

## GHS Classification

**ID938**

**CAS 118-74-1**

### Physical Hazards

**Benzene, hexachloro-**

Date Classified: Jul. 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	-	-	-	There are no chemical groups associated with explosive properties present in the molecules.
2 Flammable gases	Not applicable	-	-	-	Solid (GHS definition)
3 Flammable aerosols	Not applicable	-	-	-	Not aerosol products
4 Oxidizing gases	Not applicable	-	-	-	Solid (GHS definition)
5 Gases under pressure	Not applicable	-	-	-	Solid (GHS definition)
6 Flammable liquids	Not applicable	-	-	-	Solid (GHS definition)
7 Flammable solids	Not classified	-	-	-	UNRTDG Class: 6.1
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 applicable	-	-	-	Solid (GHS definition)
10 Pyrophoric solids	Not classified	-	-	-	UNRTDG Class: 6.1
11 Self-heating substances and mixtures	Not classified	-	-	-	UNRTDG Class: 6.1
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	-	-	-	Solid (GHS definition)
14 Oxidizing solids	Not applicable	-	-	-	Organic compounds containing chlorine (but not oxygen and fluorine) and the chlorine is chemically bonded only to carbon and hydrogen (but not to other elements).
15 Organic peroxides	Not applicable	-	-	-	Containing no -O-O- structure
16 Corrosive to metals	Classification not possible	-	-	-	Liquid at a test temperature, 55degC. 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 5	-	Warning	May be harmful if swallowed	Rat LD50 value:3500mg/kg (EHC 195 (1997), ACGIH 7th (2001), DFGOT vol.16 (2001), PATTY 4th (1994), IARC 79 (200), ATSDR (2002)) and 10000mg/kg (MOE Risk Assessment vol.1(2002), EHC 195 (1997), ACGIH 7th (2001), IARC 79 (2001)). Based on the values above, the lower value was adapted. And it was classified to category 5.
1 Acute toxicity (dermal)	Classification not possible	-	-	-	No data available
1 Acute toxicity (inhalation: gas)	Not applicable	-	-	-	Solid (GHS definition)
1 Acute toxicity (inhalation: vapour)	Classification not possible	-	-	-	No data available
1 Acute toxicity (inhalation: dust, mist)	Classification not possible	-	-	-	No data available
2 Skin corrosion / irritation	Classification not possible	-	-	-	There is description that the skin irritation of laboratory animals is low (EHC 195 (1997), DFGOT (vol.16, 2001)). But an animal species, valid time, etc. were unknown, it could not be classified since data was insufficient.
3 Serious eye damage / eye irritation	Not classified	-	-	-	We classified it as out of Category based on the descriptions that it had no ocular irritant property in the laboratory animals although the species of the animals tested was unknown(EHC 195 (1997), DFGOT (vol.16, 2001)).
4 Respiratory/skin sensitization	Respiratory sensitization: Classification not possible; Skin sensitization: Classification not possible	-	-	-	Respiratory organ: No data. Skin: Since data was insufficient, we could not classify it.
5 Germ cell mutagenicity	Not classified	-	-	-	There is a negative result in the dominant lethal test using the rat, which is an in vivo multigeneration mutagenicity test using a germ cell (IRIS, 2005, ATSDR, 2002, EHC 195, 1997, ACGIH 7th, 2001, DFGOT vol.16, 2001, PATTY 4th, 1994, IARC 79, 2001). So it carried out outside Category.

6	Carcinogenicity	Category 2	Health hazard	Warning	Suspected of causing cancer (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)	It was classified into the category 2 (EU-ANNEX I, 2005) in EU. But it was classified into group 2B (IARC 79, 2001) in IARC, A3 (ACGIH 7th, 2001) in ACGIH, B-2 (IRIS, 2005) in EPA in 1996, and R (NTP RoC 11th, 2005) in NTP. So it was considered as Category 2.
7	Toxic to reproduction	Category 1A	Health hazard	Danger	May damage fertility or the unborn child	It was considered as Category 1A based on expert judgement since there is a description that significant increase mortality after birth of a child animal was observed in the oral administration examination during pregnancy and the oral administration reproductive examination using the rat or mouse (MOE Risk Assessment the 1st volume (2002), ACGIH (7th, 2001), EHC 195 (1997), ATSDR (2002), DFGOT (vol.16, 2001), PATTY (4th, 1994) and IARC 79 (2001)), and the description that the newborn who drank the breast milk has died by humans exposure (IARC 79 (2001), EHC 195 (1997)).
8	Specific target organs/systemic toxicity following single exposure	Classification not possible	-	-	-	Insufficient data available.
9	Specific target organs/systemic toxicity following repeated exposure	Category 1 (liver, skin, thyroid gland, bone, kidneys, endocrine system); Category 2 (immune system, nervous system)	Health hazard	Danger; Warning	Causes damage to organs (liver, skin, thyroid gland, bone, kidneys, endocrine system) through prolonged or repeated exposure; May cause damage to organs (immune system, nervous system) through prolonged or repeated exposure	Based on the description that in accidental exposure example by the oral ingestion to the human, the influence on liver, the skin, a bone, or the thyroid, such as the liver dysfunction, cutaneous porphyrias, arthritis, and a hypertrophied thyroid was observed (MOE Risk Assessment The 1st volume (2002), ACGIH (7th, 2001), EHC 195 (1997), ATSDR (2002), DFGOT (vol.16, 2001), PATTY (4th, 1994), and IARC 79 (2001)), and the description that the effects on the kidney and adrenal gland was observed with the dose of the guidance value range of Category 1 in the oral study using the rat (IRIS (2005), ATSDR (2002), DFGOT (vol.16, 2001), and EHC 195 (1997)), and based on the description that the influence to the nervous system, such as a tremor, and immune suppression were observed in the range of guidance value of Category 2 in the oral study using the rat or mouse (ACGIH (7th, 2001), EHC 195 (1997), ATSDR (2002), IARC 79 (2001), PATTY (4th, 1994)), it was categorized as Category 1 (liver, the skin, the thyroid, the bone, the kidney, an endocrine systems), and Category 2 (immune systems, nervous systems).
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 24-hour EC50<30microg/L of Crustacea (Daphnia magna) (IUCLID, 2000).
11 Hazardous to the aquatic environment (chronic)	Category 1	Environment	Warning	Very toxic to aquatic life with long lasting effects	Classified into Category 1, since acute toxicity is Category 1, not rapidly degrading (BOD: 0% (existing chemical substances safety inspections data)), and bioaccumulative (BCF=30000 (existing chemical substances safety inspections data)).