

GHS Classification

ID1280

tin difluoride

CAS 7783-47-3

Date Classified: Mar. 15, 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	Not classified	-	-	-	Non-combustible (ICSC (J) (2004))
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	-	-	-	Non-combustible (ICSC (J), 2004)
11 Self-heating substances and mixtures	Not classified	-	-	-	Not combustible (ICSC(J) (2004))
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	Not applicable	-	-	-	Solid (GHS definition)
14 Oxidizing solids	Classification not possible	-	-	-	No data available
15 Organic peroxides	Not applicable	-	-	-	Inorganic compound
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	Based on the rat oral LD50 values : 360mg/kg (RTECS, 2004) and 200-300mg/kg (HSDB, 2003), we adopted the lower value (200-300mg/kg) to classify the substance as Category 3.
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	Classification not possible	-	-	-	There is the description that effect was not acknowledged by the coating of the 0.1% solution (DFGOT 14, 2000) or 0.5% solution (CICAD 65, 2005) to the rabbit skin. But data is insufficient and it cannot be classified.
3 Serious eye damage / eye irritation	Category 2A-2B	Exclamation mark	Warning	Causes serious eye irritation	From the description that eye irritation was indicated with this product (ICSC, 2004), and eye irritation was indicated with inorganic tin compounds (ACGIH-TLV(2006)), it was 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	Not classified	-	-	-	There is the negativity in the mouse small core test (CICAD 65, 2005;DFGOT 14, 2000), it is classified as the out of the Category. In addition, there is a slightly positive reports in in vitro mutagenicity test (Ames test) (CICAD 65, 2005; DFGOT 14, 2000; RTRCS, 2004). But it is not regarded as a result with the reliability instead of the reaction under a general condition (CICAD 65, 2005).
6 Carcinogenicity	Classification not possible	-	-	-	In the assessment including the this product, IARC set fluoride to Group 3 (CICAD 65, 2005;HSDB, 2003), and ACGIH set fluoride to A4(ACGIH-TLV, 2006) (neither of them can not be classified as a human carcinogen). However, IARC did not carry out the carcinogenicity assessment of the tin compounds nor the first tin of fluoridation. Therefore, it is presupposed that it cannot be classified since data is insufficient.

7	Toxic to reproduction	Classification not possible	-	-	-	Although effect was not seen in the rat generating toxicity test by pregnancy term medication (CICAD 65, 2005), the effect on reproduction ability is unknown. And since its data is insufficient, it cannot be classified.
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)	Although there was no data of this product, since it was supposed that an inorganic tin compound indicates respiratory irritant, it was considered as Category 3 (respiratory irritant) in ACGIH-TLV (2006).
9	Specific target organs/systemic toxicity following repeated exposure	Category 1 (lung, bone, tooth)	Health hazard	Danger	Causes damage to organs (lung, bone, tooth) through prolonged or repeated exposure	This product may affect a tooth or a bone (fluorosis) (ICSC, 2004), and it is supposed that it has a possibility of pneumoconiosis by as an inorganic tin compound, and has an effect on bone of fluorosis by as fluoride (ACGIH-TLV (2006)). Therefore, it was classified into Category 1 (lungs, bones, tooth). In addition, descriptions of "expression of benign pneumoconiosis" and "dental caries prophylaxis" are seen in SEISYO.
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)	Classification not possible	-	-	-	No data available
11 Hazardous to the aquatic environment (chronic)	Classification not possible	-	-	-	No data available.