GHS Classification

ID1410 Decabromo-1,1'-biphenyl

CAS 13654-09-6 Date Classified: Oct. 23, 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	–	–	–	Containing no chemical groups with explosive properties
2	Flammable gases	Not applicable	–	–	–	Classified as "solid" according to GHS definition
3	Flammable aerosols	Not applicable	–	–	–	Not aerosol products
4	Oxidizing gases	Not applicable	–	–	–	Classified as "solid" according to GHS definition
5	Gases under pressure	Not applicable	–	–	–	Classified as "solid" according to GHS definition
6	Flammable liquids	Not applicable	–	–	–	Classified as "solid" according to GHS definition
7	Flammable solids	Not classified	–	–	–	Classified into Class 9 (UN#3152 Polyhalogenated Biphenyls (solid), or Polyhalogenated Terphenyls (solid)) (UN Recommendation on the Transport of Dangerous Goods).
8	Self-reactive substances and mixtures	Not applicable	–	–	–	Containing no chemical groups with explosive or self-reactive properties
9	Pyrophoric liquids	Not applicable	–	–	–	Classified as "solid" according to GHS definition
10	Pyrophoric solids	Not classified	–	–	–	Considered non-pyrophoric when in contact with air at ordinary temperatures since the substance is used as a flame retardant (EHC 152 (1994)). Classified into Class 9 (UN#3152 Polyhalogenated Biphenyls (solid), or Polyhalogenated Terphenyls (solid)) (UN Recommendation on the Transport of Dangerous Goods).
11	Self-heating substances and mixtures	Not classified	–	–	–	Classified into Class 9 (UN#3152 Polyhalogenated Biphenyls (solid), or Polyhalogenated Terphenyls (solid)) (UN Recommendation on the Transport of Dangerous Goods).
12	Substances and mixtures, which in contact with water, emit flammable gases	Not applicable	–	–	–	Containing no metals or metalloids (B, Si, P, Ge, As, Se, Sn, Sb, Te, Bi, Po, At)
13	Oxidizing liquids	Not applicable	–	–	–	Classified as "solid" according to GHS definition
14	Oxidizing solids	Not applicable	–	–	–	Organic compounds containing no oxygen, fluorine or chlorine
15	Organic peroxides	Not applicable	–	–	–	Organic compounds 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)	Not classified	–	–	–	Based on the rat LD50 (oral route) value of >5,000mg/kg and >20,000mg/kg (EHC 152 (1994)).
1	Acute toxicity (dermal)	Not classified	–	–	–	Based on the rat LD50 (dermal route) value of >5,000mg/kg (EHC 152 (1994)) and rabbit LD50 (dermal route) of >8,000mg/kg (EHC 152 (1994)).
1	Acute toxicity (inhalation: gas)	Not applicable	–	–	–	Due to the fact that the substance is a solid according to the GHS definition and inhalation of its gas is not expected.
1	Acute toxicity (inhalation:	Classification not possible	–	–	–	No data available
1	Acute toxicity (inhalation: dust, mist)	Classification not possible	–	–	–	No data available
2	Skin corrosion / irritation	Category 3	–	Warning	Causes mild skin irritation	Based on the description in the report on rabbit skin irritation tests (exposure duration unknown) (PATTY (4th, 2000)): "Mild rash and edematous response occurred at the abraded and intact skin sites in four of six treated animals" and the substance is "classified as an only mild skin irritant."
3	Serious eye damage / eye irritation	Category 2B	–	Warning	Causes eye irritation	Based on the description in the report on rabbit eye irritation tests (EHC 152 (1994)): "Caused mild irritation."
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)–	Respiratory sensitization: No data available Skin sensitization: No data available
5	Germ cell mutagenicity	Not classified	–	–	–	Based on the absence of data on multi-generation mutagenicity tests and germ cell mutagenicity tests in vivo, and negative data on somatic cell mutagenicity tests in vivo (micronucleus tests), described in EHC 152 (1994).
6	Carcinogenicity	Category 2	Health hazard	Warning	Suspected of causing cancer	Due to the fact that the substance is classified as Category R (Polybrominated Biphenyls) by NTP (2005), Category 2B (Polybrominated biphenyls) by IARC (1987) and Category 2B (Polybrominated Biphenyls) by the Japan Society for Occupational Health (2005).
7	Toxic to reproduction	Classification not possible	–	–	–	Insufficient data available
8	Specific target organs/systemic toxicity following single exposure	Classification not possible	–	–	–	Insufficient data available

9	Specific target organs/systemic toxicity following repeated exposure	Classification not possible	–	–	–	Insufficient data available
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	-	-	-	Since it was suggested that relevant toxicity is not indicated within the water solubility (1.25*10-11mg/L (PHYSPROP Database (2005)) of this substance in spite of 24 hours EC50>66mg/L of the crustacea (Daphnia magna) (EHC152 (1994)), it was classified into Not classified.
11	Hazardous to the aquatic environment (chronic)	Not classified	-	-	-	Although it is water-insolubility and acute toxicity was not reported within the aqueous solubility concentrations and there was no rapidly degrading (the decomposition by BOD: 0.8%(Existing Chemical Safety Inspections Data)), since the bio-accumulation (BCF=5.4(Existing Chemical Safety Inspections Data)) was low, it was classified into Not classified.