

GHS Classification

ID683

Toxaphene

CAS 8001-35-2

Date Classified: May 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	-	-	-	Although it could be used as an aerosol, this evaluation is done with "solid" of the bulk substance.
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
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
11 Self-heating substances and mixtures	Not classified	-	-	-	Not combustible.
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 (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.

Health Hazards

Hazard class	Classification	symbol	signal word	hazard statement	Rational for the classification
1 Acute toxicity (oral)	Category 3	Skull and crossbones	Danger	Toxic if swallowed	SPECIES: Rat Route of admin.: oral feed ENDPOINT: LD50 VALUE: 50-300mg/kg REFERENCE SOURCE: ACGIH (2001), IARC 79 (2001)
1 Acute toxicity (dermal)	Category 3	Skull and crossbones	Danger	Toxic in contact with skin	Since there were data of rat dermal LD50: male 1075mg/kg and female 780mg/kg in DFGOT vol.19 (2003), they were set as Category 3.
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 3	Skull and crossbones	Danger	Toxic if inhaled	Particulate inhalation half fatal dose 3.4mg/L (1hr) of the rat (ATSDR (1986)) was converted into exposure for 4 hours to presume LC50: 0.85mg/L. So it was set as Category 3.
2 Skin corrosion / irritation	Category 3	-	Warning	Causes mild skin irritation	Since the result of rabbit test was Mild(ATSDR (1996)), it was classified as "Category 3."
3 Serious eye damage / eye irritation	Not classified	-	-	-	It was put into the eye 14 times, and since it had only hair-breadth affect on the eyelid (ATSDR (1996)), it was set as the outside of category.
4 Respiratory/skin sensitization	Respiratory sensitization: Classification not possible; Skin sensitization: Classification not possible	(Respiratory sensitization)-; (Skin sensitization)-	(Respiratory sensitization)-; (Skin sensitization)-	(Respiratory sensitization)-; (Skin sensitization)-	No data available
5 Germ cell mutagenicity	Not classified	-	-	-	Since the negative result was obtained by the mice in vivo dominant lethality test, we classified it as "Out Of Category." For the in vitro examination, some positive findings were obtained with multiple tests.

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 set as "2" based on the judgment of IARC: 2B, ACGIH:A3, and EU: category 3. In an experiment of rats, cancer has occurred in liver and thyroid.
7	Toxic to reproduction	Not classified	-	-	-	Since the adverse effects was not observed in the rat three-generation administration test (ACGIH (2001)) of rats, and in mouse five generation administration test (EHC 45 (1984)), it carried out "Category Outside."
8	Specific target organs/systemic toxicity following single exposure	Category 1 (central nervous system, liver); Category 3 (respiratory tract irritation)	Health hazard	Danger	Cause damage to organs (central nervous system, liver); May cause respiratory irritation or may cause drowsiness and dizziness (respiratory tract irritation)	Since the influence on a central nervous system in humans (ACGIH (2001)) is described and the influence on liver in rat (EHC 45 (1984)), it is classified into "Category 1", respectively. Since R37 was specified in EU, "Category 3 (respiratory tract irritation)" was added.
9	Specific target organs/systemic toxicity following repeated exposure	Category 2 (liver, kidneys, thyroid gland)	Health hazard	Warning	May cause damage to organs (liver, kidneys, thyroid gland) through prolonged or repeated exposure	It was classified to as "Category 2" because of effects to the liver,renal,thyroid with the given dose of several 10mg/kg/day with rat and a mouse (IARC 79 (2001)).
10	Aspiration hazard	Classification not possible	-	-	-	Insufficient 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=0.054microg/L of Crustacea (Pink shrimp) (EHC45, 1984).
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=5.9 (PHYSPROP Database, 2005)).