

Copper(II) sulfate**12852-1KG**

Version 1.1

Revision Date 10/21/2021

Print Date 05/11/2023

SECTION 1. IDENTIFICATION

Product name : Copper(II) sulfate

Number : 000000020910

Product Use Description : Laboratory chemicals

Manufacturer or supplier's details : Honeywell International Inc.
1953 South Harvey Street
Muskegon, MI 49442

For more information call : 1-800-368-0050
+1-231-726-3171(Monday-Friday, 9:00am-5:00pm)

In case of emergency call : **Medical: 1-800-498-5701 or +1-303-389-1414**
: **Transportation (CHEMTREC): 1-800-424-9300 or**
: **+1-703-527-3887**
:
: (24 hours/day, 7 days/week)

SECTION 2. HAZARDS IDENTIFICATION**Emergency Overview**

Form : powder

Color : light grey

Odor : odourless

Classification of the substance or mixture

Classification of the substance or mixture : Acute toxicity, Category 4, Oral
Skin irritation, Category 2
Eye irritation, Category 2A

GHS Label elements, including precautionary statements

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Symbol(s)

:



Signal word

:

Warning

Hazard statements

:

Harmful if swallowed.
Causes skin irritation.
Causes serious eye irritation.

Precautionary statements

:

Prevention:

Wash skin thoroughly after handling.
Do not eat, drink or smoke when using this product.
Wear protective gloves/protective clothing/eye protection/face protection.

Response:

IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth.
IF ON SKIN: Wash with plenty of soap and water.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If skin irritation occurs: Get medical advice/ attention.
If eye irritation persists: Get medical advice/ attention.
Take off contaminated clothing and wash before reuse.

Disposal:

Dispose of contents/ container to an approved waste disposal plant.

Carcinogenicity

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP, IARC, or OSHA.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula

: CuO4S

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Chemical nature : Substance

Chemical name	CAS-No.	Concentration
Copper sulfate	7758-98-7	100.00 %

SECTION 4. FIRST AID MEASURES

- General advice : First aider needs to protect himself. Move out of dangerous area. Take off all contaminated clothing immediately. Show this safety data sheet to the doctor in attendance.
- Inhalation : Remove to fresh air. If breathing is difficult, give oxygen. Use oxygen as required, provided a qualified operator is present. Call a physician.
- Skin contact : Wash off immediately with plenty of water for at least 15 minutes. Take off contaminated clothing and shoes immediately. Wash contaminated clothing before re-use. Call a physician if irritation develops or persists.
- Eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician.
- Ingestion : Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Call a physician.

Notes to physician

- Most important symptoms/effects, acute and delayed : No information available.
- Indication of immediate medical attention and special treatment needed, if necessary : Treat symptomatically.

SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Water spray
Foam

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Carbon dioxide (CO₂)
Dry powderSpecific hazards during
firefighting: The product is not flammable.
In case of fire hazardous decomposition products may be
produced such as:
Copper oxides
Sulphur oxidesSpecial protective equipment
for firefighters

: Wear self-contained breathing apparatus and protective suit.

Further information

: Use extinguishing measures that are appropriate to local
circumstances and the surrounding environment.**SECTION 6. ACCIDENTAL RELEASE MEASURES**Personal precautions,
protective equipment and
emergency procedures: Wear personal protective equipment.
Evacuate personnel to safe areas.
Ensure adequate ventilation.
Avoid dust formation.
Avoid breathing dust.
Avoid contact with skin, eyes and clothing.

Environmental precautions

: Prevent further leakage or spillage if safe to do so.
Discharge into the environment must be avoided.
Do not flush into surface water or sanitary sewer system.
Do not allow run-off from fire fighting to enter drains or water
courses.Methods and materials for
containment and cleaning
up: Use mechanical handling equipment.
Sweep up and shovel into suitable containers for disposal.
Dispose of in accordance with local regulations.**SECTION 7. HANDLING AND STORAGE****Handling**Precautions for safe
handling: Wear personal protective equipment.
Use only in well-ventilated areas.
Avoid dust formation.

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Avoid inhalation, ingestion and contact with skin and eyes.

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Storage

Conditions for safe storage, including any incompatibilities : Keep containers tightly closed in a dry, cool and well-ventilated place.
Store in original container.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Protective measures : Ensure that eyewash stations and safety showers are close to the workstation location.
Legal requirements are to be considered in regard of the selection, use and care of personal protective equipment.
Avoid breathing dust.
Avoid contact with skin, eyes and clothing.

Engineering measures : Use with local exhaust ventilation.

Eye protection : Safety goggles

Hand protection : Protective gloves
Gloves must be inspected prior to use.
Replace when worn.

Skin and body protection : Protective suit

Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment.

Hygiene measures : Take off all contaminated clothing immediately.
Remove and wash contaminated clothing before re-use.
Keep working clothes separately.
Separate rooms are required for washing, showering and changing clothes.
Wash hands before breaks and at the end of workday.
Avoid contact with the skin and the eyes.

Exposure Guidelines

Components	CAS-No.	Value	Control	Upda	Basis
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Copper sulfate	7758-98-7	TWA : Time weighted average	parameters 0.2 mg/m3	te 03 2014	ACGIH:US. ACGIH Threshold Limit Values, as amended
Further information	:	Form of exposure : Fume. Expressed as : as Cu			
Copper sulfate	7758-98-7	TWA : Time weighted average	1 mg/m3	03 2014	ACGIH:US. ACGIH Threshold Limit Values, as amended
Further information	:	Form of exposure : dust/mist Expressed as : as Cu			
Copper sulfate	7758-98-7	REL : Recomm ended exposure limit (REL):	0.1 mg/m3	2016	NIOSH/GUIDE:US. NIOSH: Pocket Guide to Chemical Hazards, as amended
Further information	:	Form of exposure : Fume. Expressed as : as Cu			
Copper sulfate	7758-98-7	REL : Recomm ended exposure limit (REL):	1 mg/m3	2005	NIOSH/GUIDE:US. NIOSH: Pocket Guide to Chemical Hazards, as amended
Further information	:	Form of exposure : dust/mist Expressed as : as Cu			

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state : powder

Color : light grey

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Odor	: odourless
Odor threshold	: Note: No data available
pH	: Note: No data available
Melting point/range	: Note: No data available
Boiling point/boiling range	: Note: Decomposes on heating.
Flash point	: Note: Not applicable
Evaporation rate	: Note: No data available
Flammability	: The product is not flammable.
Lower explosion limit	: Note: Not applicable
Upper explosion limit	: Note: Not applicable
Vapor pressure	: Note: negligible
Vapor density	: Note: No data available
Density	: ca. 3.606 g/cm ³ at 20 °C
Water solubility	: Note: completely soluble
Partition coefficient: n-octanol/water	: Note: No data available

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Ignition temperature	: Note: Not applicable
Auto-ignition temperature	: Note: not auto-flammable
Decomposition temperature	: 340 - 650 °C
Viscosity, dynamic	: Note: No data available
Viscosity, kinematic	: Note: No data available
Oxidizing properties	: The substance or mixture is not classified as oxidizing.
Molecular weight	: 159.61 g/mol
Bulk density	: ca. 1,000 kg/m ³

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: Not classified as a reactivity hazard.
Chemical stability	: Stable under recommended storage conditions.
Possibility of hazardous reactions	: Hazardous polymerisation does not occur.
Conditions to avoid	: Protect from heat/overheating. Protect from atmospheric moisture and water. Avoid dust formation.
Incompatible materials	: Reactions with various metals. Acetylene
Hazardous decomposition products	: In case of fire hazardous decomposition products may be produced such as: Copper oxides Sulphur oxides

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SECTION 11. TOXICOLOGICAL INFORMATION

Acute oral toxicity	: LD50: 482 mg/kg Species: Rat, male and female Method: OECD Test Guideline 401
Acute inhalation toxicity	: Note: No data available
Acute dermal toxicity	: LD50: > 2,000 mg/kg Species: Rat Method: OECD Test Guideline 402 Note: No deaths
Skin irritation	: Note: Classification based on Annex VI of regulation 1272/2008/EC.
Eye irritation	: Species: Rabbit Result: Irritating to eyes. Method: OECD Test Guideline 405
Sensitisation	: Species: Guinea pig Result: non-sensitizing Method: OECD Test Guideline 406
Repeated dose toxicity	: Note: Not classified due to data which are conclusive although insufficient for classification.
Genotoxicity in vitro	: Test Method: Ames test Metabolic activation: with and without metabolic activation Result: negative Method: OECD Test Guideline 471
Genotoxicity in vivo	: Test Method: Micronucleus test Species: Mouse

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	Method: Mutagenicity (micronucleus test) Result: negative
Genotoxicity in vivo	: Test Method: unscheduled DNA synthesis assay Species: Rat Method: OECD Test Guideline 486 Result: negative
Carcinogenicity	: Species: not specified Note: Not classified due to data which are conclusive although insufficient for classification.
Reproductive toxicity	: Species: not specified Note: Not classified due to data which are conclusive although insufficient for classification.

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity effects**

Toxicity to fish	: Note: Classification based on Annex VI of regulation 1272/2008/EC.
Toxicity to daphnia and other aquatic invertebrates	: Note: Classification based on Annex VI of regulation 1272/2008/EC.
Toxicity to algae	: Note: Classification based on Annex VI of regulation 1272/2008/EC.

Elimination information (persistence and degradability)

Biodegradability	: Note: The methods for determining biodegradability are not applicable to inorganic substances.
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Further information on ecology

Additional ecological	: Very toxic to aquatic life with long lasting effects.
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information

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods : Observe all Federal, State, and Local Environmental regulations.

SECTION 14. TRANSPORT INFORMATION

DOT UN/ID No. : UN 3077
Proper shipping name : Environmentally hazardous substances, solid, n.o.s. (Copper sulphate)
Class : 9
Packing group : III
Hazard Labels : 9

IATA UN/ID No. : UN 3077
Description of the goods : Environmentally hazardous substances, solid, n.o.s. (Copper sulphate)
Class : 9
Packaging group : III
Hazard Labels : 9
Packing instruction (cargo aircraft) : 956
Packing instruction (passenger aircraft) : 956
Packing instruction (passenger aircraft) : Y956

IMDG UN/ID No. : UN 3077
Description of the goods : Environmentally hazardous substances, solid, n.o.s. (COPPER SULPHATE)
Class : 9
Packaging group : III
Hazard Labels : 9
EmS Number : F-A, S-F
Marine pollutant : yes

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Not regulated for transport when single and combination packagings are <5L for liquids or <5kg for solids per ADR 2.2.9.2.10, IMDG 2.10.3 and IATA SP A197).

SECTION 15. REGULATORY INFORMATION**Inventories**

US. Toxic Substances Control Act : On TSCA Inventory

Australia. Industrial Chemicals Act (AICC), as amended : On the inventory, or in compliance with the inventory

Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL) : All components of this product are on the Canadian DSL

Japan. Kashin-Hou Law List : On the inventory, or in compliance with the inventory

Korea. Existing Chemicals Inventory (KECI) : On the inventory, or in compliance with the inventory

Philippines. Inventory of Chemicals and Chemical Substances (PICCS) : On the inventory, or in compliance with the inventory

China. Inventory of Existing Chemical Substances (IECSC) : On the inventory, or in compliance with the inventory

New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand : On the inventory, or in compliance with the inventory

National regulatory information

US. EPA CERCLA Hazardous Substances (40 : The following component(s) of this product is/are subject to release reporting under 40 CFR 302 when release exceeds the

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CFR 302)

Reportable Quantity (RQ):

Reportable quantity: 10 lbs

SARA 302 Components : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components : The following components are subject to reporting levels established by SARA Title III, Section 313:
: Copper sulfate 7758-98-7

SARA 311/312 Hazards : Acute Health Hazard

CERCLA Reportable Quantity : 10 lbs

California Prop. 65 : This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

Massachusetts RTK : Copper sulfate 7758-98-7

New Jersey RTK : Copper sulfate 7758-98-7

Pennsylvania RTK : Copper sulfate 7758-98-7

SECTION 16. OTHER INFORMATION

	HMIS III	NFPA
Health hazard	: 2	2
Flammability	: 0	0
Physical Hazard	: 0	
Instability	:	0

Hazard rating and rating systems (e.g. HMIS® III, NFPA): This information is intended solely for the use of individuals trained in the particular system.

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Further information

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. Final determination of suitability of any material is the sole responsibility of the user. This information should not constitute a guarantee for any specific product properties.

Changes since the last version are highlighted in the margin. This version replaces all previous versions.

Previous Issue Date: 10/25/2016

Prepared by Honeywell Performance Materials and Technologies Product Stewardship Group