

GHS Classification

ID621

Methanethiol

CAS 74-93-1

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	-	-	-	Gas (GHS definition)
2 Flammable gases	Category 1	-	Danger	Extremely flammable gas	Flammable range with air is 3.9-21.8 vol%.
3 Flammable aerosols	Not applicable	-	-	-	Not aerosol products
4 Oxidizing gases	Not classified	-	-	-	Flammable gas
5 Gases under pressure	Low pressure liquefied gas	Gas cylinder	Warning	Contains gas under pressure; may explode if heated	Critical temp: 196.8degC
6 Flammable liquids	Not applicable	-	-	-	Gas (GHS definition)
7 Flammable solids	Not applicable	-	-	-	Gas (GHS definition)
8 Self-reactive substances and mixtures	Not applicable	-	-	-	Gas (GHS definition)
9 Pyrophoric liquids	Not applicable	-	-	-	Gas (GHS definition)
10 Pyrophoric solids	Not applicable	-	-	-	Gas (GHS definition)
11 Self-heating substances and mixtures	Not applicable	-	-	-	Gas (GHS definition)
12 Substances and mixtures, which in contact with water, emit flammable gases	Not applicable	-	-	-	Gas (GHS definition)
13 Oxidizing liquids	Not applicable	-	-	-	Gas (GHS definition)
14 Oxidizing solids	Not applicable	-	-	-	Gas (GHS definition)
15 Organic peroxides	Not applicable	-	-	-	Gas (GHS definition)
16 Corrosive to metals	Classification not possible	-	-	-	Test methods applicable to gas substances are not available

Health Hazards

Hazard class	Classification	symbol	signal word	hazard statement	Rational for the classification
1 Acute toxicity (oral)	Not applicable	-	-	-	Gas (GHS definition)
1 Acute toxicity (dermal)	Not applicable	-	-	-	Gas (GHS definition)
1 Acute toxicity (inhalation: gas)	Category 3	Skull and crossbones	Danger	Toxic if inhaled	It was considered as Category 3. Based on Rat LC50 (4 hours) value: 675ppm (ACGIH, 2004, DFGOT vol.20, 2003, PATTY 4th, 1994, ATSDR, 1992) and LC50 (1 hour) value: 1680ppm (4-hour equivalent of 840 ppm)(DFGOT vol.20, 2003, PATTY 4th, 1994).
1 Acute toxicity (inhalation: dust, mist)	Not applicable	-	-	-	Gas (GHS definition)
2 Skin corrosion / irritation	Classification not possible	-	-	-	Classification not possible due to lack of data
3 Serious eye damage / eye irritation	Category 2A-2B	Exclamation mark	Warning	Causes serious eye irritation	Since it was gas, there was no data directly applied to the eye. But it was set as Category 2A-2B from description that eye irritation was acknowledged as impact of the humans on ACGIH (2004).
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	-	-	-	We classified it as Out Of Category. Since the negative results were obtained for the micronucleus tests which used the mouse red corpuscles, which were the in vivo mutagenicity tests using the somatic cells, in ACGIH (2004) and DFGOT (vol.20, 2003).
6 Carcinogenicity	Classification not possible	-	-	-	No data available
7 Toxic to reproduction	Classification not possible	-	-	-	No data available

8	Specific target organs/systemic toxicity following single exposure	Category 1 (lung); Category 3 (narcotic effects)	Health hazard	Danger; Warning	Cause damage to organs (lung); May cause respiratory irritation or may cause drowsiness and dizziness (narcotic effects)	Based on the descriptions that in the inhalation exposure test using the rat, influences on the central nerve systems that suggest the anesthetic actions such as loss of righting reflex, ataxie etc., were observed (ACGIH (2004), DFGOT (vol.20, 2003), PATTY (4th, 1994) and ATSDR (1992)), that pathological changes of lung were observed in the exposure concentration (1500ppm, 30 min) of the guidance value range of Category 1, and that there was death from pulmonary oedemas in the human evidence of exposure (DFGOT (vol.20, 2003)). So it was set as Category 1 (lungs) and 3 (anesthetic actions).
9	Specific target organs/systemic toxicity following repeated exposure	Classification not possible	-	-	-	Classification not possible due to lack of data
10	Aspiration hazard	Not applicable	-	-	-	Gas (GHS definition)

Environmental Hazards

Hazard class	Classification	symbol	signal word	hazard statement	Rational for the classification
11 Hazardous to the aquatic environment (acute)	Classification not possible	-	-	-	Insufficient data available.
11 Hazardous to the aquatic environment (chronic)	Classification not possible	-	-	-	Classification not possible due to lack of data