

GHS Classification

ID442

CAS 108-77-0

Physical Hazards

2,4,6-Trichloro-1,3,5-triazine

Date Classified: Aug. 22, 2006 (Environmental Hazards: Mar. 31, 2006)

Reference Manual: GHS Classification Manual (Feb. 10, 2006)

| Hazard class | Classification | symbol | signal word | hazard statement | Rational for the classification |
|---|-----------------------------|--------|-------------|------------------|---|
| 1 Explosives | Not applicable | — | — | — | Containing no chemical groups with explosive properties |
| 2 Flammable gases | Not applicable | — | — | — | Classified as "solid" according to GHS definition |
| 3 Flammable aerosols | Not applicable | — | — | — | Not aerosol products |
| 4 Oxidizing gases | Not applicable | — | — | — | Classified as "solid" according to GHS definition |
| 5 Gases under pressure | Not applicable | — | — | — | Classified as "solid" according to GHS definition |
| 6 Flammable liquids | Not applicable | — | — | — | Classified as "solid" according to GHS definition |
| 7 Flammable solids | Not classified | — | — | — | Non-flammable (ICSC, 2004) |
| 8 Self-reactive substances and mixtures | Not applicable | — | — | — | Containing no chemical groups with explosive or self-reactive properties |
| 9 Pyrophoric liquids | Not applicable | — | — | — | Classified as "solid" according to GHS definition |
| 10 Pyrophoric solids | Not classified | — | — | — | Non-flammable (ICSC, 2004) |
| 11 Self-heating substances and mixtures | Not classified | — | — | — | Non-flammable (ICSC, 2004) |
| 12 Substances and mixtures, which in contact with water, emit flammable gases | Not applicable | — | — | — | Containing no metals or metalloids (B, Si, P, Ge, As, Se, Sn, Sb, Te, Bi, Po, At) |
| 13 Oxidizing liquids | Not applicable | — | — | — | Classified as "solid" according to GHS definition |
| 14 Oxidizing solids | Not applicable | — | — | — | Organic compounds containing chlorine (but not oxygen and fluorine), with the chlorine bound to carbon and hydrogen (but not to other elements) |
| 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 | Based on the LD50 value of 275mg/kg calculated from the testing data of rat LD50 (oral route) of 1,143mg/kg, 315mg/kg, 327mg/kg, 930mg/kg and 208mg/kg (SIDS (2005)). |
| 1 Acute toxicity (dermal) | Category 5 | — | Warning | May be harmful in contact with skin | Based on the rat LD50 (dermal route) value of 5,000mg/kg (SIDS (2005)). |
| 1 Acute toxicity (inhalation: gas) | Not applicable | — | — | — | Due to the fact that the substance is "solid" according to the GHS definition and inhalation of its gas is not expected. |
| 1 Acute toxicity (inhalation: dust, mist) | Classification not possible | — | — | — | No data available |
| 1 Acute toxicity (inhalation: dust, mist) | Category 2 | Skull and crossbones | Danger | Fatal if inhaled | Based on the LC50 value of 0.0911 mg/L calculated from the testing data of rat LC50 (inhalation of dust) of 0.17mg/L (SIDS (2005)), 0.086mg/L (SIDS (2005)) and 0.201mg/L (SIDS(2005)). |
| 2 Skin corrosion / irritation | Category 2 | Exclamation mark | Warning | Causes skin irritation | Based on the description of rabbit skin irritation tests (4 hour application) (CERI Hazard Data 2000-55 (2001) and SIDS (2005)): "irritating to the skin," though the severity of the effects is unknown. Although classified into Category 2-3, the substance should be placed in Category 2 from the viewpoint of safety. |
| 3 Serious eye damage / eye irritation | Category 1 | Corrosion | Danger | Causes serious eye damage | Based on the data on rabbit eye irritation tests (CERI Hazard Data 2000-55 (2001) and (SIDS (2005)) and human health effects (CERI Hazard Data 2000-55 (2001)): "severely irritating." Although classified into Category 1-2A, the substance should be placed in Category 1 from the viewpoint of safety. |
| 4 Respiratory/skin sensitization | Respiratory sensitization: Classification not possible Skin sensitization: Category 1 | (Respiratory sensitization) — (Skin sensitization) Exclamation mark | (Respiratory sensitization) — (Skin sensitization) Warning | (Respiratory sensitization) — (Skin sensitization) May cause an allergic skin reaction | Respiratory sensitization: No data available Skin sensitization: Based on the description in the report on skin sensitization studies in animals (CERI Hazard Data 2000-55 (2001) and SIDS (2005)): "skin sensitization: positive." |
| 5 Germ cell mutagenicity | Not classified | — | — | — | Based on the absence of data on multi-generation mutagenicity tests, germ cell mutagenicity tests in vivo, and negative data on somatic cell mutagenicity tests in vivo (micronucleus tests), described in SIDS (2005) and CERI Hazard Data 2000-55 (2001). |
| 6 Carcinogenicity | Classification not possible | — | — | — | No data available |
| 7 Toxic to reproduction | Category 2 | Health hazard | Warning | Suspected of damaging fertility or the unborn child | Based on the evidence of a slight increase in postimplantation loss at doses causing parental toxicity in rat teratogenicity studies, described in MOE Risk Assessment vol. 3 (2004). |
| 8 Specific target organs/systemic toxicity following single exposure | Category 1 (respiratory organs, nervous system), Category 3 (narcotic effects) | Health hazard | Danger | Causes damage to organs (respiratory organs, nervous system) (Narcotic effects) May cause drowsiness or dizziness | Based on the human evidence including "the occurrence of pulmonary edema 2-3 hours after inhalation of vapour or fume," "purulent bronchitis" (MOE Risk Assessment vol. 3 (2004)), and the evidence from animal studies including "hypokinesia, lethargy, hypomotonia, loss of reflex, cyanosis, gait disorder, reduced reflex, swelling and edema in the lung with secretion of mucus, and hydropneumothorax" (SIDS (2001)). The effects on experimental animals were observed at dosing levels within the guidance value ranges for Category 1. |

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| 9 | Specific target organs/systemic toxicity following repeated exposure | Category 1 (respiratory organs, liver, spleen, blood system, kidneys, heart) | Health hazard | Danger | Causes damage to organs through prolonged or repeated exposure (respiratory organs, liver, spleen, blood system, kidneys, heart) | Based on the human evidence including "irritation of the upper and lower respiratory tracts, occurrence of bronchitis and bronchial pneumonia" (MOE Risk Assessment vol. 3 (2004)), and the evidence from animal studies including "histological changes in the liver/spleen/lung, decreased RBC/hemoglobin/hematocrit levels," "reduced RBC, decreased hemoglobin levels, interstitial pneumonia, degeneration of the liver/kidneys/myocardium, and bronchial pneumonia in a fatal case" (CERI Hazard Data 2000-55 (2001)). The effects on experimental animals were observed at dosing levels within the guidance value ranges for Category 1. |
| 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) | Not classified | - | - | - | It was classified into Not classified from 24 hours EC50>1000mg/L (the crustacea (Daphnia magna) of cyanuric ester(hydrolysis product of this product) (SIDS (2005) and others). |
| 11 Hazardous to the aquatic environment (chronic) | Not classified | - | - | - | Since it was not water-insolubility (the water-solubility =400.8mg/L (PHYSPROP Database, 2005)), and acute toxicity was low, it was classified into Not classified. |