

GHS Classification

ID899

m-bis(2,3-epoxypropoxy)benzene

CAS 101-90-6

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) (1998))
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	-	-	-	Test methods applicable to liquid substances at 140degC are not 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 (but not chlorine and fluorine) and the oxygen is 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	-	-	-	No data available

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	SPECIES: Rat ENDPOINT: LD50 VALUE: 2570 mg/kg REFERENCE SOURCE: DFGOT (vol.7, 1996), IARC (36, 1985)
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	Category 2	Exclamation mark	Warning	Causes skin irritation	It was referred to as Category 2 from description that severe irritation was acknowledged when applied to the skin of the rabbit on DFGOT (vol.7, 1996) and IARC 36 (1985).
3 Serious eye damage / eye irritation	Category 2A	Exclamation mark	Warning	Causes serious eye irritation	We classified it as Category 2A based on the descriptions that severe irritational property was acknowledged when applied to the eyes of the rabbits (DFGOT (vol.7, 1996) and IARC 36 (1985)).
4 Respiratory/skin sensitization	Respiratory sensitization: Classification not possible; Skin sensitization: Category 1	(Respiratory sensitization)-; (Skin sensitization)Exclamation mark	(Respiratory sensitization)-; (Skin sensitization)Warning	(Respiratory sensitization)-; (Skin sensitization)May cause allergic skin reaction	Respiratory organ: No data. Skin: Based on the descriptions of IARC 71 (1999), DFGOT (vol.7, 1996, and ICSC (J) and (1998)) that skin sensitizing property was acknowledged in the human, we classified it to be Category 1. In addition, it is indicated to display "Sh" (skin sensitization) in the acceptable concentration advices (MAK/BAT) of DFG, and to display the risk phrase of "R43" (when the skin is contacted, there is possibility to be sensitized) in EU-ANNEX I.

5	Germ cell mutagenicity	Category 2	Health hazard	Warning	Suspected of causing genetic defects (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)	There is a positive result (NTP DB, Access on Oct 2005) by the micronucleus examination and chromosomal aberration test, which use the mouse marrow cells, and which are the in vivo mutagenicity tests using a somatic cell, and there is no positive result by the in vivo genotoxicity study using a germ cell. So it was set as Category 2.
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 2B (IARC 71, 1991) in IARC, 2B in Japan Assoc. of Industrial Health (industrial hygiene academic society recommendation, 2005), R (NTP Roc 11th, 2005) in NTP and category 3 (EU-Annex I, 2005) in EU. So it was considered as Category 2.
7	Toxic to reproduction	Classification not possible	-	-	-	No data available
8	Specific target organs/systemic toxicity following single exposure	Category 3 (respiratory tract irritation)	Exclamation mark	Warning	may cause respiratory irritation or may cause drowsiness and dizziness (respiratory tract irritation)	From description in ICSC (J) (1998), and HSFS (2001) that the respiratory tract, or a nose and a throat is stimulated, it was judged that there was respiratory irritant and it was set as Category 3 (respiratory irritant).
9	Specific target organs/systemic toxicity following repeated exposure	Not classified	-	-	-	In the 13-week repeated oral administration study using rats and mouse, significant toxicity was not observed in the dose which exceeds the maximum of the guidance value of Category 2 in these tests (DFGOT (vol.7, 1996), IARC 36 (1985), and NTP TR 257 (1986)), therefore we classified it to be 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)	Classification not possible	-	-	-	No data available
11 Hazardous to the aquatic environment (chronic)	Classification not possible	-	-	-	No data available.