

MATERIAL SAFETY DATA SHEET - MSDS

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

Identification of the product:

Name of material: Schiff's Reagent

Art.Nr.: 31827, Innerpackage: PP Bottle

Use of the substance/preparation:

analytical chemistry, laboratory reagent,

Manufacturer/supplier identification:

Company:

Gatt-Koller GmbH

Swarovskistrasse 74

A-6067 Absam

Tel.: 0043-5223-44216-0

Fax.: 0043-5223-43216

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2. Composition/information on ingredients

Identification and amount of the components:

Dangerous components:

Product: Hydrochloric acid

EC no. (EINECS) 231-595-7 CAS: 7647-01-0 EC Index: 017-002-01-X

R: 34-37 Symbol: C (Corrosive)

Content: ~ 11%

3. Hazards identification

Hazards classification for the substance according to the european directives:

Irritating to eyes, respiratory system and skin.

4. First aid measures

After inhalation: Fresh air.

After skin contact: wash off with plenty of water. Remove contaminated clothing.

After ingestion: make victim drink plenty of water, induce vomiting, summon doctor.

After eye contact: rinse out with plenty of water with the eyelid held wide open. Summon eye specialist.

5. Fire-fighting measures

Suitable extinguishing media: To suit environment.

Special risks: Non-combustible. Hydrogen may form upon contact with metals (danger of explosion!)

Formation of dangerous vapours possible in event of fire.

The following may develop in event of fire: hydrochloric .

Special protective equipment for fire fighting: Do not stay in dangerous zone without suitable chemical protection clothing and self-contained breathing apparatus.

Further information: Contain escaping vapours with water. Prevent fire-fighting water from entering surface water or groundwater.

6. Accidental release measures

Person-related precautionary measures: Do not inhale vapours/aerosols. Avoid substance contact. Ensure supply of fresh air in enclosed rooms.

Environmental precautions: Do not allow to enter sewerage system.

Procedures for cleaning / absorption: Take up with liquid-absorbent material. Forward for disposal. Clean up.

Additional notes: Elimination of nocive effect: Neutralize with: dil. sodium hydroxide solution, lime, sandlime or soda.

7. Handling and storage

Handling: No further requirements.

Storage: Store tightly closed, in a well-ventilated place. Store at + 15°C to + 25°C. No metal containers. Cannot be stored indefinitely.

8. Exposure controls/personal protection

Exposure limit values: (MAK, Germany):

Exposure controls:

Occupational exposure controls: The personal protective equipment must be selected according to the

working place, based on the concentration and amount of the dangerous substance. The supplier should indicate the stability of the personal protective equipment to chemical reagents.

Respiratory protection: When vapours/aerosols are generated.

Hand protection: required

Eye protection: required

Skin protection: Acid-resistant protective clothing. Apply skin- protective barrier cream.

Industrial hygiene: Immediately change contaminated clothing. Wash hands and face after working with substance.

9. Physical and chemical properties

General information:

Form: liquid

Colour: colourless

Odour: biting

Important health, safety and environmental information:

pH value: (20 °C) < 1

Boiling temperature: ---

Flash point: ---

Explosion limits (low): ---

Explosion limits (high): ---

Vapour pressure: ---

Density (20 °C): ~ 1,06 g/cm³

Solubility in water: (20 °C): miscible

Viscosity: ---

Refractive index: ---

Melting temperature: ---

Ignition temperature: ---

10. Stability and reactivity

Conditions to be avoided: Heating

Substances to be avoided:

The generally known reaction partners of water.

Hazardous decomposition products: In event of fire: see chapter 5.

Further information:

11. Toxicological information

Acute toxicity:

LC₅₀ (inhalation, rat): 3124 ppm (V) /1h (related to: pure substance).

Further toxicological information:

Property that must be anticipated on the basis of the components of the preparation:

After inhalation: Irritations of the mucous membranes, coughing, and dyspnoea.

After skin contact: irritations

After eye contact: irritations

After ingestion: irritations of mucous membranes in the mouth, pharynx, oesophagus, and gastrointestinal tract.

Further information:

Further hazardous properties cannot be excluded.

The product should be handled with the care usual when dealing with chemicals.

12. Ecological information

Ecotoxic effects: Quantitative data on the ecological effect of this product are not available.

Further ecologic data:

The following applies to hydrochloric acid in general: Toxic for aquatic organisms. Harmful effect due to pH shift. Hydrochloric acid (including such due to reaction): lethal for fish as from 25 mg/l.

Fish toxicity: L.idus LC₅₀: 862 mg/l (Solution: 1N).

Toxicity limit: Plants: 6 mg/l. Does not cause biological oxygen deficit.

Do not allow to enter waters, waste water, or soil!

13. Disposal considerations

Product: There are no uniform EU Regulations for the disposal of chemicals or residues. Chemical residues generally count as special waste. The disposal of the latter is regulated in the EU member countries through corresponding laws and regulations. We recommend that you contact either the

authorities in charge or approved waste disposal companies which will advise you on how to dispose of special waste.

Packaging: Disposal in compliance with official regulations. Handle contaminated packaging in the same way as the substance itself. If not officially specified differently, non-contaminated packaging may be treated like household waste or recycled.

14. Transport information

Not subject to transport regulations.

15. Regulatory information

EC-classification: This product has been included in the dangerous substances index with its corresponding EC index number, so it has been classified according to the 67/548/EEC directive and its later adaptations.

Symbol: Xi (Irritant)

R-phrases: 36/37/38 Irritating to eyes, respiratory system and skin.

S-phrases: 26-37-45 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable gloves. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible)

EC-Index-No: 017-002-01-X

German regulations

Water pollution class 1 (slightly polluting substance)

Storage class VCI 8 B

16. Other information

Text of any R phrases of the dangerous components of the mixture:

Product: Hydrochloric acid

R34: Causes burns. R37: Irritating to respiratory system.

Date: 05/02/2007

The information supplied in this data sheet, is based on the present state of our knowledge. The purpose of this information, is only to describe the security measures to follow in the handling of the product.

Therefore it does not represent a guarantee about the properties of the product.

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