

GHS Classification

ID891

CAS 2426-08-6

Physical Hazards

Oxirane, (butoxymethyl)-

Date Classified: Aug. 18, 2006 (Environmental Hazards: Mar. 31, 2006)

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	-	-	-	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	Classification not possible (Category 3 or Category 4)	Flame	Warning	Flammable liquid and vapour; Combustible liquid	Flash point data are distributed in Category 3 and 4. Therefore, if the flash point is not measured with a real sample, it cannot be judged. The acceptance criteria are as follows: Category 3: 23 degC<= flash point <=60 degC; Category4: 60 degC< flash point <=93 degC
7 Flammable solids	Not applicable	-	-	-	Liquid (GHS definition)
8 Self-reactive substances and mixtures	Classification not possible	-	-	-	No data available
9 Pyrophoric liquids	Classification not possible	-	-	-	No data available
10 Pyrophoric solids	Not applicable	-	-	-	Liquid (GHS definition)
11 Self-heating substances and mixtures	Classification not possible	-	-	-	Test methods applicable to liquid substances are not available
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 applicable	-	-	-	Organic compounds containing oxygen (but not chlorine and fluorine) chemically bonded only to carbon and hydrogen (but not to other elements).
14 Oxidizing solids	Not applicable	-	-	-	Liquid (GHS definition)
15 Organic peroxides	Not applicable	-	-	-	Containing no -O-O- structure
16 Corrosive to metals	Classification not possible	-	-	-	No data available

Health Hazards

Hazard class	Classification	symbol	signal word	hazard statement	Rational for the classification
1 Acute toxicity (oral)	Category 5	-	Warning	May be harmful if swallowed	Category 5 based on SPECIES: Rat; ENDPOINT: LD50; VALUE: :2260mg/kg (ACGIH 7th, 2001; DFGOT vol.4, 1992; PATTY 4th, 1994), 2050mg/kg (DFGOT vol.4, 1992) and 2500mg/kg (DFGOT vol.4, 1992)
1 Acute toxicity (dermal)	Category 3	Skull and crossbones	Danger	Toxic in contact with skin	Based on rabbit LD50 value: 788mg/kg (PATTY (4th, 1994)) and 2520mg/kg (DFGOT vol.4, 1992), the lowest values was adopted and set as Category 3.
1 Acute toxicity (inhalation: gas)	Not applicable	-	-	-	Liquid (GHS definition)
1 Acute toxicity (inhalation: vapour)	Category 4	Exclamation mark	Warning	Harmful if inhaled	Rat LC50 (4 hours) value: 2590ppm (13.77mg/L) could be judged from vapor pressure as the steam with almost no mist, and classified by the ppm concentration standard as Category 4.
1 Acute toxicity (inhalation: dust, mist)	Classification not possible	-	-	-	No data available
2 Skin corrosion / irritation	Category 2	Exclamation mark	Warning	Causes skin irritation	It was set as Category 2 from description that the skin was stimulated as effect of the humans (ACGIH (7th, 2001), DFGOT (vol.4, 1992), PATTY (4th, 1994)).
3 Serious eye damage / eye irritation	Category 2A-2B	Exclamation mark	Warning	Causes serious eye irritation	We classified it as Category 2A-2B based on the descriptions that irritation was acknowledged by the test applied to the eyes of the rabbits (DFGOT (vol.4, 1992) and PATTY (4th, 1994)). Since the degree of irritation was different by the tests, we could not classify it deliberately.
4 Respiratory/skin sensitization	Respiratory sensitization: Classification not possible; Skin sensitization: Category 1	(Respiratory sensitization)-; (Skin sensitization)Exclamation mark	(Respiratory sensitization)-; (Skin sensitization)Warning	(Respiratory sensitization)-; (Skin sensitization)May cause allergic skin reaction	Sensitizing property for respiratory organ: No data. Skin sensitization : There was description that sensitizing property was recognized in two skin sensitivity tests for the human in DFGOT (vol.4, 1992), moreover, there were descriptions that skin sensitizing property was reported in human by ACGIH (7th, 2001) and PATTY (4th, 1994), therefore, we classified it as Category 1.

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)	There is no clear positive finding with in vivo mutagenicity test using germ cells, and there is a positive result with micronucleus test on mice, which is an in vivo mutagenicity test using somatic cells (DFGOT vol.4, 1992 and PATTY 4th, 1994). Since there was no data of in vivo genotoxicity study using germ cells, it was classified as Category 2 .
6	Carcinogenicity	Category 2	Health hazard	Warning	Suspected of causing cancer (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)	Since it was classified into the category 3 of carcinogenesis in EU, it was considered as Category 2 according to table 1 of an indicator.
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)	It was set as Category 3 (respiratory irritant) from description in DFGOT (vol.4, 1992) that respiratory irritant was seen in evidence of human exposure.
9	Specific target organs/systemic toxicity following repeated exposure	Category 1 (respiratory organs)	Health hazard	Danger	Causes damage to organs (respiratory organs) through prolonged or repeated exposure	Based on the description that in the 28-day inhalation exposure test using the rat, nasal mucosa degeneration and respiratory epitheliums dysplasia (metaplasia) were observed with the exposures in the Category 1 guidance value range (DFGOT (vol.4, 1992) and PATTY (4th, 1994)), it was classified into Category 1 (respiratory systems).
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	-	-	-	No data available
11 Hazardous to the aquatic environment (chronic)	Classification not possible	-	-	-	No data available.