

**Copper(II) nitrate trihydrate**  
**61194-500G**

Version 1.0

Issuing date 06/13/2017

Revision Date 06/13/2017

Print Date 08/07/2019

**1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING****Product information**

Trade name : Copper(II) nitrate trihydrate

Number : 000000020736

Recommended use of the chemical and restrictions on use : Laboratory chemicals

Manufacturer or supplier's details : Honeywell Specialty Chemicals Seelze GmbH  
Wunstorfer Straße 40  
Seelze, 30926

For further information, please contact: : 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**  
: **In Japan: +(81)-345209637**  
: (24 hours/day, 7 days/week)

**2. HAZARDS IDENTIFICATION****Classification of the substance or mixture**

Classification of the substance or mixture : Oxidizing solids, Category 1  
Corrosive to metals, Category 1  
Skin corrosion, Category 1B  
Serious eye damage, Category 1  
Acute aquatic toxicity, Category 1  
Chronic aquatic toxicity, Category 1

**GHS Label elements, including precautionary statements**

Symbol(s) :



Signal word : Danger

**Copper(II) nitrate trihydrate****61194-500G**

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- Hazard statements** : May cause fire or explosion; strong oxidizer.  
May be corrosive to metals.  
Causes severe skin burns and eye damage.  
Very toxic to aquatic life with long lasting effects.
- Precautionary statements** : **Prevention:**  
Keep away from heat.  
Keep/Store away from clothing/ combustible materials.  
Take any precaution to avoid mixing with combustibles.  
Keep only in original container.  
Do not breathe dust or mist.  
Wash skin thoroughly after handling.  
Avoid release to the environment.  
Wear protective gloves/ protective clothing/ eye protection/ face protection.  
Wear fire/ flame resistant/ retardant clothing.
- Response:**  
IF SWALLOWED: rinse mouth. Do NOT induce vomiting.  
IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.  
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
IF ON CLOTHING: rinse immediately contaminated clothing and skin with plenty of water before removing clothes. Immediately call a POISON CENTER/doctor.  
Wash contaminated clothing before reuse.  
In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.  
In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.  
Absorb spillage to prevent material damage.  
Collect spillage.
- Storage:**  
Store locked up.  
Store in corrosive resistant container with a resistant inner liner.
- Disposal:**  
Dispose of contents/ container to an approved waste disposal plant.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

**Copper(II) nitrate trihydrate****61194-500G**

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Chemical nature : Substance

Chemical name	CAS-No.	Concentration
Copper(II) nitrate-3-hydrate	10031-43-3	100.00 %
Copper(II) nitrate-3-hydrate		

**4. FIRST AID MEASURES**

- General advice : Move out of dangerous area.  
First aider needs to protect himself.  
Show this safety data sheet to the doctor in attendance.
- Inhalation : If inhaled, remove to fresh air.  
If breathing is difficult, give oxygen.  
Call a physician.
- Skin contact : After contact with skin, wash immediately with plenty of water.  
Call a physician.
- Eye contact : Protect unharmed eye.  
Rinse thoroughly with plenty of water, also under the eyelids.  
Call a physician immediately.
- Ingestion : When swallowed, allow water to be drunk.  
Do NOT induce vomiting.  
Call a physician immediately.

**5. FIREFIGHTING MEASURES**

- Suitable extinguishing media : Water spray  
Foam  
Carbon dioxide (CO<sub>2</sub>)  
Dry powder
- Specific hazards during firefighting : Strong oxidizer. Contact with other material may cause fire.  
Keep away from reducing agents.  
In fires, the product supports combustion.  
In case of fire hazardous decomposition products may be produced such as:  
Copper oxides  
nitrogen oxides (NO<sub>x</sub>)
- Special 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.

**Copper(II) nitrate trihydrate****61194-500G**

Version 1.0

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Revision Date 06/13/2017

Print Date 08/07/2019

**6. ACCIDENTAL RELEASE MEASURES**

- |   |   |   |
|---|---|---|
| Personal precautions,<br>protective equipment and<br>emergency procedures | : | Wear personal protective equipment.<br>Evacuate personnel to safe areas.<br>Ensure adequate ventilation.<br>Avoid dust formation.<br>Do not breathe dust.<br>Do not get in eyes, on skin, or on clothing.   |
| Environmental precautions   | : | Prevent further leakage or spillage if safe to do so.<br>Discharge into the environment must be avoided.<br>Do not flush into surface water or sanitary sewer system.<br>Do not allow run-off from fire fighting to enter drains or water<br>courses. |
| Methods and materials for<br>containment and cleaning up                  | : | Use mechanical handling equipment.<br>Sweep up and shovel into suitable containers for disposal.<br>Do not pick up with the help of saw-dust or other combustible<br>substances.<br>Dispose of in accordance with local regulations.                  |

**7. HANDLING AND STORAGE****Handling**

- |                               |   |  |
|-------------------------------|---|--|
| Precautions for safe handling | : | Wear personal protective equipment.<br>Use only in well-ventilated areas.<br>Avoid dust formation.<br>Never return unused material to storage receptacle.<br>Do not breathe dust.<br>Do not get in eyes or mouth or on skin. |
|-------------------------------|---|--|

- |  |   |   |
|--|---|---|
| Advice on protection against<br>fire and explosion | : | Keep away from easily oxidizable materials.<br>Keep away from combustible material. |
|--|---|---|

**Storage**

- |  |   |   |
|--|---|---|
| Conditions for safe storage,<br>including any<br>incompatibilities | : | Store in original container.<br>Keep containers tightly closed in a dry, cool and well-<br>ventilated place.<br>Keep away from heat and sources of ignition.<br>Do not store near combustible materials.<br>Protect from physical damage.<br>Store away from incompatible substances. |
|--|---|---|

**Copper(II) nitrate trihydrate****61194-500G**

Version 1.0

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Further information on storage conditions : Protect from atmospheric moisture and water.  
Advice on common storage : Keep away from reducing agents.  
Do not store with combustible materials.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Components with workplace control parameters**

Contains no substances with occupational exposure limit values.

**Appropriate engineering controls**

Use with local exhaust ventilation.

**Individual protection measures, such as personal protective equipment**

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

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

Eye protection : Safety goggles

Skin and body protection : Protective suit

Hygiene measures : Keep working clothes separately.  
Separate rooms are required for washing, showering and changing clothes.  
When using, do not eat, drink or smoke.

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.  
Do not breathe dust.  
Do not get in eyes, on skin, or on clothing.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

Physical state : solid

Colour : blue green

Odour : odourless

**Copper(II) nitrate trihydrate****61194-500G**

Version 1.0

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pH : 3.5 - 4.5 at 50.00 g/l, 20 °C

Melting point (decomposition) : > 114 °C  
Note: Decomposition

Flash point : Note: Not applicable

Flammability : The product is not flammable.

Lower explosion limit : Note: Not applicable

Upper explosion limit : Note: Not applicable

Vapour pressure :  
Note: no data availableDensity : ca. 2.05 g/cm<sup>3</sup> at 20 °C

Water solubility : 1,300 g/l at 20 °C

Partition coefficient: n-octanol/water : Note: no data available

Ignition temperature : Note: Not applicable

Auto-ignition temperature : Note: not auto-flammable

Viscosity, dynamic : Note: Not applicable

Viscosity, kinematic : Note: Not applicable

Oxidizing properties : The substance or mixture is classified as oxidizing with the category 1.

Bulk density : ca. 1,600 kg/m<sup>3</sup>  
6/11

**Copper(II) nitrate trihydrate**  
**61194-500G**

Version 1.0

Issuing date 06/13/2017

Revision Date 06/13/2017

Print Date 08/07/2019

Corrosivity : Note: Corrosive to metals

**10. STABILITY AND REACTIVITY**

- Chemical stability : Stable under normal conditions.
- Possibility of hazardous reactions : Hazardous polymerisation does not occur.  
Corrosive in contact with metals
- Conditions to avoid : Keep away from heat and sources of ignition.  
Keep away from reducing agents.  
Avoid contact with combustible material (paper, wool, oil).  
Avoid dust formation.
- Incompatible materials to avoid : Potassium Ferrocyanide  
Tin  
Reducing agents  
Combustible material  
As oxidising agent, attacks organic substances such as wood, paper, fats.
- Hazardous decomposition products : In case of fire hazardous decomposition products may be produced such as:  
Copper oxides  
nitrogen oxides (NO<sub>x</sub>)

**11. TOXICOLOGICAL INFORMATION**

- Acute oral toxicity : Note: no data available
- Acute inhalation toxicity : Note: no data available
- Acute dermal toxicity : Note: no data available
- Skin irritation : Species: reconstructed human epidermis (RhE)  
Result: Category 1B  
Classification: Causes severe burns.  
Method: OECD Test Guideline 431  
Test substance: Copper(II) nitrate hydrate

**Copper(II) nitrate trihydrate**  
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Eye irritation : Result: Risk of serious damage to eyes.  
Classification: Risk of serious damage to eyes.

Sensitisation : Maximisation Test  
Species: Guinea pig  
Result: Did not cause sensitisation on laboratory animals.  
Classification: Does not cause skin sensitisation.  
Method: OECD Test Guideline 406

**12. ECOLOGICAL INFORMATION****Toxicity**

Toxicity to fish : Note: no data available

Toxicity to daphnia and other aquatic invertebrates : Note: no data available

Toxicity to algae : Note: no data available

**Other adverse effects**

Additional ecological information : Very toxic to aquatic life with long lasting effects.  
The methods for determining biodegradability are not applicable to inorganic substances.

**13. DISPOSAL CONSIDERATIONS**

Disposal methods : In accordance with local and national regulations.

**14. TRANSPORT INFORMATION**



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**ADR**

UN/ID No. : UN 3085  
Description of the goods : OXIDIZING SOLID, CORROSIVE, N.O.S.  
(COPPER(II) NITRATE-3-HYDRATE)  
Class : 5.1  
Packing group : I  
Classification Code : OC2  
Labels : 5.1 (8)

**IATA**

UN/ID No. : UN 3085  
Description of the goods : Oxidizing solid, corrosive, n.o.s.  
(Copper(II) nitrate-3-hydrate)  
Class : 5.1  
Packing group : I  
Labels : 5.1 (8)  
Packing instruction (cargo aircraft) : 561  
Packing instruction (passenger aircraft) : 557

**IMDG**

UN/ID No. : UN 3085  
Description of the goods : OXIDIZING SOLID, CORROSIVE, N.O.S.  
(COPPER(II) NITRATE-3-HYDRATE)  
Class : 5.1  
Packing group : I  
Labels : 5.1 (8)  
EmS Number 1 : F-A  
EmS Number 2 : S-Q  
Marine pollutant : yes

**15. REGULATORY INFORMATION****National regulatory information**

Vessel Safety Law : Oxidizing substances and organic peroxides (Article 2 and 3 of  
JP VSL rules on shipping and storage of dangerous goods and its  
Attached Table 1)

Aviation Law : Oxidizing substances and organic peroxides (Article 194 of The  
JP AVL Enforcement Rules of Aviation Law and its Attached Table 1)

Deleterious Substances - : Listed  
Cabinet Order

**Copper(II) nitrate trihydrate****61194-500G**

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Revision Date 06/13/2017

Print Date 08/07/2019

JP DS CO

72

Substances Subject to be :

Notified Names

Threshold Concentration: 0.1 % wt 379

JP MSDSD

Substances Subject to be :

Indicated Names

Article 18

Threshold limits: 1 % wt 379

JPISHL LR

**Other international regulations****Notification status**US. Toxic Substances : On TSCA Inventory  
Control ActAustralia. Industrial Chemical : On the inventory, or in compliance with the inventory  
(Notification and  
Assessment) ActCanada. Canadian : All components of this product are on the Canadian DSL  
Environmental Protection Act  
(CEPA). Domestic  
Substances List (DSL)

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

Korea. Toxic Chemical : On the inventory, or in compliance with the inventory  
Control Law (TCCL) ListPhilippines. The Toxic : On the inventory, or in compliance with the inventory  
Substances and Hazardous  
and Nuclear Waste Control  
ActChina. Inventory of Existing : On the inventory, or in compliance with the inventory  
Chemical SubstancesNew Zealand. Inventory of : On the inventory, or in compliance with the inventory  
Chemicals (NZIoC), as  
published by ERMA New  
Zealand

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**16. OTHER INFORMATION**

	<b>HMIS III</b>	<b>NFPA</b>
Health hazard	: 3	3
Flammability	: 0	0
Physical Hazard	: 1	
Instability	:	0
Special hazard.	:	OX

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.

**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.

Prepared by Honeywell Performance Materials and Technologies Product Stewardship Group