

COBALT (II) SULFATE HEPTAHYDRATE

SECTION 1: CHEMICAL PRODUCT IDENTIFICATION

Product Name: Cobalt(II) sulfate heptahydrate

Product Code: 978

CAS#: 10026-24-1

Synonym: Cobaltous sulfate

Chemical Name: Not available

Chemical Formula: $\text{CoO}_4\text{S} \cdot 7\text{H}_2\text{O}$

Formula weight : 281.10

SECTION 2: COMPOSITION AND INFORMATION ON INGREDIENTS

Composition:

Name: Cobalt(II) sulfate heptahydrate

Toxicological Data on Ingredients: Acute Tox. 4; Eye Irrit. 2; Resp. Sens. 1; Skin Sens. 1; Muta. 2; Carc. 1B; Repr. 1B; Aquatic Acute 1; Aquatic Chronic 1; H302, H319, H334, H317, H341, H350i, H360F, H400, H410

SECTION 3: HAZARDS IDENTIFICATION

Classification of the substance or mixture

Eye irritation (Category 2), H319

Respiratory sensitization (Category 1), H334

Skin sensitization (Category 1), H317

Germ cell mutagenicity (Category 2), H341

Reproductive toxicity (Category 1B), H360F

Potential Acute Health Effects: Short-term (acute) aquatic hazard (Category 1), H400

Potential Chronic Health Effects: Long-term (chronic) aquatic hazard (Category 1), H410

Carcinogenic Effects: Carcinogenicity, Inhalation (Category 1B), H350i

Mutagenic Effects: Not available.

Teratogenic Effects: Not available.

Developmental Toxicity: Not Available

SECTION 4: FIRST AID MEASURES

Description of first aid measures

General advice Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled If breathed in: Move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact Wash off with soap and plenty of water. Consult a physician.

In case of eye contact: Flush eyes with water as a precaution.

If swallowed: Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Most important symptoms and effects, both acute and delay: No data available

Indication of any immediate medical attention and special treatment needed: No data available

SECTION 5: FIRE AND EXPLOSION DATA

Extinguishing media

Suitable extinguishing media :



Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special hazards arising from the substance or mixture

Nitrogen oxides (NO_x)

Cobalt/cobalt oxides

Not combustible.

Has a fire-promoting effect due to release of oxygen.

Ambient fire may liberate hazardous vapours.

Development of hazardous combustion gases or vapours possible in the event of fire.

Advice for firefighters Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Avoid breathing dust.

Environmental precautions Do not let product enter drains.

Methods and materials for containment and cleaning up Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling

Work under hood. Do not inhale substance/mixture.

Conditions for safe storage, including any incompatibilities

Tightly closed. Dry. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorized persons

Storage Class:

Storage class (TRGS 510): 6.1D: Non-combustible, acute toxic Cat.3 / toxic hazardous materials or hazardous materials causing chronic effects

Specific end use(s) A part from the uses:

No other specific uses are stipulated

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure controls

Appropriate engineering controls Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure Do not let product enter drains.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance Form

: Crystalline



Colour	: Red Brown
Odour	: Not available
Odour Threshold	: Not available
pH	: Not available
Melting point/freezing point	: 98°C
Initial boiling point and boiling range	: Not available
Flash point	: Not available
Evaporation rate	: Not available
Flammability (solid, gas)	: Not available
Upper/lower flammability or explosive limits	: Not available
Vapour pressure	: Not available
Vapour density	: Not available
Relative density	: 2,03 g/cm ³ at 25 °C - lit.
Water solubility	: 362 g/l at 20 °C
Partition coefficient	: Not available
Auto-ignition temperature	: Not available

SECTION 10: STABILITY AND REACTIVITY DATA

Reactivity no data available

Chemical stability

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

Possibility of hazardous reactions

no data available

Conditions to avoid :

no data available

Incompatible materials

no data available

Hazardous decomposition products **Other decomposition products** - In the event of fire

SECTION 11: TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute Toxicity:

LD50 Oral - Rat - male and female - 1.330 mg/kg

Skin corrosion/irritation no data available

Serious eye damage/eye irritation no data available

Respiratory or skin sensitization no data available

Carcinogenicity

May cause cancer by inhalation.

SECTION 12: ECOLOGICAL INFORMATION

Toxicity:

Toxicity to fish semi-static test LC50 - Pimephales promelas (fathead minnow) -

1,866 mg/l - 96 h

Toxicity to daphnia static test LC50 - Ceriodaphnia dubia (water flea) - 0,39 mg/l - 48 h

and other aquatic invertebrates

Toxicity to algae static test ErC50 - Pseudokirchneriella subcapitata - 0,095 mg/l - 72

h

Toxicity to bacteria static test EC50 - activated sludge - 120 mg/l - 30 min

Persistence and degradability:



Not available.

Bioaccumulative potential no data available

Mobility in soil no data available

Results of PBT and vPvB assessment PBT/vPvB assessment not available

Other adverse effects no data available

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods Product Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging Dispose of as unused product.

SECTION 14: TRANSPORT INFORMATION

UN number:

ADR/RID: 3077

IMDG: 3077

IATA: 3077

UN proper shipping name

ADR/RID: Environmentally Hazardous Substance, Solid, N.O.S. (Cobalt(II) sulfate heptahydrate)

IMDG: Environmentally Hazardous Substance, Solid, N.O.S. (Cobalt(II) sulfate heptahydrate)

IATA: Environmentally Hazardous Substance, Solid, N.O.S. (Cobalt(II) sulfate heptahydrate)

Transport hazard class(es):

ADR/RID: 9

IMDG: 9

IATA: 9

Packaging group:

ADR/RID: III

IMDG: III

IATA: III

Environmental hazards:

ADR/RID: Yes

IMDG Marine pollutant: Yes

IATA: Yes

SECTION 15: OTHER REGULATORY INFORMATION

Regulatory information This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

SECTION 16: OTHER INFORMATION

References: Full text of H AND R-Statements.

H302 Harmful if swallowed.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H341 Suspected of causing genetic defects.

H350i May cause cancer by inhalation.

H360F May damage fertility.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

Other Special Considerations: Not available

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