

GHS Classification

ID242

2-Propyn-1-ol

CAS 107-19-7

Date Classified: Oct. 1, 2005 (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	Classification not possible	-	-	-	No data available, though the oxygen balance is in the boundary value of "Classified" or "Not".
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 3	Flame	Warning	Flammable liquid and vapour	Flash point: >=23degC and <=60degC
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 2	Skull and crossbones	Danger	Fatal if swallowed	It was set as Category 2 based on the value of 32mg/kg.. This value was calculated from rat LD50 values of 20 mg/kg (ACGIH, 7th.2001) and 54, 55, and 70 mg/kg (above, PATTY, 4th.1994).
1 Acute toxicity (dermal)	Category 1	Skull and crossbones	Danger	Fatal in contact with skin	It was set as Category 1 based on the value of 24 mg/kg which calculated from rabbit LD50 value : 88 mg/kg (ACGIH, 7th.2001) and 16 and 88 mg/kg (PATTY, 4th.1994).
1 Acute toxicity (inhalation: gas)	Not applicable	-	-	-	Liquid (GHS definition)
1 Acute toxicity (inhalation: vapour)	Category 2	Skull and crossbones	Danger	Fatal if inhaled	Based on the rat LC50 value (1 hour exposure: 1040ppm, ACGIH 7th.2001), which is equivalent of 520ppm (1.19mg/L) in 4 hour exposure, it was classified as Category 2.
1 Acute toxicity (inhalation: dust, mist)	Classification not possible	-	-	-	No data available
2 Skin corrosion / irritation	Category 1B	Corrosion	Danger	Causes severe skin burns and eye damage	Based on the statements that rabbit skin surface necrosed with the source being Priority 1 (ACGIH, 7th. 2001 and PATTY, 4th. 1994), and that severe necrosis is seen in less than 1 hour (5 or 15 minutes) on rabbit skin with the source being Priority 2 (BUA 213, 1999), it was judged to be corrosive substance and was classified as Category 1B.
3 Serious eye damage / eye irritation	Category 1	Corrosion	Danger	Causes serious eye damage	When eyedrops was applied to the rabbit at ACGIH (7th.2001) and PATTY (4th.1994), it was set as Category 1 based on it being indicated that permanent corneal injury takes place.
4 Respiratory/skin sensitization	Respiratory sensitization: Classification not possible; Skin sensitization: Not classified	-	-	-	Respirator: No data Skin : The sources of Priority 1 (ACGIH, 7th. 2001 and PATTY, 4th.1994) describe that "it is not a skin sensitization." Because this corresponds to the case when hazardousness is negated clearly, we classified this as out of category.

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 the micronucleus test using mouse erythrocytes is positive (NTP DB, 2005), there are no data from in vivo genotoxicity tests using germ cells. So the substance was classified as Category 2.
6	Carcinogenicity	Classification not possible	-	-	-	No data available
7	Toxic to reproduction	Classification not possible	-	-	-	No data available
8	Specific target organs/systemic toxicity following single exposure	Category 3 (narcotic effects)	Exclamation mark	Warning	May cause respiratory irritation or may cause drowsiness and dizziness (narcotic effects)	It was classified into Category 3 (anesthetic actions). Based on the description that the transient anesthetic effects (drowsiness, loss of activity or excitement) were observed (RTECS 2005 and BUA 213, 1999).
9	Specific target organs/systemic toxicity following repeated exposure	Category 1 (liver, kidneys)	Health hazard	Danger	Causes damage to organs (liver, kidneys) through prolonged or repeated exposure	It was classified in Category 1 based on description that the damage was seen in liver and kidney with exposure airborne concentrations of the guidance value range of Category 1 in repeated inhalation toxicity studies (ACGIH, 7th.2001 and PATTY, 4th.1994). However, although there is description that the damage was seen in liver and kidney also in the repeated oral toxicity study (IRIS of Priority 1, /2005 and PATTY, 4th.1994), the dose which indicates toxicity is in the range of the guidance value of Category 2.
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 96-hour LC50=1.44mg/L of fishes (Fathead minnows) (HSDB, 2004).
11 Hazardous to the aquatic environment (chronic)	Not classified	-	-	-	Since rapidly degrading (BOD: 95% (existing chemical safety inspections data)), and less bio-accumulative (log Kow=-0.38 (PHYSPROP Database, 2005)).