

## GHS Classification

**ID160**

**CAS 79-00-5**

### Physical Hazards

**1,1,2-Trichloroethane**

Date Classified: Apr. 20, 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	-	-	-	Containing no chemical groups with explosive properties
2 Flammable gases	Not applicable	-	-	-	Classified as "liquid" according to GHS definition
3 Flammable aerosols	Not applicable	-	-	-	Not aerosol products
4 Oxidizing gases	Not applicable	-	-	-	Classified as "liquid" according to GHS definition
5 Gases under pressure	Not applicable	-	-	-	Classified as "liquid" according to GHS definition
6 Flammable liquids	Classification not possible	-	-	-	Classification not possible due to lack of data (No literature indicates the flash point (ICSC, 2004)).
7 Flammable solids	Not applicable	-	-	-	Classified as "liquid" according to GHS definition
8 Self-reactive substances and mixtures	Not applicable	-	-	-	Containing no chemical groups with explosive or self-reactive properties
9 Pyrophoric liquids	Classification not possible	-	-	-	No data available
10 Pyrophoric solids	Not applicable	-	-	-	Classified as "liquid" according to 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	-	-	-	Containing no metals or metalloids (B, Si, P, Ge, As, Se, Sn, Sb, Te, Bi, Po, At)
13 Oxidizing liquids	Not applicable	-	-	-	Organic compounds containing chlorine (but not oxygen and fluorine), with the chlorine bound to carbon and hydrogen (but not to other elements)
14 Oxidizing solids	Not applicable	-	-	-	Classified as "liquid" according to 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	Based on the rat LD50 (oral route) value of 836mg/kg representing the lower of the two testing data, 836mg/kg (SIDS (2002)) and 1,140mg/kg (CERI-NITE Hazard Assessment No.12 (2004)).
1 Acute toxicity (dermal)	Not classified	-	-	-	Based on the rabbit LD50 (dermal route) of 5,371mg/kg (CERI-NITE Hazard Assessment No.12 (2004)).
1 Acute toxicity (inhalation: gas)	Not applicable	-	-	-	Due to the fact that the substance is "liquid" according to the GHS definition and inhalation of its gas is not expected.
1 Acute toxicity (inhalation: vapour)	Category 3	Skull and crossbones	Danger	Toxic if inhaled	Based on the rat LC50 value of 4.17mg/L (758ppm), calculated from the testing data of rat LC50 (inhalation of vapour) of 9.18mg/L (6 hours), 5.45 mg/L (8 hours) and 2.78 mg/L (8 hours) (CERI-NITE Hazard Assessment No.12 (2004)), was lower than 90% of the saturated vapor concentration (25,000ppm) under a saturated vapour pressure of 2.5kPa (20degC) (ICSC (2004)), the substance was considered as "vapour containing substantially no mist" and was classified based on standard values expressed in ppm.
1 Acute toxicity (inhalation: dust, mist)	Classification not possible	-	-	-	No data available
2 Skin corrosion / irritation	Category 2	Exclamation mark	Warning	Causes skin irritation	While technical guidelines set out that the classification should be based on the results of 4-hour application, the results of 24-hour application in rabbits suggest mild to severe skin irritation (SIDS (2002)). The results of 5-minute application in humans suggest pricking pain, burning sensation and temporary whitening of the skin (CERI-NITE Hazard Assessment No.12 (2004)).
3 Serious eye damage / eye irritation	Category 2B	-	Warning	Causes eye irritation	Based on the human reports (CERI-NITE Hazard Assessment No.12 (2004)), and the evidence of "mild irritation" from rabbit eye irritation tests (CERI-NITE Hazard Assessment No.12 (2004), SIDS (2002)).
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 using mouse bone marrow), described in CERI-NITE Hazard Assessment No.12 (2004), SIDS (2004).
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

8	Specific target organs/systemic toxicity following single exposure	Category 1 (liver) Category 3 (respiratory tract irritation, narcotic effects)	Health hazard and Exclamation mark	Danger Warning	Causes damage to organs (liver) (Respiratory tract irritation) May cause respiratory irritation (Narcotic effects) May cause drowsiness or dizziness	Based on the human evidence including "narcotic influence, respiratory irritation" (CERI-NITE Hazard Assessment No.12 (2004)), and the evidence from animal studies including "adverse effects on the liver (as indicated by biochemical examination of blood), depression of the central nervous system" (SIDS (2002)). The effects on experimental animals were observed at dosing levels within the guidance value ranges for Category 1.
9	Specific target organs/systemic toxicity following repeated exposure	Category 1 (nervous system, gastrointestinal tract, kidneys, respiratory organs) Category 2 (liver)	Health hazard	Danger Warning	Causes damage to organs through prolonged or repeated exposure (nervous system, gastrointestinal tract, kidneys, respiratory organs) May cause damage to organs through prolonged or repeated exposure (liver)	Based on the human evidence including "severe effects on the central nervous system, chronic digestive tract disorder, renal lipid deposition, pulmonary disorder" (CERI-NITE Hazard Assessment No.12 (2004)), and the evidence from animal studies including "adverse effects on the liver (detected through blood biochemical examination)" (CERI-NITE Hazard Assessment No.12 (2004)). The effects on experimental animals were observed at dosing levels within the guidance value ranges for 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 3	-	-	Harmful to aquatic life	It was classified into Category 3 from 48 hours EC50=18000microg/L of the crustacea (Daphnia magna) (MOE Risk Assessment vol. 2 (2003) and others.).
11 Hazardous to the aquatic environment (chronic)	Not classified	-	-	-	Although the acute toxicity was Category 3, judging from the NOEC=13mg/L during 28 days of the crustacea (Daphnia magna) (CERI/NITE Hazard Assessment Report, 2004), it was classified into Not classified.