

GHS Classification

ID268

Chloroacetic acid

CAS 79-11-8

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	—	—	—	Containing no chemical groups with explosive properties
2 Flammable gases	Not applicable	—	—	—	Classified as "solid" according to GHS definition
3 Flammable aerosols	Not applicable	—	—	—	Not aerosol products
4 Oxidizing gases	Not applicable	—	—	—	Classified as "solid" according to GHS definition
5 Gases under pressure	Not applicable	—	—	—	Classified as "solid" according to GHS definition
6 Flammable liquids	Not applicable	—	—	—	Classified as "solid" according to GHS definition
7 Flammable solids	Not classified	—	—	—	Cannot be classified due to lack of data, though "flammable" according to ICSC (2003). Classified into Division 6.1 and Class 8, in accordance with the classification by the UN Recommendations on the Transport of Dangerous Goods (UN#0154, chlorodinitrobenzene (solid)).
8 Self-reactive substances and mixtures	Not applicable	—	—	—	Containing no chemical groups with explosive or self-reactive properties
9 Pyrophoric liquids	Not applicable	—	—	—	Classified as "solid" according to GHS definition
10 Pyrophoric solids	Not classified	—	—	—	Not pyrophoric when in contact with air at ordinary temperatures: the auto-ignition temperature is 470degC (ICSC, 2003)
11 Self-heating substances and mixtures	Classification not possible	—	—	—	Test methods applicable to liquid substances are not available (melting point: 52.5-63degC (ICSC,1999), test temperature:140degC)
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	—	—	—	Classified as "solid" according to GHS definition
14 Oxidizing solids	Not applicable	—	—	—	Organic compounds containing oxygen (but not chlorine and fluorine), with the oxygen bound to carbon and hydrogen (but not to other elements)
15 Organic peroxides	Not applicable	—	—	—	Organic compounds containing no "-O-O-" structure
16 Corrosive to metals	Classification not possible	—	—	—	Test methods applicable to solid substances are not available (melting point: 63degC (alpha type), 56.2degC (beta type) (ICSC, 2003), test temperature: 55degC). No data available (melting point: 52.5degC (gamma Type) (ICSC, 2003)).

Health Hazards

Hazard class	Classification	symbol	signal word	hazard statement	Rational for the classification
1 Acute toxicity (oral)	Category 3	Skull and crossbones	Danger	Toxic if swallowed	Based on the LD50 value of 55mg/kg calculated from the testing data of rat LD50 (oral route) of 55mg/kg, 90mg/kg and 277.5mg/kg (EU-RAR No.52 (2005)).
1 Acute toxicity (dermal)	Category 3	Skull and crossbones	Danger	Toxic in contact with skin	Based on the LD50 value of 250mg/kg representing the lower of the testing data of rat LD50 (dermal route) of 305mg/kg and rabbit LD50 of 250mg/kg (EU-RAR No.52 (2005)).
1 Acute toxicity (inhalation: gas)	Not applicable	—	—	—	Due to the fact that the substance is "solid" according to the GHS definition and inhalation of its gas is not expected.
1 Acute toxicity (inhalation: dust, mist)	Classification not possible	—	—	—	No data available
1 Acute toxicity (inhalation: dust, mist)	Classification not possible	—	—	—	Insufficient data available
2 Skin corrosion / irritation	Category 1A-1C	Corrosion	Danger	Causes severe skin burns and eye damage	Based on the evidence of "severe irreversible irritation and corrosion of the skin" in rabbit skin irritation tests (though the results are not those of 4-hour application) (CERI Hazard Data 98-9 (1999)) and the epidemiological evidence of "chemical burn at the site of exposure." Although classified as Category 1A-1C, the substance should be placed in Category 1A from the viewpoint of safety, if further subclassification is needed.
3 Serious eye damage / eye irritation	Category 1	Corrosion	Danger	Causes serious eye damage	Based on the evidence of "severe eye irritation (severe eye corrosion)" in rabbit eye irritation tests (EU-RAR No.52 (2005)) and the epidemiological evidence of "serious eye irritation and corrosion" (CERI Hazard Data 98-9 (1999)).
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: Cannot be classified due to the insufficiency of data
5 Germ cell mutagenicity	Classification not possible	—	—	—	Based on the absence of data on multi-generation mutagenicity tests, germ/somatic cell mutagenicity tests in vivo and germ cell genotoxicity tests in vivo, and negative data on somatic cell genotoxicity tests in vivo (DNA damage tests), no strong positive data on mutagenicity tests in vitro, described in EU-RAR No.52 (2005) and NTP DB (Access on February 2006).
6 Carcinogenicity	Not classified	—	—	—	Due to the fact that the substance is classified as A4 by ACGIH (2005).
7 Toxic to reproduction	Category 2	Health hazard	Warning	Suspected of damaging fertility or the unborn child	Based on the description in MOE Risk Assessment vol.3 (2004), EU-RAR No.52 (2005) and BUA 127 (1993); The results of rat teratogenicity tests suggest a significant increase in the incidence of heart malformation in fetuses at dosing levels toxic to parental animals.
8 Specific target organs/systemic toxicity following single exposure	Category 1 (nervous system, heart, kidneys, liver, respiratory organs)	Health hazard	Danger	Causes damage to organs (nervous system, heart, kidneys, liver, respiratory organs)	Based on the human evidence including "nausea, vomiting, cardiovascular system disorder, nervous system disorder including loss of consciousness and coma" (CERI Hazard Data 98-9 (1999)), "disorientation, excitement, heart failure and coma, severe metabolic acidosis, rhabdomyolysis, hepatic adipose infiltration, renal failure and brain edema, severe respiratory irritation and pulmonary edema" (MOE Risk Assessment vol.3 (2004)).

9	Specific target organs/systemic toxicity following repeated exposure	Category 2 (respiratory organs, heart, liver)	Health hazard	Warning	May cause damage to organs through prolonged or repeated exposure (respiratory organs, heart, liver)	Based on the evidence from animal studies including "peripheral pulmonary perivenous infiltration and wall thickening" (CERI Hazard Data 98-9 (1999)), "myocardial degeneration, chronic nasal inflammation, moderate liver inflammation" (MOE Risk Assessment vol.3 (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 1	Environment	Warning	Very toxic to aquatic life	It was classified into Category 1 from 72 hours ErC50=0.033mg/L of the algae (Scenedesmus) (CERI/NITE Hazard Assessment Report (preliminary version), 2006).
11 Hazardous to the aquatic environment (chronic)	Not classified	—	—	—	Since there was rapidly degrading (the decomposition by BOD: 99.8% (Existing Chemical Safety Inspections Data)) and the bio-accumulation was low (log Kow=0.22 (PHYSPROP Database, 2005)), it was classified into Not classified.