

GHS Classification

ID1381

Peroxyacetic acid

CAS 79-21-0

Date Classified: Mar. 23, 2006 (Environmental Hazards: Feb. 10, 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	-	-	-	UNRTDG Class: 5.2
2 Flammable gases	Not applicable	-	-	-	Liquid (GHS definition)
3 Flammable aerosols	Not applicable	-	-	-	Not aerosol products
4 Oxidizing gases	Not applicable	-	-	-	Liquid (GHS definition)
5 Gases under pressure	Not applicable	-	-	-	Liquid (GHS definition)
6 Flammable liquids	Category 4	-	Warning	Combustible liquid	Flash point: >60degC and <=90degC
7 Flammable solids	Not applicable	-	-	-	Liquid (GHS definition)
8 Self-reactive substances and mixtures	Not applicable	-	-	-	Classified in organic peroxides
9 Pyrophoric liquids	Not classified	-	-	-	UNRTDG Class: 5.2
10 Pyrophoric solids	Not applicable	-	-	-	Liquid (GHS definition)
11 Self-heating substances and mixtures	Not classified	-	-	-	UNRTDG Class: 5.2
12 Substances and mixtures, which in contact with water, emit flammable gases	Not applicable	-	-	-	The chemical structure of the substance does not contain metals or metalloids(B, Si, P, Ge, As, Se, Sn, Sb, Te, Bi, Po, At).
13 Oxidizing liquids	Not classified	-	-	-	UNRTDG Class: 5.2
14 Oxidizing solids	Not applicable	-	-	-	Liquid (GHS definition)
15 Organic peroxides	Type F (43% or less in mass and with	Flame	Warning	Heating may cause a fire	UNRTDG Class: 5.2
16 Corrosive to metals	Not classified	-	-	-	UNRTDG Class: 5.2

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	SPECIES: Rat ENDPOINT: LD50 VALUE: 1540 mg/kg REFERENCE SOURCE: DFGOT
1 Acute toxicity (dermal)	Category 4	Exclamation mark	Warning	Harmful in contact with skin	It was set as Category 4 based on rabbit LD50 value: 1410mg/kg (DFGOT).
1 Acute toxicity (inhalation: gas)	Not applicable	-	-	-	Liquid (GHS definition)
1 Acute toxicity (inhalation: vapour)	Category 1	Skull and crossbones	Danger	Fatal if inhaled	Based on LC50 value in 1 hour exposure on mice: 0.524mg/L (4-hour equivalent: 0.262mg/L) (DFGOT), it could be judged as the steam with almost no mist from vapor pressure. And it was classified by the ppm concentration standard. The converted value was classified as 84ppm from conversion coefficient of 1ppm = 3.11mg/m3, and it was classified as Category 1. This substance is caustic.
1 Acute toxicity (inhalation: dust, mist)	Classification not possible	-	-	-	No data available
2 Skin corrosion / irritation	Category 1A-1C	Corrosion	Danger	Causes severe skin burns and eye damage	From the description that severe irritation was acknowledged in the rabbit skin after open apply in 500mg (RTECS (Access on Aug 2005)), and that eschar which attains to necrosis and depths by 3-hour apply on the rabbit skin was acknowledged (DFGOT vol.7 (1996)), it judged that there were intensive skin irritations and skin corrosivenesses. So it was set as category 1A-1C.
3 Serious eye damage / eye irritation	Category 1	Corrosion	Danger	Causes serious eye damage	There is the description that blindness was acknowledged accompanying the severe inflammation accompanied by corneal clouding by the test which applied five drops of suspension 1% using the rabbit (DFGOT vol.7 (1996)). And the description that severe eye irritations was acknowledged by the test which applied 1mg of peracetic equivalent to the eye of the rabbit (RTECS (Access on Aug 2005)). And skin corrosiveness. So it was set as Category 1.
4 Respiratory/skin sensitization	Respiratory sensitization: Classification not possible; Skin sensitization: Not classified	-	-	-	Respirator: no data available. Skin : in the skin sensitization study by the Draize's method using the guinea pig of IUCLID (2000), with description DFGOT vol.7 (1996) that two sorts of tablets were negative, it is targeted at the patient who has shown the symptoms of eczema in human who used drug product including the product for skin disinfection, since the positive example was not admitted by the examination which examined skin sensitization, the description that there will not be the potential of significant causing sensitivity (PAA probably does not have significant allergic potential.), the potential which shows skin sensitization to humans was judged to estimate that it is very low, and carried out.

5	Germ cell mutagenicity	Category 2	Health hazard	Warning	Suspected of causing genetic defects (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)	Although there was a result (DFGOT) positive by the chromosome aberration test using the mammals bone marrow cells using a somatic which is an in vivo mutagenicity test, there was no result positive by the in vivo genotoxicity test using a germ cells. So it is classified into Category 2.
6	Carcinogenicity	Classification not possible	-	-	-	Classification not possible due to lack of data
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 1 (respiratory organs)	Health hazard	Danger	Cause damage to organs (respiratory organs)	From description that it is a corrosive substances, and pulmonary edema was observed within the range of guidance value in Category 1 in inhalation exposure test of the rat in DFGOT, it was judged that respiratory system is target organ, and considered as Category 1.
9	Specific target organs/systemic toxicity following repeated exposure	Category 1 (respiratory organs, liver)	Health hazard	Danger	Causes damage to organs (respiratory organs, liver) through prolonged or repeated	Based on description that the pulmonary inflammation and bronchopneumonia were observed in inhalation exposure to the mouse, cow, and pig (DFGOT vol.7 (1996)), and description that the hepatocellular necrosis was observed in dermal exposure to the guinea pigs (DFGOT vol.7 (1996)), respiratory tracts and liver were judged as target organs. Since these effects were observed in exposure with the guidance value range of Category 1, it was classified into Category 1.
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 2	-	-	Toxic to aquatic life	It was classified into Category 2 from 48-hour EC50=3.3mg/L of Crustacea (Daphnia magna) (IUCRID, 2000).
11 Hazardous to the aquatic environment (chronic)	Not classified	-	-	-	Since rapidly degrading (it hydrolyzed and acetic acid and hydrogen peroxide are generated), and supposed less bio-accumulative (log Kow=-1.07(PHYSPROP Database, 2005)).