

GHS Classification

ID23

Chloroethane

CAS 75-00-3

Date Classified: May 24, 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 applicable	-	-	-	Classified as "gas" according to GHS definition
2 Flammable gases	Category 1	Flame	Danger	Extremely flammable gas	Based on the description in ICSC (2004): the lower explosion limit is 3.6vol%. Classified into Division 2.1 (UN#1037) (UN Recommendations on the Transport of Dangerous Goods)
3 Flammable aerosols	Not applicable	-	-	-	Not aerosol products
4 Oxidizing gases	Not classified	-	-	-	Classified into Division 2.1 (UN#1037) (UN Recommendations on the Transport of Dangerous Goods)
5 Gases under pressure	Liquefied gas	Gas cylinder	Warning	Contains gas under pressure; may explode if heated	The boiling point is 12.5degC (ICSC 2004), and the critical temperature is 187.2degC (Merck (13th, 2001)) - i.e., liquefied gas. Classified into Division 2.1 (UN#1037) (UN Recommendations on the Transport of Dangerous Goods)
6 Flammable liquids	Not applicable	-	-	-	Classified as "gas" according to GHS definition
7 Flammable solids	Not applicable	-	-	-	Classified as "gas" according to GHS definition
8 Self-reactive substances and mixtures	Not applicable	-	-	-	Classified as "gas" according to GHS definition
9 Pyrophoric liquids	Not applicable	-	-	-	Classified as "gas" according to GHS definition
10 Pyrophoric solids	Not applicable	-	-	-	Classified as "gas" according to GHS definition
11 Self-heating substances and mixtures	Not applicable	-	-	-	Classified as "gas" according to GHS definition
12 Substances and mixtures, which in contact with water, emit flammable gases	Not applicable	-	-	-	Classified as "gas" according to GHS definition
13 Oxidizing liquids	Not applicable	-	-	-	Classified as "gas" according to GHS definition
14 Oxidizing solids	Not applicable	-	-	-	Classified as "gas" according to GHS definition
15 Organic peroxides	Not applicable	-	-	-	Classified as "gas" according to GHS definition
16 Corrosive to metals	Classification not possible	-	-	-	Test methods applicable to gaseous substances are not available.

Health Hazards

Hazard class	Classification	symbol	signal word	hazard statement	Rational for the classification
1 Acute toxicity (oral)	Classification not possible	-	-	-	No data available
1 Acute toxicity (dermal)	Classification not possible	-	-	-	No data available
1 Acute toxicity (inhalation: gas)	Not classified	-	-	-	Based on the rat LC50 value of 40,700ppm representing the lower of the two testing data, 40,700ppm and 42,800ppm (4 hours), calculated from the testing data of rat LC50 (2-hour inhalation) of 57,576ppm (MOE Risk Assessment vol. 2 (2003)) and 60,632ppm (ACGIH (7th, 2003)).
1 Acute toxicity (inhalation: dust, mist)	Not applicable	-	-	-	Due to the fact that the substance is "gas" according to the GHS definition and inhalation of its vapour is not expected.
1 Acute toxicity (inhalation: dust, mist)	Not applicable	-	-	-	Due to the fact that the substance is "gas" according to the GHS definition and inhalation of its dust/mist is not expected.
2 Skin corrosion / irritation	Classification not possible	-	-	-	Insufficient data available
3 Serious eye damage / eye irritation	Category 2A-2B	Exclamation mark	Warning	Causes serious eye irritation	Based on the description in the report on rabbit eye irritation tests (CERI Hazard Data 99-14 (2000)): Corneal opacity and corneal epithelial damage are observed. Classified into Category 2A-2B because the intensity of irritation is unknown, although the substance should be placed in Category 2A from the viewpoint of safety, if further subclassification is needed.
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 available Skin sensitization: No data available
5 Germ cell mutagenicity	Not classified	-	-	-	Based on the absence of data on multi-generation mutagenicity tests and germ cell mutagenicity tests in vivo, and negative data on somatic cell mutagenicity tests in vivo (micronucleus tests), described in CERI-NITE Hazard Assessment No.41 (2004), NTP DB (Access on January 2006) and IARC (1999).
6 Carcinogenicity	Category 2	Health hazard	Warning	Suspected of causing cancer	Due to the fact that the substance is classified as Category A3 by ACGIH (2001).
7 Toxic to reproduction	Classification not possible	-	-	-	Insufficient data available (no data available on reproductive effects)
8 Specific target organs/systemic toxicity following single exposure	Category 2 (respiratory organs, liver, kidneys) Category 3 (narcotic effects)	Health hazard and Exclamation mark	Warning	May cause damage to organs (respiratory organs, liver, kidneys) (Narcotic effects) May cause drowsiness or dizziness	Based on the human evidence including "narcotic effects" (NITE Initial Risk Assessment No.41 (2005)), and the evidence from animal studies including "histologic changes in the lungs, liver and kidneys" (CERI Hazard Data 99-14 (2000)). The effects on experimental animals were observed at dosing levels within the guidance value ranges for Category 2.

9	Specific target organs/systemic toxicity following repeated exposure	Category 1 (liver, nervous system) Category 2 (respiratory organs)	Health hazard	Danger Warning	Causes damage to organs through prolonged or repeated exposure (liver, nervous system) May cause damage to organs through prolonged or repeated	Based on the human evidence including "hepatomegaly, temporary hepatic function disorder, epileptic seizure, ataxia, gait disorder, disorientation, temporary lapse of memory, hallucination" (NITE Initial Risk Assessment No.41 (2005)), and the evidence from animal studies including "hepatic function disorder, a decrease in blood pressure, a decrease in the capacity of phagocytes, hepatic fatty degeneration, hypertrophy of the alveolar septum" (CERI Hazard Data 99-14 (2000)). The effects on experimental animals were observed at dosing levels within the guidance value ranges for Category 2.
10	Aspiration hazard	Not applicable	-	-	-	Due to the fact that the substance is a gas at ordinary temperatures.

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 hours EC50=58mg/L of the crustacea (Daphnia magna) (CERI/NITE Hazard Assessment Report (2004) and others.).
11 Hazardous to the aquatic environment (chronic)	Category 3	-	-	Harmful to aquatic life with long lasting effects	Although acute toxicity was Category 3 and the bio-accumulation potential was low (log Kow=1.43(PHYSROP Database, 2005)), since there was no rapidly degrading (the decomposition by BOD: 1%(Existing Chemical Safety Inspections Data)), it was classified into Category