

GHS Classification

ID1108

Sulfuric acid, zinc salt (1:1), heptahydrate

CAS 7446-20-0

Date Classified: Aug. 22, 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 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	Not classified	-	-	-	Non-combustible (ICSC (J) (2001))
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	Not classified	-	-	-	Non-combustible (ICSC (J), 2001)
11 Self-heating substances and mixtures	Not classified	-	-	-	Not combustible (ICSC(J) (2001))
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	Classification not possible	-	-	-	No data available
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	Because the LD50 in rats was 1260mg/kg in RTECS (2000), the substance was classified as Category 4. [Note] Because the data available for this substance is limited, also refer to the classification results of zinc sulfates (anhydride) (IDNo.0247, CAS No.7733-02-0) for each item related to its health hazards.
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)	Not applicable	-	-	-	NITE synthesis search (2006) had a description "practically 0 mmHg" about vapor pressure. Therefore, it was thought that exposure to vapor was difficult and it was out of classification.
1 Acute toxicity (inhalation: dust, mist)	Classification not possible	-	-	-	No data available
2 Skin corrosion / irritation	Category 3	-	Warning	Causes mild skin irritation	It was thought that there was a statement that redness is indicated to the human skin (ICSC (J) (2001)), and there was mild irritation, and it was set as Category 3.
3 Serious eye damage / eye irritation	Category 2A-2B	Exclamation mark	Warning	Causes serious eye irritation	There is the description that it causes redness, pain, and temporary vision loss to human eye (ICSC (J) (2001)), and it was classified into R41 (Risk of serious damage to eyes) according to EU-Annex I (Accessed in July 2006) as zinc sulfates (anhydride). So it was classified into Category 2A-2B. In addition, it is difficult to subdivide the Category from existing information.
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	-	-	-	Classification not possible due to lack of data
6 Carcinogenicity	Classification not possible	-	-	-	Although it is categorized as zinc compounds into I in IRIS (2005) (corresponding to outer Category) , due to insufficient data, it cannot be classified.
7 Toxic to reproduction	Classification not possible	-	-	-	No data available

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)	The substance was classified as Category 3 (airway irritant) because there is a report of airway irritant properties in humans (coughs, pharyngeal pain, etc.) in ICSC (J) (2001).
9	Specific target organs/systemic toxicity following repeated exposure	Classification not possible	-	-	-	Although there was a report that effect was observed in the pancreatics with the repeated toxicity studies of rats and mice (RTECS (2000)), in comparison with a guidance value, it was classified out of Category. Other data was not found, and it was considered that it cannot be classified.
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=0.095mg/L of Crustacea (Ceriodaphnia) (ECETOC TR91, 2003).
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.