

GHS Classification

ID858

Methoxychlor

CAS 72-43-5

Date Classified: Jul. 24, 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 by regulated examination methods, though "Flammable" (ICSC (J) (1999))
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	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	-	-	-	Although there is information that it corrodes irons and aluminum slightly (HSDB (Access on Jan. 2006)), 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	Calculated based on rat LD50 values: 5000 – 6000 mg/kg (ACGIH 7th, 2001), 5000 – 7000 mg/kg (IARC 20, 1979), and 3460 – 7000 mg/kg (ATSDR, 2002). Since the calculated value was 4325mg/kg, it was set as Category 5.
1 Acute toxicity (dermal)	Not classified	-	-	-	They were set as the outside of Category based on rat and rabbit LD50 values: all 6000mg/kg (PD, 2006).
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: Not classified	-	-	-	Respiratory organ: No data. Skin: We classified it as Out. Of Category based on the description that it has almost or completely no skin sensitizing property in ACGIH (7th, 2001).
5 Germ cell mutagenicity	Not classified	-	-	-	There was a negative result with the chromosome aberration test on mice sperm cells, which is an in vivo mutagenicity test using germ cells, and chromosome aberration test on mice marrow cells, which is an in vivo mutagenicity test using somatic cells (ATSDR, 2002). So it was classified as out of Category.
6 Carcinogenicity	Not classified	-	-	-	It is classified into group 3 (IARC Suppl.7, 1987) in IARC, A4 (ACGIH 7th, 2001) in ACGIH and D (IRIS, 2006) in EPA in 1990. So it was considered as the outside of Category.
7 Toxic to reproduction	Category 2	Health hazard	Warning	Suspected of damaging fertility or the unborn child	It was classified into Category 2 based on the description that reduction of fertility was observed at the dose occurring general toxicity to parental animals in the rat oral administration reproductive study (ACGIH (7th, 2001), IRIS (2006), and ATSDR (2002)).

8	Specific target organs/systemic toxicity following single exposure	Category 2 (nervous system)	Health hazard	Warning	May cause damage to organs (nervous system)	It was set as Category 2 (nerve systems) from description that the influence of the nervous systems, such as tremors, convulsions, paralysis, etc. was acknowledged in the doses of the guidance value range of Category 2 in the oral study using the rat of ATSDR (2002).
9	Specific target organs/systemic toxicity following repeated exposure	Category 2 (liver, nervous system, endocrine system)	Health hazard	Warning	May cause damage to organs (liver, nervous system, endocrine system) through prolonged or repeated exposure	Based on the description that in the feeding oral administration tests using the rat, edema, necrosis and congestion of the liver were observed with the dosage in the Category 2 guidance value range (IRIS (2006)), the description that in feeding oral administration tests using the dog, the effects on the nervous systems, such as tremors and spasms, etc., were observed with the dosage in the Category 2 guidance value range (IARC 20 (1979)), and the description that in the oral study using the rat or mouse, effects on the endocrine systems, such as increases in the prolactin level in pituitary, increased levels of hypothalamic GnRH (gonadotropin releasing hormones), and females menstrual cycle abnormalities, were observed with the dosage in the Category 2 guidance value range (IRIS (2006), NTP DB (2006), ATSDR (2002)), it was classified into Category 2 (liver, nervous systems, endocrine 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 48-hour LC50=0.78microg/L of Crustacea (Water flea) (HSDB, 2004).
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=5.08 (PHYSPROP Database, 2005)).