

GHS Classification

ID428

Tributyltin chloride

CAS 1461-22-9

Date Classified: Jun. 20, 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 "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	—	—	—	No data available. The flash point of some products on the market is over 110degC (c.c.) (Sigma-Aldrich MSDS, 2004), which is "Not classified."
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 classified	—	—	—	Stable to water (insoluble in cold water, HSDB (2006))
13 Oxidizing liquids	Classification not possible	—	—	—	Classification not possible due to lack of data, though being organic compounds containing chlorine bound to elements other than carbon and hydrogen
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 3	Skull and crossbones	Danger	Toxic if swallowed	Based on the rat LD50 (oral route) of 122mg/kg representing the lower of the two testing data, 122mg/kg (EHC 116 (1990)) and 129mg/kg (EHC 116 (1990)).
1 Acute toxicity (dermal)	Classification not possible	—	—	—	No data available
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: dust, mist)	Classification not possible	—	—	—	No data available
2 Skin corrosion / irritation	Category 2	Exclamation mark	Warning	Causes skin irritation	Based on the description in the report on rat skin irritation tests (EHC 116 (1990)): "The substance induced widespread epidermal necrosis within 12-24 hours. Regeneration of the epidermal layer was observed at 18-24 hours. No inflammatory infiltration was found in the dermis. At 5 hours, erythema reached a maximum and remained through 48 hours. By 72 hours, erythema reactions had resolved." The substance is thus considered to cause strong irritation with reversible effects, and classified into Category 2.
3 Serious eye damage / eye irritation	Category 2A	Exclamation mark	Warning	Causes serious eye irritation	Based on the description of the human health effects (HSDB (2006)): "severely irritating to the eye."
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	Classification not possible	—	—	—	No data available As for the health hazards, refer to "ID1275, Tributyltin oxide, CAS: 56-35-9."
6 Carcinogenicity	Classification not possible	—	—	—	No data available As for the health hazards, refer to "ID1275, Tributyltin oxide, CAS: 56-35-9."
7 Toxic to reproduction	Classification not possible	—	—	—	No data available As for the health hazards, refer to "ID1275, Tributyltin oxide, CAS: 56-35-9."
8 Specific target organs/systemic toxicity following single exposure	Category 2 (liver, kidneys)	Health hazard	Warning	Causes damage to organs (liver, kidneys)	Based on the evidence from animal studies including "steatosis of the hepatocyte, traces of lipid in renal tubules, haemorrhages in the gastrointestinal tract and kidney" (EHC 116 (1990)). 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	Classification not possible	—	—	—	No data available Refer to "ID1275, Tributyltin oxide, CAS: 56-35-9."
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=1.1microg/L of the crustacea (Mysid Shrimp) (EHC116 (1990) and others.).
11 Hazardous to the aquatic environment (chronic)	Category 1	Environment	Warning	Very toxic to aquatic life with long lasting effects	Since acute toxicity was Category 1 and there was no rapidly degrading (it was hydrolyzed, and triphenyltin hydroxide was generated, and was residue(existing chemical safety inspections data)), and since there was bio-accumulation (BCF=9210(triphenyltin hydroxide) (existing chemical safety inspections data)), it was classified into Category 1.