GHS Classification

ID188 Bicyclo[2.2.1]hept-5-ene-2,3-dicarboxylic acid, 1,4,5,6,7,7-hexachloro-

CAS 115-28-6 Date Classified: Aug. 18, 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	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 metaloids(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 -0-0- structure
16	Corrosive to metals	Classification not possible	–	–	–	Test methods applicable to gas or liquid substances at a test temperature, 55degC, are not available.

Health Hazards

	Hazard class	Classification	symbol	signal word	hazard statement	Rational for the classification
1	Acute toxicity (oral)	Category 4	Exclamation mark	Warning	Harmful if swallowed	It was set as Category 4 based on rat LD50 value: 1770mg/kg (CERI Hazard Data, 2002, EHC 185, 1996, NTP TR304, 1987).
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	–	–	–	There are the descriptions thet rat LC50 value in 4-hour exposure is >47.4ppm (equivalent 0.754mg/L) (CERI Hazard Data Description (2002)), and that death was not acknowledged in a rat by 4-hour exposure to 0.79mg/L (EHC 185 (1996)). It was not category 1. But there is no other data and the category could not be specified. Therefore, it cannot be classified since data is insufficient.
2	Skin corrosion / irritation	Category 2	Exclamation mark	Warning	Causes skin irritation	It was classified as Category 2 from description that the moderate irritation was observed in the application test on rabbit skin in CERI Hazard Data (2002).
3	Serious eye damage / eye irritation	Category 2A	Exclamation mark	Warning	Causes serious eye irritation	It was set as Category 2A from description that severe irritation was admitted in the test applied to the eye of the rabbit in CERI Hazard Data (2002).
4	Respiratory/skin sensitization	Respiratory sensitization: Classification not possible; Skin sensitization: Classification not	(Respiratory sensitization)-; (Skin sensitization)-	(Respiratory sensitization)-; (Skin sensitization)-	(Respiratory sensitization)-; (Skin sensitization)-	Respirator: No data Skin: EHC 185 (1996) describes that the skin sensitization test using guinea pigs showed negative, but the test method is unknown. We therefore classified this as uncategorizable because of insufficient data.
5	Germ cell mutagenicity	Classification not possible	–	–	–	It was decided that the substance could not be classified because there are only data from in vitro tests and there are no strong positive results in several parameters.

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 is classified into 2B according to IARC (IARC 48, 1990), into 2B according to Japan Society for Occupational Health (Japan Society for Occupational Health recommendation, 2005), and is classified into R according to NTP (NTP RoC 11th, 2005). So it was set as Category 2.
7	Toxic to reproduction	Classification not possible	–	–	–	No data available
8	Specific target organs/systemic toxicity following single exposure	Classification not possible	–	–	–	Although there is description that toxicity was not observed in the inhalation exposure test using rat in EHC 185 (1996), it was an examination by lower concentration than the guidance value range of Category 2, and there was no other appropriate laboratory data in animal sutdies. Therefore, it cannot be classified since data is insufficient.
9	Specific target organs/systemic toxicity following repeated exposure	Not classified	–	–	–	Due to the description that in the 13-week oral feeding administration tests using the rat and mouse of CERI Hazard Data (2002), EHC 185 (1996), IARC 48 (1990) and NTP TR304 (1987), the toxic effects was not observed in guidance value Category 2, it was carried out out of Category.
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)	Not classified	–	–	–	It carried out the outside of Category from 48-hour LC50=110.7mg/L of Crustacea (Daphnia magna) (CERI Hazard Data, 2002).
11	Hazardous to the aquatic environment (chronic)	Not classified	–	–	–	Since not water-insoluble (aqueous solubility =3500 mg/L (PHYSPROP Database, 2005)) and acute toxicity is low.