

## GHS Classification

**ID936**

**Ethane, hexachloro-**

**CAS 67-72-1**

Date Classified: Jun. 20, 2006 (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	-	-	-	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	-	-	-	Non-combustible (ICSC (J), 1993; etc.)
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	-	-	-	Non-combustible (ICSC (J), 1993; etc.)
11 Self-heating substances and mixtures	Not classified	-	-	-	Non-combustible (ICSC(J) (1993); etc)
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	-	-	-	Although a potential of corroding iron is suggested (ICSC (J) (1993)), test methods suitable for a solids material are not established.

**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: 4460mg/kg (ACGIH 7th (2001), PATTY 4th (1994), ATSDR (1997), NTP TR361(1989)), 7080mg/kg (PATTY 4th (1994), ATSDR (1997), NTP TR361 (1989)), 5900mg/kg (PATTY 4th (1994), NTP TR361 (1989)), 4489mg/kg (ATSDR (1997)) and 6000mg/kg (NTP TR361 (1989)), calculated based on the values above. Since the calculated values was 4767mg/kg, it was classified to category 5.
1 Acute toxicity (dermal)	Not classified	-	-	-	Based on rabbit LD50 values: 32000mg/kg or >32000mg/kg (ACGIH 7th, 2001, PATTY 4th, 1994, NTP TR361, 1989, ATSDR, 1997), it was set as the outside of Category.
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)	Not classified	-	-	-	LC50 value was not indicated from description that two examples died among six examples in the test using the rat by 5900ppm 8-hour exposure (4-hour equivalent 114 mg/L) (IARC 73 (1999), ATSDR (1997)). But lethal concentration was over 20 times of the limit of 4. Therefore, it was judged as the outside of category.
2 Skin corrosion / irritation	Category 3	-	Warning	Causes mild skin irritation	There is description that irritation was not acknowledged in the test applied to the skin of the rabbit (PATTY (4th, 1994), NTP TR361 (1989), and ATSDR (1997)). But it was set as Category 3 from description that slight skin irritation was acknowledged in the example of repetitive exposure of the humans (IARC 73 (1999), ATSDR (1997)).
3 Serious eye damage / eye irritation	Category 2B	-	Warning	Causes eye irritation	There is the descriptions that in the test applied to the eyes of the rabbit, the ocular irritant property which recovered 72 hours after administration was acknowledged (PATTY (4th, 1994), NTP TR361 (1989) and ATSDR (1997)). Therefore we judged that ocular irritant property was slight and classified it as Category 2B.
4 Respiratory/skin sensitization	Respiratory sensitization: Classification not possible; Skin sensitization: Not possible	-	-	-	Respiratory organ: No data. Skin : Based on the description that sensitizing property was not acknowledged in the skin sensitivity test using the guinea pigs in ACGIH (7th, 2001), PATTY (4th, 1994), NTP TR361 (1989) and ATSDR (1997), we classified it to be Out Of Category.
5 Germ cell mutagenicity	Classification not possible	-	-	-	Although there is a positive result (IARC 73, 1999) in a joint examination with somatic DNA of a rat and a mouse which is an in vivo genotoxicity study using a somatic, there is no positive result by in vitro mutagenicity test. So it cannot classify

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 C (IRIS, 2006) in EPA in 1994. But it was classified in group 2B (IARC 73, 1999) in IARC, A3 (ACGIH 7th, 2001) in ACGIH, and R (NTP RoC 11th, 2005) in NTP. So it was considered as Category 2 according to ACGIH which is latest assessment document.
7	Toxic to reproduction	Not classified	-	-	-	It was considered as out of Category based on the description that specific reproductive toxicity was not observed at the dose in which general toxicity is observed in a dam animals in oral administration and an inhalation exposure test using pregnancy rat (ACGIH (7th, 2001), PATTY (4th, 1994), IARC 73 (1999), IRIS (2006), ATSDR (1997), NTP TR361 (1989)).
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 2 (kidneys, nervous system)	Health hazard	Warning	May cause damage to organs (kidneys, nervous system) through prolonged or repeated exposure	Based on the description that the influence on the kidney was observed among male and females with the dose of the guidance value range of Category 2 in the oral study using the rats (ACGIH (7th, 2001), PATTY (4th, 1994), IARC 73 (1999), NTP TR361 (1989), IRIS (2006), ATSDR (1997)), and based on the description that the effects on the nervous system was observed with the concentration of the guidance value range of Category 2 in the inhalation exposure test using the dogs (ACGIH (7th, 2001), IARC 73 (1999), NTP TR361 (1989), IRIS (2006), and ATSDR (1997)), we categorized it as Category 2 (the kidney, 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 1	Environment	Warning	Very toxic to aquatic life	It was classified into Category 1 from 96-hour LC50=0.97mg/L of fishes (Bluegill) (ECETOC TR91, 2003).
11 Hazardous to the aquatic environment (chronic)	Category 1	Environment	Warning	Very toxic to aquatic life with long lasting effects	Classified into Category 1, Classified into Category 1, since acute toxicity was Category 1, and not rapidly degrading (BOD: 0% (existing chemical safety inspections data)), though less bio-accumulative (BCF=8.5 (existing chemical safety inspections data)).