GHS Classification

ID687 Benzenesulfonic acid, 4,4'-oxybis-, dihydrazide

CAS 80-51-3 Date Classified: Apr. 20, 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	Classification not possible	-	-	-	Classification not possible due to lack of data. The substance could be classified as explosives since it contains nitrogen atoms adjacent to each other (Sulfonyl hydrazides) as chemical groups associated with explosive properties present and has oxygen balance calculated at -84.2, higher than -200 of the criteria.
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	Not classified	-	-	-	Non-combustible (ICSC (J) (1998))
8	Self-reactive substances and mixtures	Classification not possible	-	-	-	S=O binding (sulfonyl hydrazides) is included as grouping in connection with autoreactive. Although this product is "the UN number 3226 self-reactivity substance D", in "ship safety laws", there is no data. So it cannot be classified.
9	Pyrophoric liquids	Not applicable	-	-	-	Solid (GHS definition)
10	Pyrophoric solids	Not classified	-	-	-	Non-combustible (ICSC (J), 1998)
11	Self-heating substances and mixtures	Not classified	-	-	-	Not combustible. (ICSC(J) (1998))
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	Classification not possible	-	-	-	Classification not possible due to lack of data, though containing oxygen bonded to other than carbon and hydrogen.
15	Organic peroxides	Not applicable	-	-	-	Organic compounds containing no -0-0- 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 5	-	Warning	May be harmful if swallowed	SPECIES: Rat ENDPOINT: LD50 VALUE: 2300 mg/kg REFERENCE SOURCE: ACGIH (2001)
1	Acute toxicity (dermal)	Classification not possible	-	-	-	It cannot be classified since there is only data of rabbit LD50 >200mg (ACGIH (2001)) and data is insufficient.
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	Not classified	-	-	-	Based on the report of having no skin stimulativeness on rabbits (ACGIH (2001)), it was classified as out of Category.
3	Serious eye damage / eye irritation	Category 2B	-	Warning	Causes eye irritation	Based on the slight report with being stimulative with the rabbit(ACGIH (2001)), it was set as Category 2B.
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	-	-	-	Based on the negative report (ACGIH (2001)) for the in vivo somatic mutagenicity examination (micronucleus test which used mammalian erythrocytes), we classified it as Out Of Category according to the technical guideline.
6	Carcinogenicity	Classification not possible	-	-	-	No data available

7	Toxic to reproduction	Not classified	–	–	–	Based on the report of not observing effects on reproductive function of parent animals and on development anf groowth of next generation in rat administration test during premating to 4days nursing period (Health, Labor and Welfare Ministry reports (2005)), it was considered as on the outside of Category.
8	Specific target organs/systemic toxicity following single exposure	Category 2 (nervous system)	Health hazard	Warning	May cause damage to organs (nervous system)	There is the description that there is nervous symptom such as tip toe gait and paralytic gait in rat 1000mg/kg oral administration test (Health, Labor and Welfare Ministry reports (2005)), it is classified into Category 2 (nervous system).
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)	Category 2	–	–	Toxic to aquatic life	It was classified into Category 2 from 48-hour EC50=2.9mg/L of Crustacea (Daphnia magna) (MOE eco-toxicity tests of chemicals, 2002).
11	Hazardous to the aquatic environment (chronic)	Category 2	Environment	–	Toxic to aquatic life with long lasting effects	Classified into Category 2, since acute toxicity was Category 2 and not rapidly degrading (BOD: 2% (existing chemical safety inspections data)), though less bio-accumulative (BCF<3.0 (existing chemical safety inspections data)).