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

1.1 Product identifier

Catalogue No. 841613
Product name Thiosalicylic acid for synthesis

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 Chemical for synthesis
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@merckgroup.com

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

2. Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)
Specific target organ toxicity - single exposure, Category 3, H335
Eye irritation, Category 2, H319
Skin irritation, Category 2, H315
For the full text of the H-Statements mentioned in this Section, see Section 16.

Classification (67/548/EEC or 1999/45/EC)
Xi; R36/37/38
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 Warning

Hazard statements
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.

Precautionary statements
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Reduced labelling (≤125 ml)

Hazard pictograms

Signal word
Warning

CAS-No. 147-93-3

Labelling (67/548/EEC or 1999/45/EC)
Symbol(s) Xi Irritant
R-phrase(s) 36/37/38 Irritating to eyes, respiratory system and skin.
EC-No. 205-704-3

Reduced labelling (≤125 ml)
Symbol(s) Xi Irritant

2.3 Other hazards
None known.

3. Composition/information on ingredients

Formula C₇H₆O₂S (Hill)
CAS-No. 147-93-3
EC-No. 205-704-3
Molar mass 154,19 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. Immediately call in ophthalmologist.

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed
irritant effects, Cough, Shortness of breath
4.3 Indication of immediate medical attention and special treatment needed
No information available.

5. Fire-fighting 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 material, 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 fire-fighters
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
Prevent fire extinguishing water from contaminating surface water or the ground water system. Suppress (knock down) gases/vapours/mists with a water spray jet.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Advice for non-emergency personnel: Avoid substance contact. Avoid generation of dusts; do not inhale 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.
Store at +15°C to +25°C.

7.3 Specific end uses
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
Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face 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 Dermatri® L (full contact), KCL 741 Dermatri® 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 3 (acc. to DIN 3181) for solid and liquid particles of toxic and very toxic 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                      powder
Colour                    light yellow
Odour                     malodorous
Odour Threshold           No information available.
pH                        No information available.
Melting point             165 - 166 °C
                           (sublimed)
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.
Relative density          1.49 g/cm³
                           at 20 °C
Water solubility          at 20 °C
                           practically insoluble
Partition coefficient: n-octanol/water
                           log Pow:  2.39
                           Method: (experimental)
                           (Lit.) No remarkable bioaccumulation potential is expected (log Pow 1-3).
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
10. Stability and reactivity

10.1 Reactivity
See section 10.3.

10.2 Chemical stability
Sensitivity to light
Sensitive to air.

10.3 Possibility of hazardous reactions
Violent reactions possible with:
Strong oxidizing agents, alkalines

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
Symptoms: Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract.

Acute inhalation toxicity
Symptoms: mucosal irritations, Cough, Shortness of breath

Skin irritation
Irritations
Causes skin irritation.

Eye irritation
Irritations
Causes serious eye irritation.

Specific target organ toxicity - single exposure
May cause respiratory irritation.

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

Aspiration hazard
No aspiration toxicity classification

11.2 Further information

Further information
Quantitative data on the toxicity of this product are not available.

Further data:
Other dangerous properties can not be excluded.
Handle in accordance with good industrial hygiene and safety practice.
12. Ecological information

12.1 Toxicity
No information available.

12.2 Persistence and degradability
No information available.

12.3 Bioaccumulative potential
Partition coefficient: n-octanol/water
log Pow: 2.39
Method: (experimental)
(Lit.) No remarkable bioaccumulation potential is expected (log Pow 1-3).

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
We have no quantitative data concerning the ecological effects of this product.
Further information on ecology
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

ADR/RID
Not dangerous goods

IATA
UN 3335 AVIATION REGULATED SOLID, N.O.S. (THIOSALICYLIC ACID), 9

IMDG
Not dangerous goods
The transport regulations are cited according to international regulations and in the form applicable in Germany. Possible national deviations in other countries are not considered.

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

Occupational restrictions Take note of Dir 94/33/EC on the protection of young people at work.
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.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.

Full text of R-phrases referred to under sections 2 and 3
R36/37/38 Irritating to eyes, respiratory system and skin.

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

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

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.