

GHS Classification

ID610

dieldrin

CAS 60-57-1

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), 1998; etc.)
8 Self-reactive substances and mixtures	Classification not possible	-	-	-	No data available
9 Pyrophoric liquids	Not applicable	-	-	-	Solid (GHS definition)
10 Pyrophoric solids	Not classified	-	-	-	Non-combustible (ICSC (J), 1998; etc.)
11 Self-heating substances and mixtures	Not classified	-	-	-	Non-combustible (ICSC(J), 1998; 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 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	-	-	-	Test methods applicable to solid substances are not available. Slightly corrosive to metals(HSDB, Access on Dec. 2005)

Health Hazards

Hazard class	Classification	symbol	signal word	hazard statement	Rational for the classification
1 Acute toxicity (oral)	Category 1	Skull and crossbones	Danger	Fatal if swallowed	It was set as Category 1 based on the description (PATTY 4th.1994, Priority 1) that LD50 in humans is 5mg/kg.
1 Acute toxicity (dermal)	Category 1	Skull and crossbones	Danger	Fatal in contact with skin	It was set as Category 1 based on the value (50mg/kg) calculated from rat LD50 (60, 50, and 120mg/kg (PD 17 (1975), EHC 91 (1989), ACGIH (7th, 2001), and PIM 575 (1975)).
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)	Category 1	Skull and crossbones	Danger	Fatal if inhaled	Category 1 because of "SPECIES: Rat; ENDPOINT: LC50; VALUE: 0.013mg/L"(RTECS, 2005)
2 Skin corrosion / irritation	Classification not possible	-	-	-	Classification not possible due to lack of data
3 Serious eye damage / eye irritation	Classification not possible	-	-	-	No data available
4 Respiratory/skin sensitization	Classification not possible; Skin sensitization: Classification not possible	-	-	-	No data available
5 Germ cell mutagenicity	Not classified	-	-	-	The substance was regarded as outside the categories. Based on the report that results from dominant lethal tests in mice, chromosome aberration tests in Chinese hamster bone-marrow cells, reciprocal translocation tests in mice, chromosome aberration tests in rats and mice and micronucleus tests in mice (JMPR 1977, EHC 91 1989) are all
6 Carcinogenicity	Not classified	-	-	-	It was classified into group 3 according to IARC (1987), into A4 according to ACGIH (proposal year 1995, 7th, 2001), into B2 according to EPA (the 1986 evaluation, (IRIS, 2005)), and into category 3 according to EU (proposal year unknown, EU ANNEX I and 2005). And evaluation of IARC was respected and it carried out the outside of Category based on ACGIH (1995) which is latest assessment.

7	Toxic to reproduction	Category 1B	Health hazard	Danger	May damage fertility or the unborn child	Since there is the description that there is the lesion in neonatal's brain at the dose cause the toxicity in the maternal animals of rat (JMPR 1979, EHC 91, 1989), and it is indicated in the lack of irreversible and congenital survival ability occur in the neonatal which was born from the maternal animals which is given the administration of test material in mouse, and additionally, it was indicated that this lack of survival ability and the decrease of nursing ability of the maternal animal cause the increase child mortality (EHC 91, 1989), it is classified into the Category 1B.
8	Specific target organs/systemic toxicity following single exposure	Category 1 (central nervous system)	Health hazard	Danger	Cause damage to organs (central nervous system)	In humans, central-nerve neurosis such as spasm is identified with 5mg/kg set to LD50 (PATTY, 4th.1994), and it had an influence with the mouse on its central nerve systems enhancing the effects of seizure inducers, etc. (JMPR 1967). So it was set as Category 1(central nervous systems).
9	Specific target organs/systemic toxicity following repeated exposure	Category 1 (central nervous system, liver)	Health hazard	Danger	Causes damage to organs (central nervous system, liver) through prolonged or repeated exposure	It was classified to as Category 1 (central nervous systems, liver), since the workers in Dieldrin manufacture got poisoning, and occurred the central nervous system symptoms (JMPR/1970, 1977, EHC 91, 1989, ACGIH 4th. 1994), and the central nervous system symptoms in dogs and rats (JMPR 1970, and EHC 91, 1989 and MOE Risk Assessment/-- the 1st volume, 2002) , and rodent ulcer of liver in rats by a chlorinated hydrocarbonic insecticide were both acknowledged by the dosage of guidance value within the limits of Category 1.
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=0.4microg/L of Crustacea (Brown shrimp) (EHC91, 1989).
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=14500 (existing chemical substances safety inspections data)).