



Material Safety Data Sheet Copper Carbonate, Basic

Edition: 16/09//2014
In compliance with Regulation (EC)1907/2006

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

1.1) Product Identifier

Material	Copper Carbonate, Basic
Synonyms	Copper(II) Carbonate-Copper(II) Hydroxide (1:1)
EC No	235-113-6
CAS No	12069-69-1
REACH registration No	01-2119513711-50
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1.2) Relevant identified uses of the substance or mixture and uses advised against

1.2.1) Relevant identified uses

Industrial use

Reference to relevant exposure scenarios:

For an overview of the exact titles of the relevant exposure scenarios please refer to section 16 of this SDS.

2) Hazard Identification

2.1) Classification of the substance or mixture

Classification in accordance with Regulation (EC) No 1272/2008 (CLP)

- Acute Tox. 4; H302
- Aquatic Acute 1; H400
- Aquatic Chronic 1; H410

Classification in accordance with Directive 67/548/EEC or 1999/45/EC

- N; R50/53
- Xn; R22

Note	Specific concentration limit	M-factor (acute)	M-factor (chronic)
-	-	M = 10	-

2.2) Label elements

Labelling according to Regulation (EC) No. 1272/2008 (CLP)

Product identifier

12069-69-1 (copper(II) carbonate--copper(II) hydroxide (1:1))

Hazard pictograms



GHS07



GHS09

Signal word

Warning

Hazard statements

- H302- Harmful if swallowed.
- H410- Very toxic to aquatic life with long lasting effects.

Precautionary statements

- P273- Avoid release to the environment.
- P301+P312- IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
- P330- Rinse mouth.
- P391- Collect spillage.
- P501- Dispose of contents/container to hazardous or special waste collection point.

2.3) Other hazards

No data available

3) Composition/Information on ingredients

3.1) Substances

Chemical characterisation

Substance name: copper(II) carbonate--copper(II) hydroxide (1:1)

Identification numbers

CAS no.: 12069-69-1

EC no. 235-113-6

3.2) Mixtures

Not applicable. The product is not a mixture.

4) First Aid Measures

4.1) Description of first aid measures

- **General information:** In case of persisting adverse effects, consult a physician. Change contaminated, saturated clothing. Poisonous symptoms can first be observed after several hours, therefore medical observation for at least 48 hours is necessary.
- **After inhalation:** Remove affected person from the immediate area. Ensure supply of fresh air.
- **After skin contact:** Wash off immediately with soap and water.
- **After eye contact:** Separate eyelids, wash the eyes thoroughly with water (15 min.). Seek medical assistance.
- **After ingestion:** Seek medical advice immediately. Rinse out mouth and give plenty of water to drink. Do not induce vomiting. Never give anything by mouth to an unconscious person.

4.2) Most important symptoms and effects, both acute and delayed

No data available.

4.3) Indication of any immediate medical attention and special treatment needed

No data available.

5) Firefighting Measures

5.1) Extinguishing media

- **Suitable extinguishing media:** Carbon dioxide; Extinguishing powder; Water spray jet; Extinguishing measures to suit surroundings.
- **Unsuitable extinguishing media:** High power water jet

5.2) Special hazards arising from the substance or mixture

In the event of fire, the following can be released: Carbon dioxide (CO₂); Carbon monoxide (CO)

5.3) Advice for firefighters

Product itself does not burn. Adapt extinguisher and fire-fighting measures to fire in the environment. Run-off water from fire fighting must not be discharged into drains or enter surface water. Fire-fighting operations, rescue and clearing work under effect of combustion and smoulder gases just may be done with breathing apparatus. Wear protective clothing.

6) Accidental Release Measures

6.1) Personal precautions, protective equipment and emergency procedures

- **For non-emergency personnel:** Refer to protective measures listed in sections 7 and 8. Ensure adequate ventilation. Avoid dust formation.
- **For emergency responders:** No data available. Personal protective equipment (PPE) - see Section 8.
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6.2) Environmental precautions

Do not discharge into the drains/surface waters/groundwater. Do not discharge into the subsoil/soil.

6.3) Methods and material for containment and cleaning up

Take up mechanically. When picked up, treat material as prescribed under heading "Disposal considerations".

6.4) Reference to other sections

No data available.

7) Handling and Storage

7.1) Precautions for safe handling

- **Advice on safe handling:** Avoid the formation and deposition of dust. Provide good ventilation of working area (local exhaust ventilation, if necessary).
- **General protective and hygiene measures:** Do not eat, drink or smoke during work time. Keep away from foodstuffs and beverages. Wash hands before breaks and after work. Provide eye wash fountain in work area. Do not inhale dust.
- **Advice on protection:** against fire and explosion No special measures necessary.

7.2) Conditions for safe storage, including any incompatibilities

- **Technical measures and storage conditions:** Keep container tightly closed in a cool, well-ventilated place.
- **Recommended storage temperature:**
Value 0 - 30°C
- **Requirements for storage rooms and vessels:** Store product in closed containers.
- **Advice on storage assembly:** Do not store together with foodstuffs. Do not store together with acids.

7.3) Specific end use(s)

No data available

8) Exposure Controls/Personal Protection**8.1) Control parameters****DNEL and PNEC Values****DNEL values (worker)**

No	Substance name			CAS / EC no
	Route of exposure	Exposure time	Effect	Value
1	copper(II) carbonate—copper(II) hydroxide (1:1)			12069-69-1 235-113-6
	dermal			9566.9 mg/kg/day
	with reference to: solid			
	dermal			956.9 mg/kg/day
	with reference to: slurry			
	inhalative			1 mg/m ³

PNEC values

No	Substance name		CAS/EC no
	Ecological compartment	Type	Value
1	copper(II) carbonate--copper(II) hydroxide (1:1)		12069-69-1 235-113-6
	Water	Fresh water	0.0078 mg Cu L-1
	Water	Fresh water sediment	87.1 mg Cu kg dwt-1
	Water	Marine water	0.0056 mg Cu L-1
	Water	Marine water sediment	676 mg Cu kg dwt-1
	Soil	-	64.6 mg Cu kg dwt-1
	Sewage treatment plant	-	0.23 mg Cu L-1

8.2) Exposure controls**Appropriate engineering controls:** no data available**Personal protective equipment**

- **Respiratory protection:** If workplace exposure limits are exceeded, a respiration protection approved for this particular job must be worn. In case of dust formation, take appropriate measures for breathing protection in the event workplace threshold values are not specified. Respiratory filter (part): P2
- **Eye / face protection:** Safety glasses (EN 166)
- **Hand protection:** In case of intensive contact, wear protective gloves (EN 374). Before use, the protective gloves should be tested in any case for its specific work-station suitability (i.e. mechanical resistance, product compatibility and antistatic properties). Adhere to the

manufacturer's instructions and information relating to the use, storage, care and replacement of protective gloves. Protective gloves shall be replaced immediately when physically damaged or worn. Design operations thus to avoid permanent use of protective gloves. Sufficient protection is given wearing suitable protective gloves checked according to i.e. EN 374, in the event of risk of skin contact with the product.

Appropriate Material: PVC

Breakthrough time > 480 min.

- **Other:** Normal chemical work clothing.
- **Environmental exposure controls:** No data available.

9) Physical/Chemical Properties

9.1) Information of the basic physical and chemical properties

Form/Colour	Powder/green
Odour	Odourless
Odour threshold	Not applicable
pH value	No data available
Boiling point/boiling range	Remarks Decomposes below boiling point
Melting point/melting range	Remarks Decomposes before melting
Decomposition point/ decomposition range	Value > 200 °C
Flash point	Not applicable
Auto-ignition temperature	Remarks Product is not selfigniting.
Oxidising properties	Not oxidising
Explosive properties	The product does not have explosive properties.
Flammability (solid, gas)	not flammable
Lower flammability or explosive limits	Not applicable
Upper flammability or explosive limits	Not applicable
Vapour pressure	Remarks negligible
Vapour density	cannot be determined
Evaporation rate	Not applicable
Relative density	Value 3.761
Density	No data available
Bulk density	Value 400 - 1000 kg/m ³ Reference temperature 20 °C
Solubility in water	Value 1.237 mg/l Reference temperature 20 °C Remarks pH 5.8 - 6.1
Solubilitu(ies)	No data available
Partition coefficient: n-octanol/water	Not applicable
Viscosity	Not applicable

9.2) Other Information

No data available

10) Stability/Reactivity

10.1) Reactivity

No data available

10.2) Chemical stability

No data available

10.3) Possibility of hazardous reactions

No data available

10.4) Conditions to avoid

Reactions with acids.

10.5) Incompatible materials

Acids

10.6) Hazardous decomposition products

Carbon dioxide

11) Toxicological Information**11.1) Information on toxicological effects**

Acute oral toxicity	
LD50	1350 mg/kg
Species	Rat
Source	manufacturer

Acute dermal toxicity	
LD50	> 2000 mg/kg
Species	Rat
Method	OECD 402
Source	manufacturer

Acute inhalational toxicity	
LC50	1.03 - 5.02 mg/l
Duration of exposure	4h
State of aggregation	Dust/mist
Species	rat
Method	OECD 403
Source	manufacturer

Skin corrosion/irritation	
Species	rabbit
Method	OECD 404
Evaluation	Non-irritant

Serious eye damage/irritation	
Species	rabbit
Method	OECD 405

Evaluation	Non-irritant
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Respiratory or skin sensitisation	
Route of exposure	Skin
Species	Guinea pig
Method	OECD 406
Remarks	No sensitising effects are known

Germ cell mutagenicity	
Source	European Union Risk Assessment Report
Evaluation	Copper substances are considered to be not mutagenic.

Reproduction toxicity	
Source	European Union Risk Assessment Report
Evaluation	Copper substances are considered to be not toxic to reproduction

Carcinogenicity	
Source	European Union Risk Assessment Report
Evaluation	Copper substances are considered to be not carcinogenic.

STOT-single exposure	
No data available	

STOT-repeated exposure	
No data available	

Aspiration hazard	
No data available	

Symptoms related to the physical, chemical and toxicological characteristics	
Eye contact may cause mechanical irritation through dust particles.	

Delayed and immediate effects as well as chronic effects from short and long-term exposure	
Inhalation of dusts may irritate the respiratory tract.	

Other information	
Exercise customary precautions when handling chemicals.	

12) Ecological Information

12.1) Toxicity

Toxicity to fish (acute)	
LC50	> 0.048 mg Cu/l

Duration of exposure	96 h
State of aggregation	Dust/mist
Species	Oncorhynchus mykiss
Method	OECD 203
Source	manufacturer

Toxicity to fish (chronic)	
No data available	

Toxicity to Daphnia (acute)	
EC50	0.0229 mg Cu/l
Duration of exposure	48 h
Species	Daphnia magna
Method	OECD 202
Source	manufacturer

Toxicity to Daphnia (chronic)	
No data available	

Toxicity to algae (acute)	
EbC50	0.0236 mg Cu/l
Duration of exposure	72h
Species	Scenedesmus subspicatus
Method	OECD 201
Source	manufacturer

Toxicity to algae (chronic)	
No data available	

Bacteria toxicity	
EC50	> 1000 mg/l
Duration of exposure	3h
Species	bacteriae
Method	OECD 209
Source	manufacturer

12.2) Persistence and degradability

No data available

12.3) Bioaccumulative potential

Partition coefficient: n-octanol/water: not applicable

12.4) Mobility in soil

No data available.

12.5) Results of PBT and vPvB assessment

No data available.

12.6) Other adverse effects

No data available.

12.7) Other Information

Do not allow to enter soil, waterways, or waste water canal.

13) Disposal Considerations**13.1) Waste treatment methods**

- **Product:** Allocation of a waste code number, according to the European Waste Catalogue, should be carried out in agreement with the regional waste disposal company.
- **Packaging:** Residuals must be removed from packaging and when emptied completely disposed of in accordance with the regulations for waste removal. Incompletely emptied packaging must be disposed of in the form of disposal specified by the regional disposer.

14) Transport Information**14.1) Transport ADR/RID/AND**

Class	9
Classification code	M7
Packing group	III
Hazard identification no.	90
UN number	UN3077
Technical name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Danger releasing substance	copper(II) carbonate--copper(II) hydroxide (1:1)
Tunnel restriction code	E
Label	9
Environmentally hazardous substance mark	Symbol "fish and tree"

14.2) Transport IMDG

Class	9
Packing group	III
UN number	UN3077
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Danger releasing substance	copper(II) carbonate--copper(II) hydroxide (1:1)
EmS	F-A+S-F
Label	9
Marine pollutant mark	Symbol "fish and tree"

14.3) Transport ICAO-TI / IATA

Class	9
Packing group	III
UN number	UN3077
Proper shipping name	Environmentally hazardous substance, solid, n.o.s.
Danger releasing substance	copper(II) carbonate--copper(II) hydroxide (1:1)
EmS	F-A+S-F
Label	9
Environmentally hazardous substance mark	Symbol "fish and tree"

14.4) Other information

No data available

14.5) Environmental hazards

Information on environmental hazards, if relevant, please see 14.1 - 14.3.

14.6) Special precautions for user

No data available

14.7) Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not relevant.

15) Regulatory Information**15.1) Safety, health and environmental regulations/legislation specific for the substance or mixture****EU Regulations****Council Directive 96/82/EC on the control of major-accident hazards involving dangerous substances:**

Remarks- Annex I, part 2, category 9 a

15.2) Chemical Safety Assessment

For this substance a chemical safety assessment has been carried out.

16) Other Information**Sources of key data used to compile the data sheet:**

- EC Directive 67/548/EC resp. 1999/45/EC as amended in each case.
- Regulation (EC) No 1907/2006 (REACH), 1272/2008 (CLP) as amended in each case.
- EC Directives 2000/39/EC, 2006/15/EC, 2009/161/EU
- National Threshold Limit Values of the corresponding countries as amended in each case.
- Transport regulations according to ADR, RID, IMDG, IATA as amended in each case.

- The data sources used to determine physical, toxic and ecotoxic data, are indicated directly in the corresponding chapter.

Full text of the R-, H- and EUH- phrases drawn up in sections 2 and 3 (provided not already drawn up in these sections):

- R22 Harmful if swallowed.
- R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- H400 Very toxic to aquatic life.

List of existing exposition scenarios:

- ES001 Formulation and (re)packing of substance and mixtures - industrial use
- ES002 Formulation in materials - industrial use
- ES003 Use in absorbents - industrial use
- ES004 Use as catalysts - industrial use
- ES005 Metal surface treatment in electroplating (solid) - industrial use

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