

GHS Classification

ID1274

tributyltin acetate

CAS 56-36-0

Date Classified: Feb. 20, 2007 (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	-	-	-	There are no chemical groups associated with explosive properties present in the molecules.
2 Flammable gases	Not applicable	-	-	-	Solid (GHS definition)
3 Flammable aerosols	Not applicable	-	-	-	Not aerosol products
4 Oxidizing gases	Not applicable	-	-	-	Solid (GHS definition)
5 Gases under pressure	Not applicable	-	-	-	Solid (GHS definition)
6 Flammable liquids	Not applicable	-	-	-	Solid (GHS definition)
7 Flammable solids	Classification not possible	-	-	-	No data available
8 Self-reactive substances and mixtures	Not applicable	-	-	-	There are no chemical groups associated with explosive or self-reactive properties present in the molecule.
9 Pyrophoric liquids	Not applicable	-	-	-	Solid (GHS definition)
10 Pyrophoric solids	Not classified	-	-	-	It was a kind of tributyl tins, and since tributyl tins were once used as antifouling agents for hulls or fishing implements, it was considered not to ignite spontaneously even if it contacted the normal temperature air. Thus it was defined as "out of Category".
11 Self-heating substances and mixtures	Classification not possible	-	-	-	Test methods applicable to solid (melting point <= 140degC) substances are not available.
12 Substances and mixtures, which in contact with water, emit flammable gases	Not classified	-	-	-	It was a kind of tributyl tins, and since tributyl tins was once used as a antifouling agent of a hull or fishing implements, it was considered to be stable to water and carried out the outside of category.
13 Oxidizing liquids	Not applicable	-	-	-	Solid (GHS definition)
14 Oxidizing solids	Classification not possible	-	-	-	No data available
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.

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	Category 3 based on SPECIES: Rat; ENDPOINT: LD50; VALUE: 50-100 mg/kg (ACGIH 7th, 2001) and 99 mg/kg (Patty, 5th, 2001; RTECS, 2004)
1 Acute toxicity (dermal)	Classification not possible	-	-	-	No data available
1 Acute toxicity (inhalation: gas)	Not applicable	-	-	-	Solid (GHS definition)
1 Acute toxicity (inhalation: vapour)	Classification not possible	-	-	-	No data available
1 Acute toxicity (inhalation: dust, mist)	Classification not possible	-	-	-	No data available
2 Skin corrosion / irritation	Category 3	-	Warning	Causes mild skin irritation	From the knowledge that the skin is stimulated and a burn injury is caused (HSFS, 1999), and that tributyltin compounds or organic tin compounds indicate skin irritation (DFGOT 1, 1991-atty 5th, 2001; ATSDR, 2005), it was judged that it had slight skin irritation leastways, and was set as category 3.
3 Serious eye damage / eye irritation	Category 2A-2B	Exclamation mark	Warning	Causes serious eye irritation	From knowledge that an eye is stimulated and a burn is caused (HSFS, 1999), and eye irritation is indicated with the organic tin compound (ACGIH 7th, 2001; Patty 5th, 2001; ATSDR, 2005), it is set as Category 2A-2B. In addition, detailed categorization is difficult.
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)-	No data available
5 Germ cell mutagenicity	Classification not possible	-	-	-	No data available

6	Carcinogenicity	Classification not possible	-	-	-	The organotin compounds is classified into A4 (it cannot classify into a the human carcinogens) in ACGIH. On the other hand, there is also a knowledge that a certain kind of organotin compounds induces cancer to animals (ATSDR, 2005) and data of its this product themselves cannot be found. Therefore, it cannot be classified since the data is insufficient.
7	Toxic to reproduction	Category 2	Health hazard	Warning	Suspected of damaging fertility or the unborn child	Since embryo fetus fatality and the developmental abnormality (the craniofacial and skeletal muscle system) were seen in the teratogenicity study using rat in the dose which indicates maternal toxicity (ATSDR, 2005; RTECS, 2004), it was set as Category 2.
8	Specific target organs/systemic toxicity following single exposure	Category 1 (central nervous system); Category 2 (digestive system); Category 3 (respiratory tract irritation)	Health hazard	Danger	Causes damage to organs (central nervous system); May cause damage to organs (digestive system); May cause respiratory irritation or may cause drowsiness and dizziness (respiratory tract irritation)	Since in the guidance value of Category 2, gastrointestinal bleedings was observed in the mouse (ATSDR, 2005), and the influence of the central nervous system on human (ATSDR, 2005; ACGIH 7th, 2001; Patty 5th, 2001) and the potential of respiratory irritant (ATSDR, 2005; ACGIH 7th, 2001) as an organic tin compounds are described, it was considered as Category 1 (central nervous system), Category 2 (alimentary system), and Category 3 (respiratory irritant).
9	Specific target organs/systemic toxicity following repeated exposure	Category 1 (immune system)	Health hazard	Danger	Causes damage to organs (immune system) through prolonged or repeated exposure	Although own data of this product could not be found, since the impacts of effects on the human immune system was suggested by as an organic tin compounds (ATSDR, 2005; ACGIH 7th, 2001-atty 5th, 2001), it was classified into Category 1 (immune systems).
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-hour LC50=3.3microg TBT/L (tributyltin acetate concentration equivalent: 4.0microg/L) of Crustacea (<i>Daphnia magna</i>) (EHC15, 1980).
11 Hazardous to the aquatic environment (chronic)	Category 1	Environment	Warning	Very toxic to aquatic life with long lasting effects	Classified into Category 1, since acute toxicity is Category 1, not rapidly degrading (it hydrolyzed, and tributyltin hydroxides was generated, and remained (existing chemical substances safety inspections data)), and bioaccumulative (BCF=9210 of tributyltin hydroxides (existing chemical substances safety inspections data)).