

GHS Classification

ID444

CAS 115-32-2

Physical Hazards

2,2,2-trichloro-1,1-bis(4-chlorophenyl)ethanol

Date Classified: Dec. 18, 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 "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	Classification not possible	—	—	—	Classification not possible due to lack of data, though classified as flammable according to ICSC (2003)
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	—	—	—	Considered non-pyrophoric when in contact with air at ordinary temperatures since the substance is stable to heat (up to 150degC) (Agricultural Chemical Registration Data)
11 Self-heating substances and mixtures	Not classified	—	—	—	Stable to heat (up to 150degC) (Agricultural Chemical Registration Data)
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 chlorine and oxygen (but not fluorine), with the chlorine and 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 with melting point of >55degC are not available (melting point:72.4degC (Agricultural Chemical Registration Data)).

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 578mg/kg (Agricultural Chemical Registration Data (2005)).
1 Acute toxicity (dermal)	Not classified	—	—	—	Based on the rat LD50 (dermal route) value of >5,000mg/kg (Agricultural Chemical Registration Data (2005)).
1 Acute toxicity (inhalation: gas)	Not applicable	—	—	—	Due to the fact that the substance is a solid according to the GHS criteria and inhalation of its gas is not expected.
1 Acute toxicity (inhalation: dust, mist)	Not classified	—	—	—	No data available
2 Skin corrosion / irritation	Not classified	—	—	—	Based on the evidence of only mild irritation with the maximum Draize score of 0.8, which cleared up on day 3, observed in rabbit skin irritation tests (Agricultural Chemical Registration Data (2005)).
3 Serious eye damage / eye irritation	Category 1	Corrosion	Danger	Causes serious eye damage	Based on the evidence of irritant effects on the cornea, iris and conjunctiva, which persisted for at least 21 days of observation (Agricultural Chemical Registration Data (2005)).
4 Respiratory/skin sensitization	Respiratory sensitization: Classification not possible Skin sensitization: Category 1	(Respiratory sensitization) — (Skin sensitization) Exclamation mark	(Respiratory sensitization) — (Skin sensitization) Warning	(Respiratory sensitization) — (Skin sensitization) May cause an allergic skin reaction	Respiratory sensitization: No data available Skin sensitization: Based on positive results in guinea pig skin sensitization tests employing the Buehler method (Agricultural Chemical Registration Data (1993)).
5 Germ cell mutagenicity	Not classified	—	—	—	Based on negative data in in vitro reverse mutation tests and rat in vivo chromosome aberration tests (Agricultural Chemical Registration Data (2005)).
6 Carcinogenicity	Not classified	—	—	—	Due to the fact that the substance is classified as Category C by IARC (1987).
7 Toxic to reproduction	Not classified	—	—	—	Based on no evidence of adverse effects on reproduction or offspring development observed in rat 2-generation reproduction studies and rat/rabbit teratogenicity studies (Agricultural Chemical Registration Data (2005)).

8	Specific target organs/systemic toxicity following single exposure	Category 2 (nervous system)	Health hazard	Warning	May cause damage to organs (nervous system)	Based on the evidence from animal studies including "inanimation," "ataxia," "collapse," "lacrimation," and "salivation" (Agricultural Chemical Registration Data (2005)). These effects were observed at dosing levels within the guidance value ranges for Category 2.
9	Specific target organs/systemic toxicity following repeated exposure	Category 1 (thyroid gland), Category 2 (liver, kidneys, adrenal)	Health hazard	Danger	Causes damage to organs through prolonged or repeated exposure (thyroid gland) May cause damage to organs through prolonged or repeated exposure (liver, kidneys).	Based on the evidence from animal studies including "increased incidence of hypertrophy of the thyroid follicular epithelium," "hepatocellular hypertrophy, hepatocellular necrosis/vacuolization," "reduced kidney weight and centrilobular hepatocellular hypertrophy, and dilatation/degeneration of the renal cortical tubules," and "hypertrophy of the adrenal cortical cells" (Agricultural Chemical Registration Data (2005)). These effects were observed at dosing levels within the guidance value ranges for Category 1 (thyroid gland) and Category 2 (liver, kidneys, adrenal).
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 48 hours EC50=0.096mg/L of the crustacea (Daphnia magna) (MOE eco-toxicity tests of chemicals, 1998).
11 Hazardous to the aquatic environment (chronic)	Category 1	Environment	Warning	Very toxic to aquatic life with long lasting effects	Since the acute toxicity was Category 1 and it had no rapidly degrading (the decomposition by BOD: 0% (Existing Chemical Safety Inspections Data)), and it had the bio-accumulation (BOF=10000 (Existing Chemical Safety Inspections Data)), it was classified into Category 1.