

GHS Classification

ID767

Cyclohexene

CAS 110-83-8

Date Classified: Jun. 20, 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 classified	-	-	-	Not classified based on UNRTDG Class: 3, though containing unsaturated C-C bonds as chemical groups associated with explosive properties present.
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: -6degC and boiling point: 83degC.
7 Flammable solids	Not applicable	-	-	-	Liquid (GHS definition)
8 Self-reactive substances and mixtures	Not classified	-	-	-	Not classified based on UNRTDG Class: 3, though containing unsaturated C-C bonds as chemical groups associated with self-reactive properties present
9 Pyrophoric liquids	Not classified	-	-	-	Flash point: 244-310degC (ICSC, 1999; NFPA, 13th, 2002; Hommel, 1991)
10 Pyrophoric solids	Not applicable	-	-	-	Liquid (GHS definition)
11 Self-heating substances and mixtures	Not classified	-	-	-	Not classified because of UNRTDG Class: 3
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)	Category 4	Exclamation mark	Warning	Harmful if swallowed	It was set as Category 4 based on LD50= 1273mg/kg calculated from four rat data (the Health, Labor and Welfare Ministry reports (2006), SIDS (2002), PATTY (5th, 2001)).
1 Acute toxicity (dermal)	Category 4	Exclamation mark	Warning	Harmful in contact with skin	It was set as Category 4 based on rabbit LD50= 1231mg/kg (PATTY (5th, 2001)).
1 Acute toxicity (inhalation: gas)	Not applicable	-	-	-	Liquid (GHS definition)
1 Acute toxicity (inhalation: vapour)	Not classified	-	-	-	The saturated vapor pressure of this product is 88119ppm, and it is thought that the test was done with vapor. Based on rat LCLo >6370ppm (SIDS (2002)), it was classified as out of Category.
1 Acute toxicity (inhalation: dust, mist)	Classification not possible	-	-	-	No data available
2 Skin corrosion / irritation	Category 3	-	Warning	Causes mild skin irritation	It was classified as Category 3 based on the statement that redness was caused on humans (ICSC (J) (1999)).
3 Serious eye damage / eye irritation	Category 2A-2B	Exclamation mark	Warning	Causes serious eye irritation	Based on the statement (ICSC (J), (1999)) that redness is produced in humans, it was set as Category 2A-2B.
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)-	No data available
5 Germ cell mutagenicity	Classification not possible	-	-	-	Based on the fact that there were no in vivo test results and on the fact that there being no strong positive finding of multiple indices for in vitro tests, we presupposed that we could not categorize it according to the technical guideline.
6 Carcinogenicity	Classification not possible	-	-	-	No data available
7 Toxic to reproduction	Not classified	-	-	-	It was considered as the outside of category based on the statement that detrimental effect was observed against either parents' reproduction potential and neonatal development and growth in rat (Health, Labor and Welfare Ministry reports (2006)).

8	Specific target organs/systemic toxicity following single exposure	Category 3 (narcotic effects); Category 3 (respiratory tract irritation)	Exclamation mark	Warning	may cause respiratory irritation or may cause drowsiness and dizziness (narcotic effects); May cause respiratory irritation or may cause drowsiness and dizziness (respiratory tract irritation)	There is a publication that temporary central nerve inhibition is indicated in humans (PATTY (5th, 2001)), a possibility of affecting a central nervous system, and there is cough and lethargia (ICSC (J), (1999)). There is a publication that an animal also has an anesthetic actions (PATTY (5th, 2001)). So it is classified into Category 3 (anesthetic actions). And based on the statement that there is respiratory irritation in humans (ICSC (J) (1999)), it is classified into Category 3 (respiratory irritation).
9	Specific target organs/systemic toxicity following repeated exposure	Not classified	-	-	-	In the study which administered a higher doses than the guidance value of Category 2 to the animal, no apparent toxicity action is observed (SIDS (2002), PATTY (5th, 2001)). According to that it is considered as the outside of Category.
10	Aspiration hazard	Category 2	Health hazard	Warning	May be harmful if swallowed and enters airways	Category 2 because of "possible to cause chemical pneumonia by misswallowing of the liquid."(ICSC(J), 1999)

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=2.1mg/L of Crustacea (Daphnia magna), and others (MOE eco-toxicity tests of chemicals, 2000).
11 Hazardous to the aquatic environment (chronic)	Category 2	Environment	-	Toxic to aquatic life with long lasting effects	Classified into Category 2, since acute toxicity was Category 2 and not rapidly degrading (BOD: 0% (existing chemical safety inspections data)), though less bio-accumulative (BCF=45 (existing chemical safety inspections data)).