# GHS Classification

## ID139 o-Dichlorobenzene

**CAS 95-50-1** Date Classified: Mar. 23, 2006 (Environmental Hazards: Feb. 10, 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 | - | - | - | Containing no chemical groups with explosive properties |
| 2 | Flammable gases | Not applicable | - | - | - | Classified as "liquid" according to GHS definition |
| 3 | Flammable aerosols | Not applicable | - | - | - | Not aerosol products |
| 4 | Oxidizing gases | Not applicable | - | - | - | Classified as "liquid" according to GHS definition |
| 5 | Gases under pressure | Not applicable | - | - | - | Classified as "liquid" according to GHS definition |
| 6 | Flammable liquids | Category 4 | - | Warning | Combustible liquid | The flash point is 66degC (c.c.) (ICSC, 2003) which is classified into Category 4. Classified into Division 6.1 (UN#1591) (UN Recommendations on the Transport of Dangerous Goods) |
| 7 | Flammable solids | Not applicable | - | - | - | Classified as "liquid" according to GHS definition |
| 8 | Self-reactive substances and mixtures | Not applicable | - | - | - | Containing no chemical groups with explosive or self-reactive properties |
| 9 | Pyrophoric liquids | Not classified | - | - | - | Not pyrophoric when in contact with air at ordinary temperatures: the auto-ignition temperature is 648degC (ICSC, 2003) |
| 10 | Pyrophoric solids | Not applicable | - | - | - | Classified as "liquid" according to 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 | - | - | - | Containing no metals or metalloids (B, Si, P, Ge, As, Se, Sn, Sb, Te, Bi, Po, At) |
| 13 | Oxidizing liquids | Not applicable | - | - | - | Organic compounds containing chlorine (but not oxygen and fluorine), with the chlorine bound to carbon and hydrogen (but not to other elements) |
| 14 | Oxidizing solids | Not applicable | - | - | - | Classified as "liquid" according to GHS definition |
| 15 | Organic peroxides | Not applicable | - | - | - | Organic compounds containing no "-O-O-" structure |
| 16 | Corrosive to metals | Not classified | - | - | - | Classified into Division 6.1 (UN#1591) (UN Recommendations on the Transport of Dangerous Goods) |

**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 | Based on the testing data of rat LD50 (oral route) of 1,516mg/kg (NICNAS (2001)). |
| 1 | Acute toxicity (dermal) | Classification not possible | - | - | - | No data available |
| 1 | Acute toxicity (inhalation: gas) | Not applicable | - | - | - | Due to the fact that the substance is "liquid" according to the GHS definition and inhalation of its gas is not expected. |
| 1 | Acute toxicity (inhalation: vapour) | Category 3 | Skull and crossbones | Danger | Toxic if inhaled | Based on the rat LC50 value of 7.8mg/L (1,277ppm), calculated from the testing data of rat LC50 (inhalation of vapour) of 9.2mg/L (6 hours), 5.9mg/L (7 hours) (EHC 128 (1991)), was lower than 90% of the saturated vapour concentration (1,800ppm) under a saturated vapour pressure of 0.18kPa (25degC) (HSDB (2005)), the substance was considered as "vapour containing substantially no mist" and was classified based on standard values expressed in ppm. |
| 1 | Acute toxicity (inhalation: dust, mist) | Classification not possible | - | - | - | No data available |
| 2 | Skin corrosion / irritation | Category 2 | Exclamation mark | Warning | Causes skin irritation | Based on the evidence of "moderate irritation" from rabbit skin irritation tests (CERI-NITE Hazard Assessment (2005)) and human reports (SIDS (2001)). |
| 3 | Serious eye damage / eye irritation | Category 2B | - | Warning | Causes eye irritation | Based on the evidence of "mild irritation" from rabbit eye irritation tests (CERI-NITE Hazard Assessment No.2 (2004)) and human reports (SIDS (2001)). |
| 4 | Respiratory/skin sensitization | Respiratory sensitization: Classification not possible<br>Skin sensitization: Classification not possible | (Respiratory sensitization) -<br>(Skin sensitization) - | (Respiratory sensitization) -<br>(Skin sensitization) - | (Respiratory sensitization) -<br>(Skin sensitization) - | Respiratory sensitization: No data available<br>Skin sensitization: Insufficient data available |
| 5 | Germ cell mutagenicity | Category 2 | Health hazard | Warning | Suspected of causing genetic defects | Based on the absence of positive data on germ cell mutagenicity tests in vivo, positive data on somatic cell mutagenicity tests in vivo, and the absence of positive data on germ cell genotoxicity tests in vivo, described in CERI-NITE Hazard Assessment No.2 (2004). |
| 6 | Carcinogenicity | Not classified | - | - | - | Due to the fact that the substance is classified as Group 3 by IARC (1987), Category A4 by ACGIH (2001) and Group D by EPA (2002). |
| 7 | Toxic to reproduction | Not classified | - | - | - | Based on the description in CERI-NITE Hazard Assessment No.2 (2004): No effects are observed in offspring. |

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| 8 | Specific target organs/systemic toxicity following single exposure | Category 1 (liver, kidneys)<br>Category 3 (respiratory tract irritation, narcotic effects) | Health hazard and Exclamation mark | Danger<br>Warning | Causes damage to organs (liver, kidneys) (Respiratory tract irritation) May cause respiratory irritation (Narcotic effects) May cause drowsiness or dizziness | Based on the human evidence including "Exposure to undiluted solution causes upper respiratory irritation, while high-concentration exposure causes central nervous depression and toxic hepatitis/ nephritis" (CERI-NITE Hazard Assessment No.2 (2004)), and the evidence from animal studies including "narcotic influence" (ACGIH (7th, 2001)). |
| 9 | Specific target organs/systemic toxicity following repeated exposure | Category 1 (nervous system, liver, blood system, respiratory organs)<br>Category 2 (kidneys) | Health hazard | Danger<br>Warning | Causes damage to organs through prolonged or repeated exposure(nervous system, liver, blood system, respiratory organs)<br>May cause damage to organs through prolonged or repeated exposure (kidneys) | Based on the human evidence including "polyneuropath, hepatopathy, nasal/respiratory irritation" (CERI-NITE Hazard Assessment No.2 (2004)), "bone marrow hyperplasia, acute hemolytic anemia, leukocytosis" (CERI Hazard Data 98-19 (1999)), and the evidence from animal studies including "renal tubular degeneration, pneumonia (with its physicochemical properties unknown)" (CERI-NITE Hazard Assessment No.2 (2004)). The effects on the liver and on the respiratory organs were observed at dosing levels within the guidance value ranges for Category 2 and Category 1, respectively. |
| 10 | Aspiration hazard | Classification not possible | - | - | - | Insufficient data available |

## Environmental Hazards

| Hazard class | Classification | symbol | signal word | hazard statement | Rational for the classification |
|---|---|---|---|---|---|
| 11 Hazardous to the aquatic environment (acute) | Category 1 | Environment | Warning | Very toxic to aquatic life | It was classified into Category 1 from 48 hours EC50=0.66mg/L of the crustacea (Ceriodaphnia) (SIDS (2005) and others.). |
| 11 Hazardous to the aquatic environment (chronic) | Category 1 | Environment | Warning | Very toxic to aquatic life with long lasting effects | Although acute toxicity is Category 1 and bio-accumulation is low (BCF=260(Existing Chemical Safety Inspections Data, )), since there was no rapidly degrading (the decomposition by BOD: 0%(Existing Chemical Safety Inspections Data)), it was classified into Category 1. |