

GHS Classification

ID1300

cupric nitrate

CAS 10031-43-3

Date Classified: Sep. 20, 2006 (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 classified	-	-	-	Not Classified because the substance is not explosive solely, though containing N-O as chemical groups associated with explosive properties present. (It might explode if mixed with Potassium ferrocyanide, or etc.)
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	Not classified	-	-	-	Nonflammable (CHRIS-Chemical Hazards Response Information System, U.S.DOT/U.S.Coast Guard, 1999). (However, since it is an oxidizing substance and may promote combustion of other substances, it needs caution.)
8 Self-reactive substances and mixtures	Not classified	-	-	-	Not classified because the substance is not self-reactive and contains no chemical groups with selfreactive properties present, though the substance contains N-O bonds as chemical groups with explosive properties present
9 Pyrophoric liquids	Not applicable	-	-	-	Solid (GHS definition)
10 Pyrophoric solids	Not classified	-	-	-	Nonflammable (CHRIS-Chemical Hazards Response Information System, U.S.DOT/U.S.Coast Guard, 1999). (However, it is an oxidizing substance, and it needs to be careful because it may ignite spontaneously if it contacts a flammable substance.)
11 Self-heating substances and mixtures	Not classified	-	-	-	Nonflammable (CHRIS-Chemical Hazards Response Information System, U.S.DOT/U.S.Coast Guard, 1999).
12 Substances and mixtures, which in contact with water, emit flammable gases	Not classified	-	-	-	Stable to water (the water solubility is obtained)
13 Oxidizing liquids	Not applicable	-	-	-	Solid (GHS definition)
14 Oxidizing solids	Category 2	Flame over circle	Danger	May intensify fire; oxidizer	Category 2 because of UNRTDG Class: 5.1, PGII (N.O.S) and oxidizing solids (BGIA, GESTIS-database on hazardous substances, Accessed in June 2006)
15 Organic peroxides	Not applicable	-	-	-	Inorganic compound
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)	Category 4	Exclamation mark	Warning	Harmful if swallowed	Category 4 based on SPECIES: Rat; ENDPOINT: LD50; VALUE: 940mg/kg; REFERENCE SOURCE: EHC 200 (1998)
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	-	-	-	No data available
3 Serious eye damage / eye irritation	Classification not possible	-	-	-	Without Data. In addition, copper dusts may cause eye irritation (PATTY, 2001).
4 Respiratory/skin sensitization	respiratory sensitization: Classification not possible; Skin sensitization: Classification not possible	(Respiratory sensitization)-; (Skin sensitization)-	(Respiratory sensitization)-; (Skin sensitization)-	(Respiratory sensitization)-; (Skin sensitization)-	No data available
5 Germ cell mutagenicity	Classification not possible	-	-	-	Although the in vitro mutagenicity test (tests for gene mutation) was a positive result (EHC 200, 1998), there was no in vivo mutagenicity test result. So it cannot be classified because of insufficient data.
6 Carcinogenicity	Classification not possible	-	-	-	Data without. In addition, copper is classified into D (corresponding to outside of category)according to IRIS (1991).
7 Toxic to reproduction	Classification not possible	-	-	-	No data available

8	Specific target organs/systemic toxicity following single exposure	Classification not possible	-	-	-	No data. In addition, there is description in ATSDR (draft, 2004) that copper dust exposure stimulates respiratory tracts.
9	Specific target organs/systemic toxicity following repeated exposure	Classification not possible	-	-	-	No data available
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)	Category 1	Environment	Warning	Very toxic to aquatic life	It was classified into Category 1 from 48-hour LC50=9.5microg/L of Crustacea (Ceriodaphnia), and others (EHC200, 1998).
11 Hazardous to the aquatic environment (chronic)	Category 1	Environment	Warning	Very toxic to aquatic life with long lasting effects	Classified into Category 1, since acute toxicity was Category 1, and it is a metallic compound, behavior in water and bioaccumulative potential are unknown.