

GHS Classification

ID770

Cyclopentane

CAS 287-92-3

Date Classified: Mar. 15, 2007 (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	-	-	-	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 2	Flame	Danger	Highly flammable liquid and vapour	Category 2 because of its flash point: -42 to -7degC, initial Boiling point: 49 to 49.3degC
7 Flammable solids	Not applicable	-	-	-	Liquid (GHS definition)
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 classified	-	-	-	The ignition points is 361 - 385 degC (ICSC (1994), the dangerous decibel (the 2nd edition, 1993), a pocket book books (1997))
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 no oxygen, fluorine and chlorine.
14 Oxidizing solids	Not applicable	-	-	-	Liquid (GHS definition)
15 Organic peroxides	Not applicable	-	-	-	Organic compounds 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)	Not classified	-	-	-	Not classified because of SPECIES: Rat; ENDPOINT: LD50; VALUE: 11400 mg/kg; REFERENCE SOURCE: RTECS(2004)
1 Acute toxicity (dermal)	Classification not possible	-	-	-	No data available
1 Acute toxicity (inhalation: gas)	Not applicable	-	-	-	Liquid (GHS definition)
1 Acute toxicity (inhalation: vapour)	Category 5	-	Warning	May be harmful if inhaled	Rat inhalation LC50 = 106mg/L (RTECS (2004)). The administration period was unknown from the writing. But exposure for 30 minutes or more with this concentration will classify as Category 5, it was classified as Category 5. In addition, the saturated concentration of this product is 4.1* 10 ⁵ ppm (equivalent value: 1.2 * 10 ⁶ mg/L), and it is presumed that the inhalation test is done in the state of steam.
1 Acute toxicity (inhalation: dust, mist)	Classification not possible	-	-	-	No data available
2 Skin corrosion / irritation	Category 2	Exclamation mark	Warning	Causes skin irritation	Since there is a description that contact with this product may stimulate human skin (SITTIG (4th, 2002), HSFS (2001), ICSC (J) (1994)), it was classified as Category 2.
3 Serious eye damage / eye irritation	Category 2A-2B	Exclamation mark	Warning	Causes serious eye irritation	Since there is the description that the contact to this product and vapor stimulate the human eyes (PATTY (5th, 2001); ICSC (J) (1994); HSFS (2001); SITTIG (4th, 2002)), it was set as Category 2A-2B. [Indications] in the case that subdividing are necessary, it is more desirable to be set as Category 2A from the viewpoint of safety.
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)-	Respiratory sensitization: No data Skin sensitization : Although there is a description that dermatitis is caused by long-term contacts in the documents of Priority 1 (PATTY (5th, 2001)) and 2 others(ICSC(J)(1994);IUCILID (2000)), since it is impossible to distinguish if it is just stimulative or allergic, it was decided that it could not be classified due to lack of data.
5 Germ cell mutagenicity	Classification not possible	-	-	-	No data available
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, respiratory tract irritation)	Exclamation mark	Warning	May cause respiratory irritation or may cause drowsiness and dizziness (narcotic effects, respiratory tract irritation)	There is the description that the influence of the central nerve, such as giddiness, clouding of consciousness, a coma, etc. is seen as a result of exposures to this product in Priority 1 (PATTY (5th, 2001)). Moreover, respiratory irritation was indicated (PATTY (5th, 2001), ICSC (J) (1994)), it is classified into Category 3 (anesthesia action, respiratory irritation).
9	Specific target organs/systemic toxicity following repeated exposure	Not classified	-	-	-	In the 12-week repetition examination in a rat of high inhalation exposure which corresponds outside the Category (PATTY (5th, 2001)), only the suppression of weight gain was observed, therefore it was classified outside of Category.
10	Aspiration hazard	Category 1	Health hazard	Danger	May be fatal if swallowed and enters airways	There is the descriptions that aspiration causes chemical pneumonia (the documents of Priority 1 (PATTY (5th, 2001)) and 2 (ICSC(J) (1994); SITTIG (4th, 2002))), therefore we classified it as Category 1.

Environmental Hazards

Hazard class	Classification	symbol	signal word	hazard statement	Rational for the classification
11 Hazardous to the aquatic environment (acute)	Category 3	-	-	Harmful to aquatic life	It was classified into Category 3 from 48-hour EC50=10.5mg/L of Crustacea (Daphnia magna) (IUCLID, 2000).
11 Hazardous to the aquatic environment (chronic)	Category 3	-	-	Harmful to aquatic life with long lasting effects	Classified into Category 3, since acute toxicity was Category 3 and rapid degradability is unknown, though supposed less bio-accumulative (log Kow=3 (PHYSROP Database, 2005)).