

## GHS Classification

**ID140**

**CAS 106-46-7**

**Physical Hazards**

**p-Dichlorobenzene**

Date Classified: May 24, 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	Classification not possible	-	-	-	Classification not possible due to lack of data, though classified as "flammable" by 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	Classification not possible	-	-	-	Classification not possible due to lack of data.
11 Self-heating substances and mixtures	Classification not possible	-	-	-	Test methods applicable to liquid substances are not available - melting point: 53degC (ICSC, 2004), test temperature: 140degC
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	-	-	-	Classification not possible due to lack of data.

## Health Hazards

Hazard class	Classification	symbol	signal word	hazard statement	Rational for the classification
1 Acute toxicity (oral)	Category 5	-	Warning	May be harmful if swallowed	Based on the rat LD50 (oral route) value of 2.512mg/kg representing the lower of the two testing data, 2.512mg/kg (NICNAS (2000)) and 2.515mg/kg (DFGOT vol. 4 (1992)).
1 Acute toxicity (dermal)	Classification not possible	-	-	-	Insufficient data available
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)	Not classified	-	-	-	No data available
1 Acute toxicity (inhalation: dust, mist)	Not classified	-	-	-	Because the rat LC50 (4-hour inhalation) value of 5.07mg/L (equivalent to 845ppm) (CERI-NITE Hazard Assessment No.76 (2005)) was higher than 110% of the saturated vapour concentration (790ppm, 20degC), the substance was considered as "dust exposure containing vapour" and was classified based on the dust classification.
2 Skin corrosion / irritation	Category 3	-	Warning	Causes mild skin irritation	Based on the description in the report on rabbit skin irritation tests (4-hour application) performed in accordance with OECD Guidelines (CERI-NITE Hazard Assessment No.76 (2005)): Mildly irritating.
3 Serious eye damage / eye irritation	Category 2B	-	Warning	Causes eye irritation	Based on the description in the report on rabbit eye irritation tests performed in accordance with OECD Guidelines (CERI-NITE Hazard Assessment No.76 (2005)): Redness and edema of the conjunctiva are observed in one out of three specimens, both of which disappear after 72 hours of exposure; mild eye irritation is observed, with no effects on the iris and cornea. The substance is considered "mildly irritating" to the eyes.
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 allergic skin reaction	Respiratory sensitization: No data available Skin sensitization: based on the description in CERI-NITE Hazard Assessment No.76 (2005) - Nine out of 24 specimens (Score: 1), four out of 24 specimens (Score: 2) and one out of 24 specimens (Score: 3) (all scored based on the maximization method). The substance is considered to cause skin sensitization.
5 Germ cell mutagenicity	Category 2	Health hazard	Warning	Suspected of causing genetic defects	Based on the negative data on multi-generation mutagenicity tests (dominant lethal tests), the absence of data on germ cell mutagenicity tests in vivo, positive data on somatic cell mutagenicity tests in vivo (micronucleus tests), and the absence of data on germ cell genotoxicity tests in vivo, described in EU-RAR No.48 (2004) and IARC 73 (1999).
6 Carcinogenicity	Category 2	Health hazard	Warning	Suspected of causing cancer	Due to the fact that the substance is classified as Category A3 by ACGIH (2005), Category R by NTP (2005), Category 3 by EU (2004) and 2B by IARC (1999).
7 Toxic to reproduction	Category 1B	Health hazard	Danger	May damage fertility or the unborn child	Based on the description in the report on two-generation reproductive toxicity tests (oral route) (EU-RAR No.48 (2004), CERI-NITE Hazard Assessment No.76 (2005)): A decrease in the number and body weight of alive newborns is observed at dosing levels not toxic to parental animals.
8 Specific target organs/systemic toxicity following single exposure	Category 1 (blood system, liver)	Health hazard	Danger	Causes damage to organs (blood system, liver)	Based on the human evidence including "hypochromia, microcytic anemia, methemoglobinuria" (CERI Hazard Data 96-47 (1998)), "jaundice, hemolytic anemia, methemoglobinuria" (CERI-NITE Hazard Assessment No.76 (2005)).

9	Specific target organs/systemic toxicity following repeated exposure	Category 1 (respiratory organs, liver, nervous system) Category 2 (kidneys)	Health hazard	Danger Warning	Causes damage to organs through prolonged or repeated exposure (respiratory organs, liver, nervous system) May cause damage to organs through prolonged or repeated exposure	Based on the human evidence including "pulmonary granulomatosis, hepatic atrophy/cirrhosis, ataxia, speech disorder, tremor in the fingers, an increase of muscular reflexes" (CERI Hazard Data 96-47 (1998)) and the evidence from animal studies including "pulmonary interstitial edema, congestion, alveolar hemorrhage, cloudy swelling in the liver, focal necrosis, cirrhosis, an increase in the kidney weight, hyaline droplet accumulation in the renal tubular epithelium" (CERI Hazard Data 96-47 (1998)). The effects on experimental animals were observed at dosing levels within the guidance value ranges for Category 2.
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 1	Environment	Warning	Very toxic to aquatic life	It was classified into Category 1 from 48 hours EC50=0.7mg/L of the crustacea (Daphnia magna) (CERI/NITE Hazard Assessment Report (2005) and others.).
11 Hazardous to the aquatic environment (chronic)	Not classified	-	-	-	Since there was rapidly degrading (28 days decomposition (the OECD testing guideline 301D): 67% (EU-RAR, 2004)), and bio-accumulation was low (BCF=190 (Existing Chemical Safety Inspections Data)), it was classified into Not classified.