

GHS Classification

ID945

heptachlor epoxide

CAS 1024-57-3

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	Classification not possible	-	-	-	No data available
8 Self-reactive substances and mixtures	Classification not possible	-	-	-	No data available
9 Pyrophoric liquids	Not applicable	-	-	-	Solid (GHS definition)
10 Pyrophoric solids	Classification not possible	-	-	-	No data available
11 Self-heating substances and mixtures	Classification not possible	-	-	-	No data available
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 oxygen and chlorine (but not fluorine) and these elements are 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 2	Skull and crossbones	Danger	Fatal if swallowed	Category 2 based on SPECIES: Rat; ENDPOINT: LD50; VALUE: :34mg/kg (used to classify) and 62 mg/kg; REFERENCE SOURCE: JMPR (1965, 1966)
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	-	-	-	No data available
3 Serious eye damage / eye irritation	Classification not possible	-	-	-	No data available
4 Respiratory/skin sensitization	Respiratory sensitization: Classification not possible; Skin sensitization: Classification not possible	-	-	-	No data available
5 Germ cell mutagenicity	Not classified	-	-	-	Although the negative result is obtained by the dominant lethal test using a mouse (JMPR 1991; IRIS 2006; ATSDR 2005), there was no in vivo mutagenicity test data using germ cells and somatics. So it carried out the outside of

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)	Since it was classified into 2B (IARC 79, 2001) in IARC, A3 (ACGIH, 7th, 2001) in ACGIH, B-2 (IRIS and Last revised on 1993) in EPA and was the category 3 (EU-ANNEX I, 2006) in EU, it was considered as Category 2.
7	Toxic to reproduction	Category 1B	Health hazard	Danger	May damage fertility or the unborn child	It was considered as Category 1B, since the death of F1 child, a macroscopic pathology view or increase of liver weight in the liver of F1 child was seen at the dose in which maternal toxicity is not observed in the two-generation reproduction study using a dog (JMPR (1991, EHC 38, 1984)).
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)	Health hazard	Danger	Causes damage to organs (liver) through prolonged or repeated exposure	In two year oral (feeding) administration test on dogs, the administrated group with dosage observing the guidance value range of Category 1, the increase in weight of liver, the change of the index which suggests a liver damages in blood biopsy inspection (elevation of SGPT actives, etc.), histopathological alterations (enlargement and vacuolation on centrilobular hepatocyte, appearance of detailed granule and ground-glass like cytoplasm) were observed (JMPR 1965, 1966, and 1991, PD 19 1975, EHC 38 1984, ACGIH 7th.2001, IRIS Access on Jan. 2006 and IARC Vol.53(1991) p.115-164), therefore, target organ were judged to be liver and were classified as Category 1 (liver).
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=0.04microg/L of Crustacea (Pink shrimp) (AQUIRE, 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, since acute toxicity is Category 1, supposed not rapidly degrading (BIOWIN), and bioaccumulative (log Kow=4.98 (PHYSPROP Database, 2005)).