

GHS Classification

ID1275

Distannoxane, hexabutyl-

CAS 56-35-9

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	-	-	-	Liquid (GHS definition)
3 Flammable aerosols	Not applicable	-	-	-	Not aerosol products
4 Oxidizing gases	Not applicable	-	-	-	Liquid (GHS definition)
5 Gases under pressure	Not applicable	-	-	-	Liquid (GHS definition)
6 Flammable liquids	Not classified	-	-	-	Not classified because of its flash point: 190degC(C.C.) (ICSC(J), 1998)
7 Flammable solids	Not applicable	-	-	-	Liquid (GHS definition)
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 classified	-	-	-	Uses are sterilization and antifungal agent, a ship's-bottom paint additive agent etc., and even if it contacts the air of normal temperature, it does not ignite spontaneously.
10 Pyrophoric solids	Not applicable	-	-	-	Liquid (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 (the water solubility is obtained)
13 Oxidizing liquids	Classification not possible	-	-	-	No data available
14 Oxidizing solids	Not applicable	-	-	-	Liquid (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	Because the oral LD50 values in rats are 127-234mg/kg (CICAD 14, 1999) or 92-194mg/kg (DFGOT 1, 1991), the substance was classified as Category 3.
1 Acute toxicity (dermal)	Category 3	Skull and crossbones	Danger	Toxic in contact with skin	It was set as Category 3 from rat dermal LD50 = 605mg/kg (ACGIH 7th, 2001;DFGOT 1, 1991).
1 Acute toxicity (inhalation: gas)	Not applicable	-	-	-	Liquid (GHS definition)
1 Acute toxicity (inhalation: vapour)	Classification not possible	-	-	-	No data available
1 Acute toxicity (inhalation: dust, mist)	Category 2	Skull and crossbones	Danger	Fatal if inhaled	Based on rat inhalation LC50 value 65mg/m3/4H (= 0.065mg/L/4H) (DFGOT 1 (1991); CICAD 14 (1999); ATSDR (2005)), it was set as Category 2.
2 Skin corrosion / irritation	Category 2	Exclamation mark	Warning	Causes skin irritation	Since severe irritation was indicated in the Draize's examination using human and rabbit skin (RTECS, 2004) and it was considered as the powerful skin stimulativeness substance (CICAD 14, 1999), it was set as Category 2.
3 Serious eye damage / eye irritation	Category 2A	Exclamation mark	Warning	Causes serious eye irritation	Since severe irritation was indicated in the Draize Test using a rabbit eye (RTECS, 2004), and it was considered as the strong eye stimulativeness substance (CICAD 14, 1999; ICSC, 1998), it was set as Category 2A.
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 : while it was negative (CICAD 14, 1999) in guinea pig skin sensitization test (Magnusson-Kligman method) and there were findings that allergic was not accepted in humans (ATSDR, 2005), since the contact sensitizing activity was acknowledged in the mouse in recent years, it was presupposed from (ATSDR, 2005; CICAD 14, 1999) that it cannot classify.
5 Germ cell mutagenicity	Not classified	-	-	-	It carried out the outside of Category. Based on the mouse small core test from the negative (ATSDR, 2005;CICAD 14, 1999) , and negative in the Ames test an in vitro mutagenicity test and the cell gene mutation test. So it is classified as the out of the Category. In addition, it is considered as the positive by levels of cytotoxicity concentration in the in vitro chromosome aberration test (CICAD 14, 1999), and the weak reaction occurs by part of mouse small core test. But it is synthetically estimated as negativity (ATSDR, 2005; CICAD 14, 1999).

6	Carcinogenicity	Not classified	-	-	-	The endocrine systems oncogeny was slightly seen in the rat about this product. But it was negative in the mouse (CICAD 14, 1999), and classified into D (it cannot classify into human carcinogenicity) (IRIS, 2002), or I (evidence is inadequate for humans carcinogenicity evaluation) (ATSDR, 2005) according to EPA. Moreover, the organotin compounds was classified into A4 (it cannot classify into a the human carcinogens) in ACGIH. Therefore, it was carried out the outside of category according to the guideline.
7	Toxic to reproduction	Not classified	-	-	-	Although the slight influences on reproductive developments, such as an fetus weight fall, ossification variation, and the number fetus of one mother, were admitted. They were dosage which effect on the maternal toxicity and immune system (IRIS, 2002; CICAD 14, 1999). And since the this product was not considered to be a reproductive developmental toxicity substances (CICAD 14, 1999), it was set as the outside of Category.
8	Specific target organs/systemic toxicity following single exposure	Category 3 (respiratory tract irritation)	Exclamation mark	Warning	may cause respiratory irritation or may cause drowsiness and dizziness (respiratory tract irritation)	Since there was knowledge which indicates respiratory irritant to humans (CICAD 14, 1999), it was considered as Category 3 (respiratory irritant). In addition, unlike other organotin compounds, about this product, effect is not observed in a nervous systems (CICAD 14, 1999).
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	Since the key virulence trait of this product is the influence on immune systems based on the knowledge acquired by animal studies(thymus dependence immune dysfunction) (CICAD 14, 1999), and since this knowledge is accepted in the guidance value of Category 1, it was classified into Category 1 (immune system).
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-hour LC50=1.5microg/L of fishes (King salmon) (EHC116, 1990).
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 (BOD: 2% (existing chemical substances safety inspections data)), and bioaccumulative (BCF=12100 (existing chemical substances safety inspections data)).