumulative potential
Partition coefficient: n-octanol/water
not applicable

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
Do not allow to run into surface waters, wastewater, or soil.
13. Disposal considerations

Waste treatment methods

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

14. Transport information

Not classified as dangerous in the meaning of transport regulations.

15. Regulatory information

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

EU regulations

Major Accident Hazard 96/82/EC
Legislation Directive 96/82/EC does not apply

National legislation

Storage class VCI 10 - 13 Other liquids and solids

15.2 Chemical Safety Assessment

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

16. Other information

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

Training advice

Provide adequate information, instruction and training for operators.

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.

Regional representation

This information is given on the authorised Safety Data Sheet for your country.