# GHS Classification

**ID1277** **Stannane, tributylfluoro-**

**CAS 1983-10-4** 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 | - | - | - | No data 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 -0-0- 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 4 | Exclamation mark | Warning | Harmful if swallowed | Because the minimum lethal dose in mice is 320mg/kg (RTECS, 2004), the LD50 was estimated to be within the Category 4 range (300-2000mg/kg). So the substance was classified as Category 4. |
| 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) | Category 2 | Skull and crossbones | Danger | Fatal if inhaled | It was set as Category 2 based on rat inhalation LC50 value of 0.4ppm/4H (= 0.00504mg/L) (ACGIH 7th, 2001). |
| 2 | Skin corrosion / irritation | Category 3 | - | Warning | Causes mild skin irritation | From the statement that the this product indicates skin irritation which is mild (minimal) (ATSDR, 2005) and the knowledge that the tributyl tin compound or the organotin compound indicates skin irritation (DFGOT 1, 1991-atty 5th, 2001;ATSDR, 2005), it was set to category 3 |
| 3 | Serious eye damage / eye irritation | Category 2A-2B | Exclamation mark | Warning | Causes serious eye irritation | From knowledge that rabbit eyes severe irritation was indicated with this product, (ATSDR, 2005), in addition, eye irritation was indicated with the organic tin compound (ACGIH 7th, 2001; Patty 5th, 2001; ATSDR, 2005), it was set to Category 2A-2B. In addition, detailed categorization is difficult. |
| 4 | Respiratory/skin sensitization | Respiratory sensitization: Classification not possible; Skin sensitization: Classification not | (Respiratory sensitization)-; (Skin sensitization)- | (Respiratory sensitization)-; (Skin sensitization)- | (Respiratory sensitization)-; (Skin sensitization)- | No data available |
| 5 | Germ cell mutagenicity | Classification not possible | - | - | - | Although there is negative knowledge in in vitro chromosome aberration test (ATSDR, 2005), there is no in vivo data. So it cannot be classified because of insufficient data |

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| 6 | Carcinogenicity | Classification not possible | – | – | – | About the this product, the negative findings in dermal exposures incomplete tests is acquired (ATSDR, 2005), and the organotin compounds is classified into A4 (it cannot classify into a the human carcinogens) in ACGIH. However, on the other hand, there is also a knowledge that a certain kind of organotin compounds induces cancer to animals (ATSDR, 2005). Therefore, its data is insufficient and it cannot be classified. |
| 7 | Toxic to reproduction | Classification not possible | – | – | – | Although a possibility that organotin compounds will affect genitalium of animals is suggested in the description (ATSDR, 2005), or tributyltin compounds is classified into Category C in DFG (a substance which does not affect human embryos and fetuses if it is within a MAK/BAT value) (MAK/BAT, 2005). But there is no data of this product, and data is insufficient, it cannot be classified.. |
| 8 | Specific target organs/systemic toxicity following single exposure | Category 1 (central nervous system); Category 3 (respiratory tract irritation) | Health hazard | Danger | Cause damage to organs (central nervous system); May cause respiratory irritation or may cause drowsiness and dizziness (respiratory tract irritation) | Although there is no data of this product itself, from the influence on the central nervous systems in human as an organic tin compounds (ATSDR, 2005; ACGIH 7th, 2001; Patty 5th, 2001) and the potential of respiratory irritant (ATSDR, 2005; ACGIH 7th, 2001) being indicated, it was considered as Category 1(central nervous systems) 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) | Classification not possible | – | – | – | Insufficient data available. |
| 11 | Hazardous to the aquatic environment (chronic) | Classification not possible | – | – | – | Classification not possible due to lack of data |