

GHS Classification

ID850

Copper

CAS 7440-50-8

Date Classified: Jul. 1, 2005 (Environmental Hazards: Mar. 31, 2006)

Physical Hazards

Reference Manual: GHS Classification Manual (Feb. 10, 2006)

Hazard class	Classification	symbol	signal word	hazard statement	Rational for the classification
1 Explosives	Not applicable	-	-	-	There are no chemical groups associated with explosive properties present in the molecules.
2 Flammable gases	Not applicable	-	-	-	Solid (GHS definition)
3 Flammable aerosols	Not applicable	-	-	-	Not aerosol products
4 Oxidizing gases	Not applicable	-	-	-	Solid (GHS definition)
5 Gases under pressure	Not applicable	-	-	-	Solid (GHS definition)
6 Flammable liquids	Not applicable	-	-	-	Solid (GHS definition)
7 Flammable solids	Classification not possible	-	-	-	Although copper fine powder can be applicable, there is no data.
8 Self-reactive substances and mixtures	Not applicable	-	-	-	There are no chemical groups associated with explosive or self-reactive properties present in the molecule.
9 Pyrophoric liquids	Not applicable	-	-	-	Solid (GHS definition)
10 Pyrophoric solids	Classification not possible	-	-	-	Fine copper powder can be applicable but there is no data.
11 Self-heating substances and mixtures	Classification not possible	-	-	-	Although copper fine powder can be applicable, no data.
12 Substances and mixtures, which in contact with water, emit flammable gases	Classification not possible	-	-	-	No data available
13 Oxidizing liquids	Not applicable	-	-	-	Solid (GHS definition)
14 Oxidizing solids	Not applicable	-	-	-	Containing no oxygen, chlorine and fluorine.
15 Organic peroxides	Not applicable	-	-	-	Inorganic substance
16 Corrosive to metals	Classification not possible	-	-	-	Test methods applicable to solid substances are not available.

Health Hazards

Hazard class	Classification	symbol	signal word	hazard statement	Rational for the classification
1 Acute toxicity (oral)	Classification not possible	-	-	-	Classification not possible due to lack of data
1 Acute toxicity (dermal)	Classification not possible	-	-	-	No data available
1 Acute toxicity (inhalation: gas)	Not applicable	-	-	-	Solid (GHS definition)
1 Acute toxicity (inhalation: vapour)	Classification not possible	-	-	-	No data available
1 Acute toxicity (inhalation: dust, mist)	Classification not possible	-	-	-	No data available
2 Skin corrosion / irritation	Classification not possible	-	-	-	Classification not possible due to lack of data
3 Serious eye damage / eye irritation	Classification not possible	-	-	-	Only according to the descriptive content of PATTY (4th, 1994), it cannot be classified. Because it cannot be judged whether it is caused by copper exposures, and the data is insufficient.
4 Respiratory/skin sensitization	Respiratory sensitization: Classification not possible; Skin sensitization: Classification not possible	-	-	-	Respiratory organs: Since data was insufficient, we could not classify it. Skin: Since data was insufficient, we could not classify it. Only from description of PATTY (4th, 1994), we cannot judge whether they are two or more cases from the separate medical institutions or not, and in EHC 200 (1998), although the potential which indicates skin sensitization is suggested, it is not determined clearly. In addition, although it is classified to be skin sensitization class 2 according to Japan Society for Occupational Health (JSFOH advice (2004)) and is mentioned to as the sensitizing chemicals (it contains only the reports of skin sensitization) in the Japanese Society of Occupational Allergy (JSOA special committee (2004)), it is not listed in the Japanese Society for Contact Dermatitis.
5 Germ cell mutagenicity	Classification not possible	-	-	-	No data available
6 Carcinogenicity	Not classified	-	-	-	Since it was classified into D in EPA (1991), it was considered as the outside of Category.
7 Toxic to reproduction	Classification not possible	-	-	-	Classification not possible due to lack of data

8	Specific target organs/systemic toxicity following single exposure	Category 3 (respiratory tract irritation)	Exclamation mark	Warning	may cause respiratory irritation or may cause drowsiness and dizziness (respiratory tract irritation)	From description that an upper respiratory tract is stimulated by fume in ACGIH (7th, 2001) was considered to be respiratory irritant, and was set to Category 3.
9	Specific target organs/systemic toxicity following repeated exposure	Category 1 (liver)	Health hazard	Danger	Causes damage to organs (liver) through prolonged or repeated exposure	Based on descriptions that hepatomegaly was observed in the worker (probable consumption of 200mg/day) considered to have been exposed to the high air concentrations (EHC 200 (1998)), target organ was considered to be liver, and was classified into Category 1. Although there is description that the gastrointestinal disorders was observed in the worker (probable consumption of 200mg/day) considered to have been exposed to the high aerial concentration (EHC 200 (1998)), based on the description about other examples of exposure (EHC 200 (1998), ACGIH (7th, 2001), and PATTY (4th, 1994)), the gastrointestinal disorders were considered to be diarrhea or nausea, and it was judged as the influence which does not endorse a classification.
10	Aspiration hazard	Classification not possible	-	-	-	No data available

Environmental Hazards

Hazard class	Classification	symbol	signal word	hazard statement	Rational for the classification
11 Hazardous to the aquatic environment (acute)	Classification not possible	-	-	-	Insufficient data available.
11 Hazardous to the aquatic environment (chronic)	Category 4	-	-	May cause long lasting harmful effects to aquatic life	Classified into Category 4, since it is metal and the behavior in the water is unknown, though L(E) C50 <=100 mg/L .