

GHS Classification

ID437

CAS 1897-45-6

Physical Hazards

Tetrachloroisophthalonitrile

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	Not classified	—	—	—	Non-flammable (IUCLID (2000))
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	—	—	—	Non-flammable (IUCLID (2000))
11 Self-heating substances and mixtures	Not classified	—	—	—	Non-flammable (IUCLID (2000))
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 (but not fluorine and oxygen), with the fluorine 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: 252.1degC (Agricultural Chemical Registration Data)).

Health Hazards

Hazard class	Classification	symbol	signal word	hazard statement	Rational for the classification
1 Acute toxicity (oral)	Not classified	—	—	—	Based on the rat LD50 (oral route) value of >10,000mg/kg (Agricultural Chemical Registration Data (1973)).
1 Acute toxicity (dermal)	Not classified	—	—	—	Based on the rat LD50 (dermal route) value of >10,000mg/kg (Agricultural Chemical Registration Data (2004)).
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)	Classification not possible	—	—	—	No data available
1 Acute toxicity (inhalation: dust, mist)	Category 2	Skull and crossbones	Danger	Fatal if inhaled	Based on the rat LC50 (inhalation route) value of 0.1mg/L (4 hours) (EHC183 (1996)).
2 Skin corrosion / irritation	Classification not possible	—	—	—	The available rabbit skin irritation tests demonstrated mild reversible irritation: mild erythema observed in all treated animals receiving 24 hour application (though the effects cleared up after 2-7 days) and mild to moderate edema in most animals exposed to >2.15g/kg (though the effects resolved after 1-2 days) (Agricultural Chemical Registration Data (1973)). However, given the high doses of application (1.0g/rabbit at a minimum) and long exposure duration (24 hours), it is decided not to use these findings for classification.
3 Serious eye damage / eye irritation	Category 2A	Exclamation mark	Warning	Causes serious eye irritation	Based on the evidence of moderate irritation which persisted for up to day 7, observed in rabbit eye irritation tests (Agricultural Chemical Registration Data (1973)).
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 skin sensitization tests with chlorothalonil (neat) in Hartley guinea pigs, though skin photosensitivity tests in guinea pigs using the Herber method showed negative.
5 Germ cell mutagenicity	Not classified	—	—	—	Based on negative data in in vitro reverse mutation tests (Agricultural Chemical Registration Data (1983)), mouse in vivo micronucleus tests (Agricultural Chemical Registration Data (1985)), and in vivo chromosome aberration tests performed in rats and hamsters (Agricultural Chemical Registration Data (1995)).
6 Carcinogenicity	Category 2	Health hazard	Warning	Suspected of causing cancer	Due to the fact that the substance is classified as Category 2B by IARC (1999) and Category 2B by the Japan Society for Occupational Health.

7	Toxic to reproduction	Category 2	Health hazard	Warning	Suspected of damaging fertility or the unborn child	Based on the evidence of increased early embryonic mortality at doses causing reduced parental body weight gains observed in rat teratogenicity studies (Agricultural Chemical Registration Data (1985)).
8	Specific target organs/systemic toxicity following single exposure	Classification not possible	—	—	—	Insufficient data available; the different routes of exposure resulted in substantial differences in the degree of toxicity (the dermal LD50 was >=10,000mg/kg without any noted symptoms of toxicity, whereas the inhalation LC50 was 0.1mg/L (Agricultural Chemical Registration Data, 1973)).
9	Specific target organs/systemic toxicity following repeated exposure	Classification not possible	—	—	—	In rat acute toxicity studies, proventricular changes probably due to irritation was observed at doses within the guidance value ranges for Category 1. However, no other findings referable to specific target organs were reported (Agricultural Chemical Registration Data (1988)) and insufficient data are available.
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 96 hours LC50=10.5microg/L of the fish (Rainbow Trout) (MOE Risk Assessment vol. 2 (2003) and others.).
11 Hazardous to the aquatic environment (chronic)	Category 1	Environment	Warning	Very toxic to aquatic life with long lasting effects	Although acute toxicity is Category 1 and bio-accumulation is low (BCF=125(Existing Chemical Safety Inspections Data,)), since there was no rapidly degrading (the decomposition by BOD: 0%(Existing Chemical Safety Inspections Data)), it was classified into Category 1.