

## Chemical Safety Data Sheet MSDS / SDS

**BRASS**Revision Date:2026-05-31 Revision Number:1

---

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****Product identifier**

Product name : BRASS  
CBnumber : CB9485826  
CAS : 63338-02-3  
EINECS Number : 215-270-7  
Synonyms : BRASS,COPPER-ZINC ALLOY

**Relevant identified uses of the substance or mixture and uses advised against**

Relevant identified uses : For R&D use only. Not for medicinal, household or other use.  
Uses advised against : none

**Company Identification**

Company : Chemicalbook  
Address : Building 1, Huihuang International, Shangdi 10th Street, Haidian District, Beijing  
Telephone : 010-86108875

---

**SECTION 2: Hazards identification****GHS Label elements, including precautionary statements**

Symbol(GHS)



Signal word

Warning

**Precautionary statements**

P273 Avoid release to the environment.  
P391 Collect spillage. Hazardous to the aquatic environment  
P501 Dispose of contents/container to.....

**Hazard statements**

H410 Very toxic to aquatic life with long lasting effects

---

**SECTION 3: Composition/information on ingredients****Substance**

Product name	: BRASS
Synonyms	: BRASS,COPPER-ZINC ALLOY
CAS	: 63338-02-3
EC number	: 215-270-7
MF	: CuPbZn
MW	: 336.14

---

## SECTION 4: First aid measures

### General advice

First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance.

### If inhaled

After inhalation: fresh air. Immediately call in physician. If breathing stops: immediately apply artificial respiration, if necessary also oxygen.

### In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.

### In case of eye contact

After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

### If swallowed

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

### Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11

### Protection of first-aiders

For personal protection see section 8.

### Notes to physician

No data available

---

## SECTION 5: Firefighting measures

### Suitable extinguishing media

Carbon dioxide (CO<sub>2</sub>) Dry powder

### Unsuitable extinguishing media

Water Foam

### Specific hazards during fire fighting

Mixture with combustible ingredients. May not get in touch with: Water Development of hazardous combustion gases or vapours possible in the event of fire.

## **Hazardous combustion products**

Zinc/zinc oxides Copper oxides

## **Specific extinguishing methods**

Prevent fire extinguishing water from contaminating surface water or the ground water system.

## **Special protective equipment for fire-fighters**

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

---

# SECTION 6: Accidental release measures

## **Personal precautions, protective equipment and emergency procedures**

Advice for non-emergency personnel: Avoid generation and inhalation of dusts in all circumstances. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert. Advice for emergency responders: For personal protection see section 8.

## **Environmental precautions**

Do not let product enter drains. Risk of explosion.

## **Methods and materials for containment and cleaning up**

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully. Dispose of properly. Clean up affected area. Avoid generation of dusts.

---

# SECTION 7: Handling and storage

## **Handling**

### **Advice on protection against fire and explosion**

Keep away from open flames, hot surfaces and sources of ignition.

### **Advice on safe handling**

Work under hood. Do not inhale substance/mixture. Keep workplace dry. Do not allow product to come into contact with water.

### **Avoidance of contact**

Strong bases Acids Strong oxidizing agents Strong acids Acid chlorides Fluorine chlorides Halogens Nitrates Carbon disulfide

## **Storage**

### **Further information on storage conditions**

Tightly closed. Dry. Keep locked up or in an area accessible only to qualified or authorized persons.

### **Materials to avoid**

Never allow product to get in contact with water during storage.

### **Storage class**

11, Combustible Solids

### **Recommended storage temperature**

Recommended storage temperature see product label.

---

## **SECTION 8: Exposure controls/personal protection**

### **Ingredients with workplace control parameters**

(Fumes) (Copper) 2007

### **Engineering measures**

No data available

### **Personal protective equipment**

#### **Respiratory protection**

required when dusts are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

#### **Recommended Filter type**

Filter type P3

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

#### **Eye/face protection**

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Safety glasses

#### **Skin and body protection**

Flame retardant antistatic protective clothing.

#### **Hand protection**

##### **Material**

Nitrile rubber

##### **Break through time**

480 min

##### **Glove thickness**

0.11 mm

##### **Protective index**

Full contact

##### **Manufacturer**

KCL 741 L

##### **Material**

Nitrile rubber

##### **Break through time**

480 min

##### **Glove thickness**

0.11 mm

##### **Protective index**

Splash contact

**Manufacturer**

KCL 741 L

**Remarks**

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D- 36124 Eichenzell, Internet: www.kcl.de).

**Hygiene measures**

Change contaminated clothing. Preventive skin protection recommended. Wash hands after working with substance.

---

## SECTION 9: Physical and chemical properties

### Information on basic physicochemical properties

powder

---

**Color**

Yellow

**Odor**

No data available

**Odor Threshold**

No data available

**pH**

No data available

**Melting point/ range**

No data available

**Boiling point/boiling range**

No data available

**Flash point**

Not applicable

**Evaporation rate**

No data available

**Flammability (solid, gas)**

No data available

**Flammability (liquids)**

No data available

**Burning rate**

No data available

**Upper explosion limit / Upper flammability limit**

No data available

**Lower explosion limit / Lower flammability limit**

No data available

**Vapor pressure**

No data available

**Relative vapor density**

No data available

**Relative density**

1.17 g/mL at 25 °C(lit.)

**Density**

1.17 g/mL at 25 °C(lit.)

**Water solubility**

No data available

**Partition coefficient: n-octanol/water**

No data available

**Autoignition temperature**

No data available

**Decomposition temperature**

No data available

**Viscosity, dynamic**

No data available

**Viscosity, kinematic**

No data available

**Flow time**

No data available

**Explosive properties**

Not classified as explosive.

**Oxidizing properties**

none

### **Molecular weight**

128.9 g/mol

### **Particle characteristics Particle size**

No data available

### **Physical state**

powder

---

## SECTION 10: Stability and reactivity

### **Reactivity**

The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.

### **Chemical stability**

Sensitive to air.

### **Possibility of hazardous reactions**

No data available

### **Conditions to avoid**

Exposure to air. Moisture.

### **Incompatible materials**

Strong bases Acids Strong oxidizing agents Strong acids Acid chlorides Fluorine chlorides Halogens Nitrates Carbon disulfide

### **Hazardous decomposition products**

In the event of fire: see section 5

---

## SECTION 11: Toxicological information

### **11.1 Information on toxicological effects**

#### **Mixture Acute toxicity**

Oral: No data available

Symptoms: Possible symptoms:, mucosal irritations

Dermal: No data available

#### **Skin corrosion/irritation**

Classified based on available data. For more details, see section 2

#### **Serious eye damage/eye irritation**

Remarks: Mixture causes serious eye irritation.

**Respiratory or skin sensitization**

Classified based on available data. For more details, see section 2

**Germ cell mutagenicity**

Classified based on available data. For more details, see section 2

**Carcinogenicity**

Classified based on available data. For more details, see section 2

**Reproductive toxicity**

Classified based on available data. For more details, see section 2

**Specific target organ toxicity - single exposure**

Classified based on available data. For more details, see section 2

**Specific target organ toxicity - repeated exposure**

Classified based on available data. For more details, see section 2

**Aspiration hazard**

Classified based on available data. For more details, see section 2

**11.2 Additional Information**

sneezing, Nausea, Weakness, Symptoms of systemic copper poisoning may include: capillary damage, headache, cold sweat, weak pulse, and kidney and liver damage, central nervous system excitation followed by depression, jaundice, convulsions, paralysis, and coma. Death may occur from shock or renal failure. Chronic copper poisoning is typified by hepatic cirrhosis, brain damage and demyelination, kidney defects, and copper deposition in the cornea as exemplified by humans with Wilson's disease. It has also been reported that copper poisoning has led to hemolytic anemia and accelerates arteriosclerosis.

Hazardous properties cannot be excluded but are unlikely when the product is handled appropriately.

**Components Copper****Acute toxicity**

Oral: No data available

Inhalation: No data available

Dermal: No data available

**Skin corrosion/irritation**

Classified based on available data. For more details, see section 2

**Serious eye damage/eye irritation**

Classified based on available data. For more details, see section 2

**Respiratory or skin sensitization**

Classified based on available data. For more details, see section 2

**Germ cell mutagenicity**

Classified based on available data. For more details, see section 2

**Carcinogenicity**

Classified based on available data. For more details, see section 2

**Reproductive toxicity**

Classified based on available data. For more details, see section 2

**Specific target organ toxicity - single exposure**

Classified based on available data. For more details, see section 2

**Specific target organ toxicity - repeated exposure**

Classified based on available data. For more details, see section 2

**Aspiration hazard**

## SECTION 12: Ecological information

### Ecotoxicity

#### Components:

#### Copper:

##### Toxicity to fish

LOEC (Oncorhynchus mykiss (rainbow trout)): 0.022 mg/l Exposure time: 96 h Test Type: mortality LC50 (Oncorhynchus mykiss (rainbow trout)): 0.15 mg/l Exposure time: 96 h

##### Toxicity to daphnia and other aquatic invertebrates

NOEC (Daphnia): 0.004 mg/l Exposure time: 24 h Test Type: mortality EC50 (Daphnia magna (Water flea)): 0.04 - 0.05 mg/l Exposure time: 48 h

##### M-Factor (Acute aquatic toxicity)

10

##### Toxicity to fish (Chronic toxicity)

NOEC (Oncorhynchus mykiss (rainbow trout)): 0.024 mg/l Exposure time: 60 d Test Type: mortality

##### M-Factor (Chronic aquatic toxicity)

10

### Persistence and degradability

#### Components:

#### Copper:

##### Biodegradability

Remarks: Not applicable

##### Bioaccumulative potential

#### Components:

#### Copper:

##### Partition coefficient: octanol/water

Remarks: Not applicable for inorganic substances

##### Mobility in soil

No data available

##### Other adverse effects

No data available

---

## SECTION 13: Disposal considerations

### Disposal methods

#### Waste from residues

Offer surplus and non-recyclable solutions to a licensed disposal company.

---

## SECTION 14: Transport information

### International Regulations

#### IATA-DGR

UN/ID No. : UN 3077

Proper shipping name : Environmentally hazardous substance, solid, n.o.s.

(Copper)

Class : 9

Packing group : III

Labels : Class 9 - Miscellaneous dangerous substances and articles

Packing instruction (cargo aircraft) : 956

Packing instruction (passenger aircraft) : 956

#### IMDG-Code

UN number : UN 3077

Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

(Copper)

Class : 9

Packing group : III

Labels : 9

EmS Code : F-A, S-F

Marine pollutant : yes

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

Not applicable for product as supplied.

National regulation GB 6944/12268

UN number : UN 3077

Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

(Copper)

Class : 9

Packing group : III

Labels : 9

#### Special precautions for user

Remarks : EHS-Mark required (ADR 2.2.9.1.10, IMDG code 2.10.3) for single packagings and combination packagings containing inner packagings with Dangerous

Goods > 5L for liquids or > 5kg for solids.

Packages smaller than or equal to 5 kg / L , not dangerous goods of Class 9

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

---

## SECTION 15: Regulatory information

### National regulatory information

#### Law on the Prevention and Control of Occupational Diseases

#### Regulations on Safety Management of Hazardous Chemicals

#### Catalogue of Hazardous Chemicals

#### Hazardous Chemicals for Priority Management

under SAWS

#### Regulation of Environmental Management on the First Import of Chemicals and the Import and Export of Toxic Chemicals

#### China Severely Restricted Toxic Chemicals for Import and Export

---

## SECTION 16: Other information

### Full text of other abbreviations

#### ACGIH

USA. ACGIH Threshold Limit Values (TLV)

#### GBZ 2.1-2007

Occupational exposure limits for hazardous agents in the workplace - Chemical hazardous agents.

#### ACGIH / TWA

8-hour, time-weighted average

GBZ 2.1-2007 / PC-TWA AIC - Australian Invent Transport by Land of Bra bw - Body weight; CMR Standard of the German List (Canada); ECx - Conc associated with x% respo Chemical Substances (Jap response; ERG - Emerge GLP - Good Laboratory P cer; IATA - International Construction and Equipm Half maximal inhibitory c tion; IECSC - Inventory o tional Maritime Dangerou Industrial Safety and H Standardization; KECl - K tration to 50 % of a test (Median Lethal Dose); MA lution from Ships; n.o.s. No Observed (Adverse) E fect Level; NOELR - No Norm; NTP - National Toxi icals; OECD - Organizatio fice of Chemical Safety a and Toxic substance; PIC stances; (Q)SAR - (Quant (EC) No 1907/2006 of th Registration, Evaluation, Accelerating Decompositi Chemical Substance Inve Thailand Existing Chemicala States); UN - United Nat Transport of Dangerous WHMIS - Workplace Hazar Permissible concentration - time weighted average ry of Industrial Chemicals

ANTT - National Agency for il

ASTM - American Society for the Testing of Materials

- Carcinogen, Mutagen or Reproductive Toxicant

DIN nstitute for Standardisation

DSL - Domestic Substances ntration associated with x% response

ELx - Loading rate se

EmS - Emergency Schedule

ENCS - Existing and New n)

ErCx - Concentration associated with x% growth rate cy Response Guide

GHS - Globally Harmonized System

actice

IARC - International Agency for Research on Canir Transport Association

IBC - International Code for the nt of Ships carrying Dangerous Chemicals in Bulk

IC50 ncentration

ICAO - International Civil Aviation Organiza- Existing Chemical Substances in China

IMDG - Interna- Goods

IMO - International Maritime Organization

ISHL alth Law (Japan)

ISO - International Organisation for rea Existing Chemicals Inventory

LC50 - Lethal Concenopulation

LD50 - Lethal Dose to 50% of a test population POL - International Convention for the Prevention of Pol- Not Otherwise Specified

Nch - Chilean Norm

NO(A)EC fect Concentration

NO(A)EL - No Observed (Adverse) Efbserveable Effect Loading Rate

NOM - Official Mexican ology Program

NZIoC - New Zealand Inventory of Chemfor Economic Co-operation and Development

OPPTS - Ofd Pollution Prevention

PBT - Persistent, Bioaccumulative S - Philippines Inventory of Chemicals and Chemical Subtative) Structure Activity Relationship

REACH - Regulation European Parliament and of the Council concerning the uthorisation and Restriction of Chemicals

SADT - Selfn Temperature

SDS - Safety Data Sheet

TCSI - Taiwan tory

TDG - Transportation of Dangerous Goods

TECI s Inventory

TSCA - Toxic Substances Control Act (United ons

UNRTDG - United Nations Recommendations on the oods

vPvB - Very Persistent and Very Bioaccumulative

ous Materials Information System

**Disclaimer:**

The information in this MSDS is only applicable to the specified product, unless otherwise specified, it is not applicable to the mixture of this product and other substances. This MSDS only provides information on the safety of the product for those who have received the appropriate professional training for the user of the product. Users of this MSDS must make independent judgments on the applicability of this SDS. The authors of this MSDS will not be held responsible for any harm caused by the use of this MSDS.