GHS Classification

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CAS 300-76-5 Date Classified: Aug. 18, 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), 1998; etc.)
8	Self-reactive substances and mixtures	Classification not possible	–	–	–	No data available
9	Pyrophoric liquids	Not applicable	–	–	–	Solid (GHS definition)
10	Pyrophoric solids	Not classified	–	–	–	Non-combustible (ICSC (J), 1998; etc.)
11	Self-heating substances and mixtures	Not classified	–	–	–	Non-combustible (ICSC (J), 1998; etc.)
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	Classification not possible	–	–	–	No data available
15	Organic peroxides	Not applicable	–	–	–	Containing no -O-O- structure
16	Corrosive to metals	Classification not possible	–	–	–	Although there is information that it corrodes metal (HSDB (Access on Jan. 2006)), there is no data based on set test methods.

Health Hazards

Hazard class		Classification	symbol	signal word	hazard statement	Rational for the classification
1	Acute toxicity (oral)	Category 3	Skull and crossbones	Danger	Toxic if swallowed	Based on Rat LD50 value: 250mg/kg, 230mg/kg, 92mg/kg and 160mg/kg (ACGIH, 2002), and 430mg/kg (PATTY 4th, 1994), calculation was applied. Since the calculated values was 139mg/kg, it was set as Category 3.
1	Acute toxicity (dermal)	Category 3	Skull and crossbones	Danger	Toxic in contact with skin	Based on rat LD50 value: 800mg/kg (ACGIH, 2002), rabbit LD50 value: 360mg/kg (ACGIH, 2002) and 1100mg/kg (PATTY 4th, 1994), the lowest value of rabbit LD50 was adopted, and it was set as Category 3.
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)	Category 2	Skull and crossbones	Danger	Fatal if inhaled	Category 2 because of SPECIES: Rat; ENDPOINT: LC50(4hr.); VALUE: 0.19mg/L
2	Skin corrosion / irritation	Category 2	Exclamation mark	Warning	Causes skin irritation	Since ACGIH (2002) describes that severe skin irritations was observed on rabbits and that dermatitis was observed in human exposure case, it was classified as Category 2.
3	Serious eye damage / eye irritation	Category 2A	Exclamation mark	Warning	Causes serious eye irritation	It was set as Category 2A from description that severe eye irritations was indicated in the rabbit of ACGIH (2002).
4	Respiratory/skin sensitization	Respiratory sensitization: Classification not possible; Skin sensitization: Category1	(Respiratory sensitization)-; (Skin sensitization)Exclamation mark	(Respiratory sensitization)-; (Skin sensitization)Warning	(Respiratory sensitization)-; (Skin sensitization)May cause allergic skin reaction	Respiratory sensitization: No data Skin sensitization : The positive rate in the maximization test using guinea pigs was unknown in ACGIH (2002). However, we classified this as Category 1 because ACGIH (2002) describes that the skin sensitization was slightly positive and that contact sensitization dermatitis was found in humans, and it classified this into skin sensitization.
5	Germ cell mutagenicity	Not classified	–	–	–	Because there are negative results from the mouse spot test, which is an in vivo mutagenicity test using somatic cells, and from the micronucleus test using mouse erythrocytes (ACGIH, 2002), the substance was regarded as outside the categories.
6	Carcinogenicity	Not classified	–	–	–	Not classified because of "A4"(ACGIH, 2002)
7	Toxic to reproduction	Not classified	–	–	–	According to ACGIH (2002), there was no obvious reproductive toxicity in the dose causing general toxicity to parent animals in the the pregnancy peroral administration using rat and rabbit, and in the two generation breeding test using rat and. So it was considered as on the outside of Categry.

8	Specific target organs/systemic toxicity following single exposure	Category 1 (nervous system)	Health hazard	Danger	Cause damage to organs (nervous system)	The substance was classified as Category 1 (nervous system). Based on the reports that symptoms indicating the effects on the nervous system were observed at the dosage within the guidance values for Category 1 in an oral administration test using rats in ACGIH (2002). And that dizziness and lateral nystagmus were continuously observed for 4 months in human exposure cases.
9	Specific target organs/systemic toxicity following repeated exposure	Category 1 (nervous system, blood)	Health hazard	Danger	Causes damage to organs (nervous system, blood) through prolonged or repeated exposure	Due to the descriptions that neurotoxic symptom and cholinesterase inhibition were observed in guidance value Category 1 in the oral administration and an inhalation atmospheric exposure test using the rat of ACGIH (2002), and that cholinesterase inhibition and anemia were observed with the given dose of the guidance value range of Category 1 in the oral study using a dog for one year, it was classified into Category 1 (nerve system, blood).
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 96-hour LC50=18 microg/L of Crustacea (Amphipod) (HSDB, 2004).
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, supposed not rapidly degrading (BIOWIN), though supposed less bioaccumulative (log Kow=1.38(PHYSPROP Database, 2005)).