Safety data sheet
according to Regulation (EC) No. 1907/2006

Printing date 29.08.2013 Version number 1 Revision: 29.08.2013

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

1.1 Product identifier

Trade name: REINECKE SALT monohydrate ≥ 93%, p.a. ACS

Article number: 6629

CAS Number:
13573-17-6
EC number:
237-003-3

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
No further relevant information available.

Application of the substance / the preparation
Laboratory chemical

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:
Carl Roth GmbH + Co. KG
Schoemperlenstraße 3-5
76185 Karlsruhe
Germany
Telefon: +49/(0)721 5606-0 Telefax: +49/(0)721 5606-149 E-Mail: sicherheit@carlroth.de

Further information obtainable from: Department Health, Safety and Environment

1.4 Emergency telephone number:
Poison Centre Munich Telefon +49/(0)89 19240

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2 Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Acute Tox. 4	H302	Harmful if swallowed.
Acute Tox. 4	H312	Harmful in contact with skin.
Acute Tox. 4	H332	Harmful if inhaled.
Skin Irrit. 2	H315	Causes skin irritation.
Eye Irrit. 2	H319	Causes serious eye irritation.
STOT SE 3	H335	May cause respiratory irritation.
Aquatic Chronic 3	H412	Harmful to aquatic life with long lasting effects.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC
Xn; Harmful
R20/21/22: Harmful by inhalation, in contact with skin and if swallowed.

Xi; Irritant
R36/37/38: Irritating to eyes, respiratory system and skin.

R32-52/53: Contact with acids liberates very toxic gas. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Additional information: Note, not yet fully tested.

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2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008
The substance is classified and labelled according to the CLP regulation.

Hazard pictograms

GHS07

Signal word Warning

Hazard statements
H302+H312+H332 Harmful if swallowed, in contact with skin or if inhaled.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements
P280 Wear protective gloves / eye protection.
P270 Do not eat, drink or smoke when using this product.
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.

Additional information:
EUH032 Contact with acids liberates very toxic gas.

2.3 Other hazards
All chemicals are potentially dangerous. They are therefore only be handled by specially trained personnel with the necessary care.

Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

3 Composition/information on ingredients

3.1 Chemical characterization: Substances

CAS No. Description
13573-17-6 Reinecke salt monohydrate

Identification number(s)
EC number: 237-003-3
Formula: $C_4H_{10}CrN_7S_4$
Molar mass [g/mol]: 336,43

4 First aid measures

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4.1 Description of first aid measures

General information:
Remove any clothing soiled by the product.

After inhalation:
Take affected persons into fresh air and keep quiet.
If breathing is difficult, give oxygen. Seek medical treatment.

After skin contact:
Wash with water and soap.
If there is any trouble seek medical help.

After eye contact:
Rinse opened eye for 10 minutes under running water. If symptoms persist, consult a doctor.

After swallowing:
Rinse out mouth and then drink water.
Seek medical treatment.

4.2 Most important symptoms and effects, both acute and delayed
We have no description of any toxic symptoms.
The following applies to ammonium salts in general: after swallowing: local irritation symptoms, nausea, vomiting, diarrhoea. Systemic effect: after the uptake of very large qantities: drop in blood pressure, collapse, CNS disorders, spasms, narcotic conditions, respiratory paralysis, haemolysis.

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

5 Firefighting measures

5.1 Extinguishing media

Suitable extinguishing agents:
Use fire extinguishing methods suitable to surrounding conditions.
CO2, powder,foam or water spray.

5.2 Special hazards arising from the substance or mixture

In the event of fire development of hazardous combustion gases or vapours possible.
In case of fire, the following can be released:
Nitrogen oxides (NOx)
Sulphure oxides (SOx)
Carbon monoxide and carbon dioxide

5.3 Advice for firefighters

Protective equipment:
Wear self-contained respiratory protective device.

6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Do not breathe dust.
Avoid contact with the eyes and skin.

6.2 Environmental precautions
Do not allow product to reach sewage system or any water course.

6.3 Methods and material for containment and cleaning up
Pick up mechanically.

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Dispose contaminated material as waste according to item 13.

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 disposal information.

7 Handling and storage

7.1 Precautions for safe handling
Provide suction extractors if dust is formed.
Keep containers, equipment and working place clean.

7.2 Conditions for safe storage, including any incompatibilities

Storage:

Requirements to be met by storerooms and receptacles:
No special requirements.

Information about storage in one common storage facility:
Store away from foodstuffs.
Do not store together with acids.

Further information about storage conditions:
Keep container tightly sealed.
Store in dry conditions.

Recommended storage temperature: +15 °C - +25 °C

7.3 Specific end use(s)
No further relevant information available.

8 Exposure controls/personal protection

Additional information about design of technical facilities:
No further data; see item 7.

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace: Not required.

Additional information:
The lists valid during the making were used as basis.

8.2 Exposure controls

Personal protective equipment:

General protective and hygienic measures:
Keep away from foodstuffs, beverages and feed.
Avoid contact with the eyes and skin.
Do not breathe dust.
Wash hands before breaks and at the end of work.

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.

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Respiratory protection:

Required when dusts are generated: filter P2.

Protection of hands:

Protective gloves
Check protective gloves prior to each use for their proper condition.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves
Nitrile, thickness: ≥ 0.11 mm
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Penetration time of glove material
Value for the permeation: Level ≥ 6
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection:

Tightly sealed goggles

Body protection:
Protective work clothing

9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information	
Appearance:	
Form:	Crystalline powder
Colour:	Dark red
Odour:	Odourless
Odour threshold:	No information available.
pH-value:	No information available.
Change in condition	
Melting point/Melting range:	268-272 °C
Boiling point/Boiling range:	No information available.
Flash point:	No information available
Flammability (solid, gaseous):	No information available

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Ignition temperature:	No information available
Decomposition temperature:	> 65 °C
Self-igniting:	No information available
Danger of explosion:	No information available
Explosion limits:	
Lower:	No information available.
Upper:	No information available.
Oxidizing properties:	No information available.
Vapour pressure:	No information available
Density:	No information available.
Vapour density	No information available
Evaporation rate	No information available
Solubility in / Miscibility with water:	Soluble in hot water.
Partition coefficient (n-octanol/water):	No information available
Viscosity:	
Dynamic:	No information available.
Kinematic:	No information available.
9.2 Other information	No further relevant information available.

10 Stability and reactivity

10.1 Reactivity See section 10.3

10.2 Chemical stability

Thermal decomposition / conditions to be avoided:
No decomposition if used and stored according to specifications.

10.3 Possibility of hazardous reactions
Contact with acids releases toxic gases.

10.4 Conditions to avoid
Heating (decomposition)
Avoid contact with moisture.

10.5 Incompatible materials:
No information available.

10.6 Hazardous decomposition products:
In case of fire: see item 5.

11 Toxicological information

11.1 Information on toxicological effects

Acute toxicity:

LD/LC50 values relevant for classification:
Quantitative data on the toxicity of this product are not available.

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Primary irritant effect:

on the skin:
Prolonged or repeated contact may cause skin irritations.
Danger through skin adsorption.

on the eye:
Intense exposure may cause irritative symptoms.

after inhalation:
Risk of absorption when vapours/aerosols are generated.
After inhalation of dusts/aerosols:

Sensitization:
Sensitization possible through inhalation.
Sensitization possible through skin contact.

CMR effects:
Germ cell mutagenicity:
No information available.
Carcinogenicity:
No information available.
Reproductive toxicity:
No information available.

Aspiration hazard:
No aspiration toxicity classification.

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.

Additional toxicological information:
The following applies to ammonium salts in general: after swallowing: local irritation symptoms, nausea, vomiting, diarrhoea. Systemic effect: after the uptake of very large qantities: drop in blood pressure, collapse, CNS disorders, spasms, narcotic conditions, respiratory paralysis, haemolysis.
Further information:
To the best of our knowledge, the toxicological properties have not been thoroughly investigated. Further hazardous properties cannot be excluded.
The product should be handled with the care usual when dealing with chemicals.

12 Ecological information

12.1 Toxicity

Aquatic toxicity:
Quantitative data on the ecological effect of this product are not available.

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.

Ecotoxical effects:

Remark:
Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Do not allow to enter waters, waste water, or soil!

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12.5 Results of PBT and vPvB assessment

PBT: Not applicable.
vPvB: Not applicable.

12.6 Other adverse effects
No further relevant information available.

13 Disposal considerations

Waste treatment methods

Recommendation
This material and its container must be disposed of as hazardous waste.
The disposal is regionally differently regulated, therefore the kind of disposal is to be inquired at the responsible authorities.

Uncleaned packaging:

Recommendation:
Disposal according to official regulations.

14 Transport information

14.1 UN-Number	
ADR, ADN, IMDG, IATA	Void
14.2 UN proper shipping name	
ADR, ADN, IMDG, IATA	Void
14.3 Transport hazard class(es)	
ADR, ADN, IMDG, IATA **Class**	Void
14.4 Packing group	
ADR, IMDG, IATA	Void
14.5 Environmental hazards:	
Marine pollutant:	No
14.6 Special precautions for user	Not applicable.
14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
UN "Model Regulation":	-

15 Regulatory information

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

National regulations:

Information about limitation of use:
Employment restrictions concerning juveniles must be observed.
Employment restrictions concerning pregnant and lactating women must be observed.

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Waterhazard class:
Water hazard class 3 (Self-assessment): extremely hazardous for water.

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

16 Other information
This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Department issuing MSDS: Department: Health, Safety and Environment

Contact: Frau Weckemann

Abbreviations and acronyms:
ADR: Accord européen sur le transport 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 Harmonized System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
LD50*: Lethal Dose, 50 percent (Not relevant for classification)
LD50*: Lethal Concentration, 50 percent (Not relevant for classification)

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