

GHS Classification

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CAS 152-16-9

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 | Classification not possible | - | - | - | Classification not possible due to lack of data on its flash point; etc. |
| 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 agricultural chemicals, and even if it contacts the normal temperature air, 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 wate (PM, 13th, 2003) |
| 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 1 | Skull and crossbones | Danger | Fatal if swallowed | There were two LD 50 value for rats of 5mg/kg (RTECS(2002)) and 13.5mg/kg (HSDB(2003)). The 5mg/kg which is higher toxicity was adopted and classified as category 1. |
| 1 Acute toxicity (dermal) | Category 1 | Skull and crossbones | Danger | Fatal in contact with skin | Since rat LD50 values were 15mg/kg (from 15mg/kg (HSDB (2003)) and 15mg/kg (RTECS (2002)), it was set as Category 1. |
| 1 Acute toxicity (inhalation: gas) | Not applicable | - | - | - | Liquid (GHS definition) |
| 1 Acute toxicity (inhalation: dust, mist) | Category 1 | Skull and crossbones | Danger | Fatal if inhaled | It was classified as Category 1 from rat LCLo (not LC50 but LCLo was used) = 0.68ppm/4H (RTECS (2002)). |
| 1 Acute toxicity (inhalation: dust, mist) | Classification not possible | - | - | - | No data available |
| 2 Skin corrosion / irritation | Classification not possible | - | - | - | No data available |
| 3 Serious eye damage / eye irritation | Classification not possible | - | - | - | No data available |
| 4 Respiratory/skin 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 (nervous system) | Health hazard | Warning | May cause damage to organs (nervous system) | There are reports of the effects specific to organophosphorus insecticide on the nervous system in humans in Priority 2 (SITTIG (4th, 2002) and HSDB (2003)). The substance was classified as Category 2 (nervous system). |

| | | | | | | |
|----|--|-----------------------------|---------------|---------|--|---|
| 9 | Specific target organs/systemic toxicity following repeated exposure | Category 2 (nervous system) | Health hazard | Warning | May cause damage to organs (nervous system) through prolonged or repeated exposure | In the impact to human, the cholinesterase inhibition effects on the nervous system is indicated in SITTING (4th, 2002), RTECS (2002), and HSDB (2003), which are the sources of Priority 2. Therefore we classified it into Category 2 (nervous 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 3 | - | - | Harmful to aquatic life | It was classified into Category 3 from 96-hour LC50=22000microg/L of fishes (Guppy) (AQUIRE, 2003). |
| 11 Hazardous to the aquatic environment (chronic) | Category 3 | - | - | Harmful to aquatic life with long lasting effects | Classified into Category 3, since acute toxicity was Category 3 and supposed not rapidly degrading (BIOWIN), though supposed less bio-accumulative (log Kow=-1.01(PHYSROP Database, 2005)). |