

**Safety Data Sheet**  
according to 1907/2006/EC, Article 31

Printing date 03.03.2010

Revision: 03.03.2010

**1 Identification of the substance/preparation and of the company/undertaking**

- **Product details**
- **Molecular formula:**  $\text{Na}_2\text{S} \cdot 3\text{H}_2\text{O}$
- **Trade name:** 42607-30-7 sodium sulphide · 3H<sub>2</sub>O
- **Article number:** CH1229
- **Application of the substance / the preparation** Laboratory Reagent.
- **Manufacturer/Supplier:**

Carlo Erba Reagenti  
Strada Rivoltana Km 6/7  
I-20090 Rodano  
Tel.: 0039 02 953251

Carlo Erba Reactifs - SDS  
Chaussée du Vexin  
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- **Further information obtainable from:**  
Q.A / Normative  
email ITALY: MSDS\_CER@carloerbareagenti.com  
email FRANCE: MSDS\_CER-SDS@carloerbareactifs.com
- **Information in case of emergency:**  
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tel: 0039 02 66 10 10 29  
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**2 Hazards identification**

- **Hazard description:**



C Corrosive

- **Information concerning to particular hazards to man and environment:**  
R 31 Contact with acids liberates toxic gas.  
R 34 Causes burns.
- **Classification system:**  
The product has to be labelled due to the calculation procedure of the "General Classification guideline for Substances of the EU", DIR. 67/548/EC, in the latest valid version.
- **GHS label elements**



**Danger**

H314 - Causes severe skin burns and eye damage.

EUH031 - Contact with acids liberates toxic gas.

- **Prevention:**  
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
- **Response:**  
P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P310 Immediately call a POISON CENTER or doctor/physician.

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- **Storage:**  
P405 Store locked up.
- **Disposal:**  
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

### **3 Composition/information on ingredients**

- **Chemical characterization:**
- **CAS No. Description**  
Sodium sulphide trihydrate
- **Identification number(s)**
- **EINECS Number:** 215-211-5
- **Index number:** 016-009-00-8

### **4 First-aid measures**

- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:**  
Immediately wash with water and soap and rinse thoroughly. Wash contaminated clothing before reuse.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:**  
Do not induce vomiting; call for medical help immediately.  
Drink plenty of water and provide fresh air.
- **Information for doctor:** Show your the doctor this Material Safety Data Sheets.

### **5 Fire-fighting measures**

- **General Information:**  
As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear.
- **Suitable extinguishing agents:**  
CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards caused by the substance, its products of combustion or resulting gases:**  
Sulfur Oxides (SO<sub>x</sub>)  
Sodium compounds.
- **Protective equipment:**  
In closed rooms wear a self contained breathing apparatus.  
Do not inhale gases in case of fire or combustion.

### **6 Accidental release measures**

- **General Information:** Use proper personal protective equipment as indicated in Section 8.
- **Person-related safety precautions:**  
Wear protective equipment. Keep unprotected persons away.  
Wear a respiratory protective device if other acidic products or unknown are involved.  
If dust/ aerosols is formed, use personal protective equipment.
- **Measures for environmental protection:** No special measures required.
- **Measures for cleaning/collecting:**  
Ensure adequate ventilation.  
For fine dusts use a vacuum cleaner.  
Use neutralizing agent.  
Dispose contaminated material as waste according to item 13.

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· **Additional information:**

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**

· **Handling:**

· **Information for safe handling:**

Handle under protective gas.

Avoid formation of dust and aerosols.

Adopt adequate ventilation at places where you develop dust.

Thorough dedusting.

· **Information about fire - and explosion protection:** No special measures required.

· **Storage:**

· **Requirements to be met by storerooms and receptacles:**

Unsuitable material for receptacle: iron, steel.

Provide alkali-resistant floor.

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

· **Information about storage in one common storage facility:** Do not store together with acids.

· **Further information about storage conditions:** Store in nitrogen.

\* **8 Exposure controls/personal protection**

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

· **Ingredients with limit values that require monitoring at the workplace:** TLV not established.

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

· **Personal protective equipment:** -

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the skin.

· **Respiratory protection:** Filter P3, in case of dust-producing handlings.

· **Protection of hands:**

The selected protective gloves have to satisfy the specifications of EU Directive 89/689/EEC and the standard EN 374 derived from it.

Rubber gloves

· **Material of gloves**

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

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.

Thin, disposable gloves in PVC or PE

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:** Chemical safety goggles.

· **Body protection:**

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

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## 9 Physical and chemical properties

- **Molecular weight** 132 g
- **Form:** Crystalline
- **Colour:** Whitish
- **Odour:** Sulfurous
- **Change in condition**
  - Melting point/Melting range:** dec. 1 °C
  - Boiling point/Boiling range:** Undetermined.
- **Flash point:** Not applicable.
- **Flammability (solid, gaseous):** Product is not flammable.
- **Danger of explosion:** Product does not present an explosion hazard.
- **Density:** Not determined.
- **Solubility in / Miscibility with water:** Soluble.
- **pH-value (100 g/l) at 20°C:** >12

## 10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Materials to be avoided:**
- **Dangerous reactions**
  - Strong exothermic reaction with acids.
  - Contact with acids releases toxic gases.
- **Dangerous decomposition products:**
  - In case of fire: Sulfur oxides (SO<sub>x</sub>)
  - Sodium compounds.

## 11 Toxicological information

- **Acute toxicity:**
- **LD/LC50 values relevant for classification:**

Oral	LD50	208 mg/kg (rat)
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- **Primary irritant effect:**
- **on the skin:**
  - Caustic effect on skin and mucous membranes.
  - Strongly basic product: irritant by the degreasing properties.
- **on the eye:**
  - Strong caustic effect.
  - Irritating power due to the basic properties.
- **Ingestion:** It can be harmful if swallowed.
- **Inhalation:**
  - Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
- **Sensitization:** No sensitizing effects known.
- **Other information (about experimental toxicology):** No more relevant data available.
- **Additional toxicological information:**
  - Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

## 12 Ecological information

- **Information about elimination (persistence and degradability):**
- **Method**
- **Ecological information** Not available

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· **Ecotoxicological effects:**

· **Aquatic toxicity:**

LC50 aq.	7 mg/L (Daphnia)
	25 mg/L (fishes)

· **Remark:** Local effects: may change the environmental pH endangering the aquatic life.

· **Additional ecological information:**

· **General notes:**

Must not reach sewage water or drainage ditch undiluted or unneutralized.

Rinse off of bigger amounts into drains or the aquatic environment may lead to increased pH-values. A high pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably reduced, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.

**13 Disposal considerations**

· **Product:**

· **Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system. Reutilise if possible or contact a waste processors for recycling or safe disposal.

· **Waste disposal key:**

The European Union does not establish uniform rules for the disposal of chemical waste, which are special waste. Their treatment and elimination of the domestic legislation of each country. So, in each case, you should contact the relevant authorities, or those companies legally authorized for elimination of waste.

2001/573/EC: Council Decision of 23 July 2001 amending the list of wastes contained in Decision 2000/532/EC.

Council Directive 91/156/EEC of 18 March 1991 amending Directive 75/442/EEC on waste.

· **Uncleaned packaging:**

The containers and packing materials contaminated with dangerous substances or preparations, have the same treatment products.

Directive 94/62/EC of the European Parliament and the Council of 20 December 1994 on packaging and packaging waste.

· **Recommendation:**

Disposal must be made according to official regulations.

Packagings that may not be cleansed are to be disposed of in the same manner as the product.

Wash with water to be treated before disposal.

· **Recommended cleansing agents:**

Sodium hypochlorite.

Water, if necessary together with cleansing agents.

**14 Transport information**

· **Land transport ADR/RID (cross-border)**



· **ADR/RID class:** 8 (C6) Corrosive substances.

· **Danger code (Kemler):** 80

· **UN-Number:** 1849

· **Packaging group:** II

· **Hazard label** 8

· **Description of goods:** 1849 SODIUM SULPHIDE, HYDRATED

· **Excepted quantities (EQ):** E2

· **Limited quantities (LQ)** LQ23

· **Transport category** 2

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· **Tunnel restriction code** E

· **Maritime transport IMDG:**



· **IMDG Class:** 8  
 · **UN Number:** 1849  
 · **Label** 8  
 · **Packaging group:** II  
 · **EMS Number:** F-A,S-B  
 · **Marine pollutant:** No  
 · **Proper shipping name:** SODIUM SULPHIDE, HYDRATED

· **Air transport ICAO-TI and IATA-DGR:**



· **ICAO/IATA Class:** 8  
 · **UN/ID Number:** 1849  
 · **Label** 8  
 · **Packaging group:** II  
 · **Proper shipping name:** SODIUM SULPHIDE, HYDRATED

· **UN "Model Regulation":** ADR 2009 - Italian Official Translation, ed. ARS IT editions

## 15 Regulatory information

· **Labelling according to EU guidelines:**

The product has been classified and marked in according to the calculation procedure of the "General Classification guideline for Substances of the EU", DIR. 67/548/EC, in the latest valid version.

Observe the general safety regulations when handling chemicals.

· **Code letter and hazard designation of product:**



C Corrosive

· **Risk phrases:**

31 Contact with acids liberates toxic gas.

34 Causes burns.

· **Safety phrases:**

26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

## 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:** Q.A / Normative

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· **Contact:**

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· **References**

ECDIN (Environmental Chem. Data and Information Network)

IUCLID (International Uniform Chemical Information Database)

NIOSH - Registry of Toxic Effects of Chemical Substances

Roth - Wassergefährdende Stoffe

Verschuieren - Handbook of Environmental Data on Organic Chemicals

ChemDAT - Safety Data Sheets from E.Merck on CD-ROM

Merian - Metals and their compounds in the environment

· **Sources**

DIR. 67/548/EC, in the latest valid version.

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006, REACH.

Regulation (EC) N° 1272/2008 of the European Parliament and of the Council of 16 December 2008, CLP, in the latest valid version.

Globally Harmonized System, GHS