Copper(II) dimethyldithiocarbamate

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878
Issue date: 3/6/2019 Revision date: 3/15/2021 Version: 2.0

Section 1 Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier:

Substance name	: Copper(II) dimethyldithiocarbamate
EC-No.	: 205-287-8
CAS-No.	: 137-29-1
REACH registration No	: Not available
Formula	: C6H12Cu2N2S4
Synonyms	: Compound-4018 / Copper bis(dimethyldithiocarbamate) / Copper(2+) dimethyldithiocarbamate / Copper, bis(dimethylcarbamodithioato-.kappa.S,.kappa.S')-, (SP- 4-1)- / Copper, bis(dimethylcarbamodithioato-S,S')-, (SP-4-1)- / Cupric N,N- dimethyldithiocarbamate / Dimethyldithiocarbamatocopper / Copper, bis(dimethylcarbamodithioato-S,S')- / Copper, bis(dimethylcarbamodithioato-.kappa.S,.kappa.S')- / Copper dimethyldithiocarbamate / (SP-4-1)- Bis(dimethyldithiocarbamato-.kappa.(2)S,S')copper(II) / Bis(dimethyldithiocarbamato)copper(II)

1.2 Relevant identified uses of the substance and uses advised against:

1.2.1. Relevant identified uses

Use of the substance/mixture : Widely used in tires and other rubber products

1.2.2. Uses advised against

Restrictions on use : No information available

1.3 Details of the supplier of the safety data sheet:

Supplier(Only representative):	Chemical Inspection & Regulation Service Limited
Supplier(Manufacturer):	QINGDAO YLSCH INDUSTRY&TRADE CO.,LTD.
Address:	ROOM 501, 2-3UNIT.,NO.8, ZHENGZHOU ROAD, SHIBEI DISTRICT, QINGDAO,CHINA
Contact person(E-mail):	sales@ylsch-rbb.com
Telephone:	0086-53287691278
Fax:	0086-53287691278

1.4 Emergency telephone Number:

+353 (1) 477 3710 Only available during office hours (9:00a.m.-17:30p.m.)

Available outside office hours?	YES		NO	X

Section 2 Hazards Identification

2.1 Classification of the substance/mixture:

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute toxicity (inhal.), Category 2
H330
Hazardous to the aquatic environment — Acute Hazard, Category 1
H400
Hazardous to the aquatic environment — Chronic Hazard, Category 2
H411
Full text of H statements : see section 16

Adverse physicochemical, human health and environmental effects

Fatal if inhaled. Very toxic to aquatic life. Toxic to aquatic life with long lasting effects.

2.2 label elements:

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

Hazard pictograms (CLP) :

Signal word (CLP)	: Danger
Hazard statements (CLP)	: H330 - Fatal if inhaled. H410 - Very toxic to aquatic life with long lasting effects.
Precautionary statements (CLP)	: P260 - Do not breathe dust/fume/gas/mist/vapours/spray. P271 - Use only outdoors or in a wellventilated area. P273 - Avoid release to the environment. P304+P340+P310 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor. P391 - Collect spillage. P403+P233 - Store in a well-ventilated place. Keep container tightly closed. P405 - Store locked up
EUH-statements	: None.

2.3 Other hazards:

This substance does not meet the PBT criteria of REACH regulation, annex XIII
This substance does not meet the vPvB criteria of REACH regulation, annex XIII
The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

Section 3 Composition/information on ingredients

3.1.Substances

Chemical Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Copper(II) dimethyldithiocarbamate	CAS-No.: 137-29-1 EC-No.: 205-287-8 REACH-no: Not available	100	Acute Tox. 2 (Inhalation), H330 Aquatic Acute 1, H400 Aquatic Chronic 2, H411

Full text of H-statements: see section 16

3.2.Mixtures

Not applicable

Section 4 First aid measures

4.1 Description of first aid measures:

First-aid measures general	: IF exposed or concerned: Get medical advice/attention.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Call a physician immediately.
First-aid measures after skin contact	: Wash skin with plenty of water. If skin irritation occurs: Get medical advice/attention.
First-aid measures after eye contact	: Rinse eyes with water as a precaution. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion	: Rinse mouth. Call a poison center or a doctor if you feel unwell. Never give anything by mouth to an unconscious person.

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

Symptoms/effects : Fatal if inhaled.

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

Treat symptomatically.

Section 5 Fire-Fighting measures

5.1 Extinguishing media:

Suitable extinguishing media	: Water spray. Dry powder. Alcohol-resistant foam. Carbon dioxide.
Unsuitable extinguishing media	: High volume water jet.

5.2 Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Toxic fumes may be released. Carbon oxides (CO, CO2). Nitrogen oxides. Sulphur oxides. Metal oxides.

5.3. Advice for firefighters

Firefighting instructions : Cool containers / tanks with spray water if possible. Fight fire from safe distance and protected location. Do not allow run-off from fire fighting to enter drains or water courses.

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

Section 6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:

6.1.1. For non-emergency personnel

Emergency procedures : Do not breathe dust/fume/gas/mist/vapours/spray. Only qualified personnel equipped with suitable protective equipment may intervene. Avoid contact with skin, eyes and clothing. Wear proper protective equipment. Evacuate personnel to a safe area. Ensure adequate ventilation, especially in confined areas.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2 Environmental Precautions:

Avoid release to the environment

6.3 Methods for Containment and Cleaning up:

For containment : Collect spillage.

Methods for cleaning up : Take up mechanically (sweeping, shovelling) and collect in suitable container for disposal.

Other information : Dispose of materials or solid residues at an authorized site.Avoid dust formation.

6.4 Reference to other sections:

For further information refer to section 13. See Section 7 for information on safe handling. See Section 8 for information on personal protection equipment.

Section 7 Handling and storage

7.1 Precautions for safe handling:

Precautions for safe handling : Wear personal protective equipment. Use only outdoors or in a well-ventilated area. Do not breathe dust/fume/gas/mist/vapours/spray. Handle in accordance with good industrial hygiene and safety practice. Avoid dust formation. Do not get in eyes, on skin, or on clothing. Do not breathe dust.

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2 Conditions for safe storage, including any incompatibilities:

Storage conditions : Keep away from food, drink and animal feedingstuffs. Store tightly closed in a dry, cool and well-ventilated place.

Incompatible products : Refer to Section 10 on Incompatible Materials.

7.3 Specific end use(s):

No information available.

Section 8 Exposure Controls/Personal Protection

8.1 Control parameters:

8.1.1. National occupational exposure and biological limit values

No additional information available

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2 Exposure controls:

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station. Provide local exhaust or general room ventilation. Emergency eye wash fountains and safety showers

should be available in the immediate vicinity of any potential exposure.

8.2.2. Personal protection equipment

8.2.2.1. Eye and face protection

Eye protection:

Safety glasses

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing

Hand protection:

Protective gloves

8.2.2.3. Respiratory protection

Respiratory protection:

[In case of inadequate ventilation] wear respiratory protection.

8.2.2.4. Thermal hazards

Thermal hazard protection:

No information available.

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

Section 9 Physical and chemical properties

9.1 Information on basic physical and chemical properties:

Physical state	: Solid. Powders.
Colour	: Brown.
Odour	: Not available
Odour threshold	: Not available
pH	: Not available
Melting point/freezing point	: Decomposes at 263 °C
Boiling point/boiling range	: 206 °C (at 0.0133 hPa)
Flammability	: Non flammable.
Explosive limits	: Not applicable
Flash point	: Not applicable
Auto-ignition temperature	: Not applicable
Decomposition temperature	: 263 °C
Viscosity, kinematic	: Not applicable
Solubility	: Poorly soluble in water.
Water	: < 0.012 mg/l (20 °C)
Partition coefficient n-octanol/water (Log Pow)	: 4.55(20 °C)
Vapour pressure	: 0.000000077 mm Hg (25 °C)
Density/relative density	: 1.75 g/cm³ (25 °C)
Relative vapour density	: Not applicable
Particle characteristics	: Not available
Explosive properties	: Not explosive.
Oxidising properties	: Not oxidising

9.2. Other information:

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

No additional information available

Section 10 Stability and reactivity

10.1Reactivity:

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Heat. Sparks. Open flame.

10.5. Incompatible materials

Strong acids. Strong oxidizing agents.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11 Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Fatal if inhaled.

Copper(II) dimethyldithiocarbamate(137-29-1)	
LD50 oral rat	> 16000 mg/kg
LC50 Inhalation - Rat	0.12 mg/l/4h

Skin corrosion/irritation : Not classified
Serious eye damage/irritation : Not classified
Respiratory or skin sensitisation : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified
STOT-single exposure : Not classified
STOT-repeated exposure : Not classified
Aspiration hazard : Not classified

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Adverse health effects caused by endocrine disrupting properties : The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

11.2.2. Other information

Other information : No information available

Section 12 Ecological information

12.1. Toxicity

Ecology - general : Very toxic to aquatic life. Toxic to aquatic life with long lasting effects.

Hazardous to the aquatic environment, short-term (acute) : Very toxic to aquatic life.

Hazardous to the aquatic environment, long-term (chronic) :Toxic to aquatic life with long lasting effects.

Copper(II) dimethyldithiocarbamate(137-29-1)	
EC50 48h - Crustacea [	1 – 10 mg/l Daphnia Magna
EC50 72h - Algae	1 – 10 mg/l Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)

12.2. Persistence and degradability

Copper(II) dimethyldithiocarbamate(137-29-1)	
Persistence and degradability	Persistence and degradability
Biodegradation	Biodegradation

12.3. Bioaccumulative potential

Copper(II) dimethyldithiocarbamate(137-29-1)	
Partition coefficient n-octanol/water (Log Pow)	Partition coefficient n-octanol/water (Log Pow)

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

Copper(II) dimethyldithiocarbamate(137-29
This substance does not meet the PBT criteria of REACH regulation, annex XIII
This substance does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Endocrine disrupting properties

Adverse effects on the environment caused by endocrine disrupting properties :The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

12.7. Other adverse effects

No additional information available

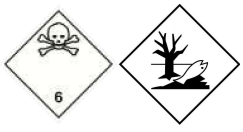
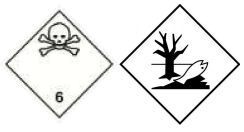
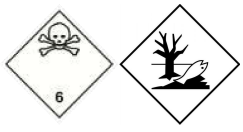
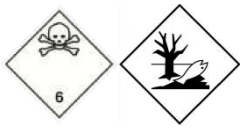
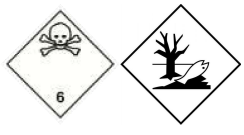
Section 13 Disposal considerations

13.1 Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

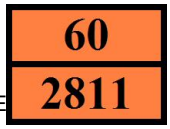
Product/Packaging disposal recommendations :Dispose in a safe manner in accordance with local/national regulations. Do not re-use empty containers without proper cleaning or reconditioning. Refer to manufacturer/supplier for information on recovery/recycling.

Section 14 Transport information

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
UN 2811	UN 2811	UN 2811	UN 2811	UN 2811
14.2. UN proper shipping name				
TOXIC SOLID, ORGANIC, N.O.S. (Copper(II) dimethyldithiocarbamate)	TOXIC SOLID, ORGANIC, N.O.S. (Copper(II) dimethyldithiocarbamate)	Toxic solid, organic, n.o.s. (Copper(II) dimethyldithiocarbamate)	TOXIC SOLID, ORGANIC, N.O.S. (Copper(II) dimethyldithiocarbamate)	TOXIC SOLID, ORGANIC, N.O.S. (Copper(II) dimethyldithiocarbamate)
14.3. Transport hazard class(es)				
6.1	6.1	6.1	6.1	6.1
				
14.4. Packing group				
II	II	II	II	II
14.5. Environmental hazards				
Dangerous for the environment: Yes	Dangerous for the environment: Yes Marine pollutant: Yes	Dangerous for the environment: Yes	Dangerous for the environment: Yes	Dangerous for the environment: Yes

14.6. Special precautions for user

Overland transport

Classification code (ADR)	: T2
Special provisions (ADR)	: 274, 614
Limited quantities (ADR)	: 500g
Excepted quantities (ADR)	: E4
Packing instructions (ADR)	: P002, IBC08
Special packing provisions (ADR)	: B4
Mixed packing provisions (ADR)	: MP10
Portable tank and bulk container instructions (ADR)	: T3
Portable tank and bulk container special provisions (ADR)	: TP33
Tank code (ADR)	: SGAH, L4BH
Tank special provisions (ADR)	: TU15, TE19
Vehicle for tank carriage	: AT
Transport category (ADR)	: 2
Special provisions for carriage - Packages (ADR)	: V11
Special provisions for carriage - Loading, unloading and handling (ADR)	: CV13, CV28
Special provisions for carriage - Operation (ADR)	: S9, S19
Hazard identification number (Kemler No.)	: 60
Orange plates	
Tunnel restriction code (ADR)	: D/E
EAC code	: 2X

Transport by sea

Special provisions (IMDG)	: 274
Limited quantities (IMDG)	: 500 g
Excepted quantities (IMDG)	: E4
Packing instructions (IMDG)	: P002
IBC packing instructions (IMDG)	: IBC08
IBC special provisions (IMDG)	: B21, B4
Tank instructions (IMDG)	: T3
Tank special provisions (IMDG)	: TP33
EmS-No. (Fire)	: F-A
EmS-No. (Spillage)	: S-A
Stowage category (IMDG)	: B
Properties and observations (IMDG)	: Toxic if swallowed, by skin contact or by inhalation.

Air transport

PCA Excepted quantities (IATA)	: E4
PCA Limited quantities (IATA)	: Y644
PCA limited quantity max net quantity (IATA)	: 1kg
PCA packing instructions (IATA)	: 669
PCA max net quantity (IATA)	: 25kg
CAO packing instructions (IATA)	: 676
CAO max net quantity (IATA)	: 100kg
Special provisions (IATA)	: A3, A5
ERG code (IATA)	: 6L

Inland waterway transport

Classification code (ADN)	: T2
Special provisions (ADN)	: 274, 614, 802
Limited quantities (ADN)	: 500 g
Excepted quantities (ADN)	: E4
Equipment required (ADN)	: PP, EP
Number of blue cones/lights (ADN)	: 2

Rail transport

Classification code (RID)	: T2
Special provisions (RID)	: 274, 614
Limited quantities (RID)	: 500g
Excepted quantities (RID)	: E4
Packing instructions (RID)	: P002, IBC08
Special packing provisions (RID)	: B4
Mixed packing provisions (RID)	: MP10
Portable tank and bulk container instructions (RID)	: T3
Portable tank and bulk container special provisions (RID)	: TP33
Tank codes for RID tanks (RID)	: SGAH, L4BH
Special provisions for RID tanks (RID)	: TU15
Transport category (RID)	: 2
Special provisions for carriage – Packages (RID)	: W11
Special provisions for carriage - Loading, unloading and handling (RID)	: CW13, CW28, CW31
Colis express (express parcels) (RID)	: CE9
Hazard identification number (RID)	: 60

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

Section 15 Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

No REACH Annex XVII restrictions
Not on the REACH Candidate List
Not on the REACH Annex XIV List
Not subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 july 2012 concerning the export and import of hazardous chemicals.
Not subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

15.1.2. National regulations

Listed on the United States TSCA (Toxic Substances Control Act) inventory
Listed on the Canadian DSL (Domestic Substances List)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
Listed on the Canadian IDL (Ingredient Disclosure List)
Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on KECL/KECI (Korean Existing Chemicals Inventory)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on the Japanese ISHL (Industrial Safety and Health Law)
Listed on INSQ (Mexican National Inventory of Chemical Substances)
Listed on the TCSI (Taiwan Chemical Substance Inventory)
Listed on the Vietnam NCI (National Chemicals Inventory)

Germany

Water hazard class (WGK) : The substance is not listed

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

Section 16 Other information

Abbreviations and acronyms	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level

NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disrupting properties

Data sources : Loli. ECHA reference.
Training advice : Normal use of this product shall imply use in accordance with the instructions on the packaging.

Full text of H- and EUH-statements	
Acute Tox. 2 (Inhalation)	Acute toxicity (inhal.), Category 2
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment — Chronic Hazard, Category 2
H330	Fatal if inhaled.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.