

GHS Classification

ID1181

propyl chloroformate

CAS 109-61-5

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 | - | - | - | 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 | Category 3 | Flame | Warning | Flammable liquid and vapour | Flash point: 34.4degC(Tag open cup) (HSDB, 2003) UNRTDG No. 2740, Class: 6.1(3, 8); PG II. |
| 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 | - | - | - | UNRTDG is classified into 6.1 (3, 8) and I according to the U.N. number (2740) peculiar to a substance. Since 4.2 was not attached, it carried out the outside of Category. |
| 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 applicable | - | - | - | The chemical structure of the substance does not contain metals or metalloids(B, Si, P, Ge, As, Se, Sn, Sb, Te, Bi, Po, At). |
| 13 Oxidizing liquids | Not applicable | - | - | - | Organic compounds containing oxygen and chlorine (but not fluorine) and these elements are chemically bonded only to carbon (but not to other elements). |
| 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 | - | - | - | Classification not possible due to lack of data on tests. UNRTDG No. 2740, Class: 6.1(3, 8), PGI |

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 | SPECIES: Mouse ENDPOINT: LD50 VALUE: 650 mg/kg REFERENCE SOURCE: RTECS(1997) |
| 1 Acute toxicity (dermal) | Classification not possible | - | - | - | Classification not possible due to lack of data |
| 1 Acute toxicity (inhalation: gas) | Not applicable | - | - | - | Liquid (GHS definition) |
| 1 Acute toxicity (inhalation: vapour) | Category 2 | Skull and crossbones | Danger | Fatal if inhaled | Based on LC50(4hr) = 0.798mg/L obtained by having converted mouse 1-hour LC50 value (319ppm) (RTECS (1997) into the value for 4 hours, it was classified as Category 2. In addition, the saturated concentration of this product is 2.6*10 ⁴ ppm, and it was presumed that the inhalation test was done with steam. |
| 1 Acute toxicity (inhalation: dust, mist) | Classification not possible | - | - | - | No data available |
| 2 Skin corrosion / irritation | Category 1A-1C | Corrosion | Danger | Causes severe skin burns and eye damage | It was set as category 1A-1C since it was classified in "C;R34" according to the European risk phrase, in addition to the description that corrosive and critical irritation is indicated to human skin in Priority 2 (ICSC (2005), SITTIG (4th, 2002), HSFS (2001)). [view] It is more desirable to be set as 1A from a viewpoint of safety, when further categorizing needs to be performed. |
| 3 Serious eye damage / eye irritation | Category 1 | Corrosion | Danger | Causes serious eye damage | In addition to being skin corrosive substances (Category 1), in Priority 2, there are descriptions which indicates corrosive and severe deep thermal burns to the human eye (ICSC (2005), HSDB (2003), SITTIG (4th, 2002), HSFS (2001)). So it was classified into Category 1. |
| 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 | - | - | - | No data available |
| 7 | Toxic to reproduction | Classification not possible | - | - | - | No data available |
| 8 | Specific target organs/systemic toxicity following single exposure | Category 2 (respiratory) | Health hazard | Warning | May cause damage to organs (respiratory) | It was considered as Category 2 (respiratory systems). Based on the description that it stimulates the respiratory systems, it has caustic to a respiratory tracts and causes pulmonary edemas at high exposure to humans (IGSC (2005), SITTIG (4th, 2002), HSFS (2001)) in document of Priority 2. |
| 9 | Specific target organs/systemic toxicity following repeated exposure | Classification not possible | - | - | - | Although the description in Priority 2 that there is a possibility of affecting lungs by repeated exposure (SITTIG (4th, 2002)), it was presupposed that it could not be classified for lack of data. |
| 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. |