

GHS Classification

ID925

2-Furanmethanol

CAS 98-00-0

Date Classified: May 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	-	-	-	Liquid (GHS definition)
3 Flammable aerosols	Not applicable	-	-	-	Not aerosol products
4 Oxidizing gases	Not applicable	-	-	-	Liquid (GHS definition)
5 Gases under pressure	Not applicable	-	-	-	Liquid (GHS definition)
6 Flammable liquids	Category 4	-	Warning	Combustible liquid	Flash point: >60degC and <=93degC
7 Flammable solids	Not applicable	-	-	-	Liquid (GHS definition)
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 classified	-	-	-	Flash point: 391degC (Ullmanns (E) (5th, 1995) A12: p119-120)
10 Pyrophoric solids	Not applicable	-	-	-	Liquid (GHS definition)
11 Self-heating substances and mixtures	Classification not possible	-	-	-	Test methods applicable to liquid substances 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	-	-	-	Organic compounds containing oxygen (but not chlorine and fluorine) chemically bonded only to carbon and hydrogen (but not to other elements).
14 Oxidizing solids	Not applicable	-	-	-	Liquid (GHS definition)
15 Organic peroxides	Not applicable	-	-	-	Containing no -O-O- structure
16 Corrosive to metals	Not classified	-	-	-	UNRTDG Class: 6.1

Health Hazards

Hazard class	Classification	symbol	signal word	hazard statement	Rational for the classification
1 Acute toxicity (oral)	Category 3	Skull and crossbones	Danger	Toxic if swallowed	Calculated based on the following values: Rat LD50 value: 110mg/kg (DFGOT vol.7, 1996), 132mg/kg (DFGOT vol.7, 1996, PATTY 4th, 1994), 275mg/kg (DFGOT vol.7, 1996, PATTY 4th, 1994) and 451mg/kg (DFGOT vol.7, 1996). Since the calculated values was 141mg/kg, it was classified to category 3.
1 Acute toxicity (dermal)	Category 3	Skull and crossbones	Danger	Toxic in contact with skin	It was set as Category 3 based on rabbit LD50 value: 657mg/kg (DFGOT vol.7, 1996, PATTY 4th, 1994).
1 Acute toxicity (inhalation: gas)	Not applicable	-	-	-	Liquid (GHS definition)
1 Acute toxicity (inhalation: vapour)	Category 2	Skull and crossbones	Danger	Fatal if inhaled	Based on rat LC50 (4 hours) value: 233ppm (equivalent: 0.933mg/L) (ACGIH 7 th, 2001, DFGOT vol. 7, 1996, and PATTY 4 th, 1994), the vapor pressure of 233ppm indicates steam with almost no mist. And it was classified as Category 2 by the ppm concentration standard.
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 set as Category 2 from description that irritation was admitted in the test using the rabbit (IUCALID (2000)) and description that the skin was stimulated (ICSC (J) (1997), HSFS (1998)).
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 reversible inflammation and corneal opacity were acknowledged in the test applied to the eyes of the rabbits (DFGOT (7 vol. 1996) and PATTY (4th, 1994)).
4 Respiratory/skin sensitization	Respiratory sensitization: Classification not possible; Skin sensitization: Classification not possible	-	-	-	Respiratory organ: No data. The skin :Although we found the description that the symptom of cutaneous sensitization was acknowledged in PATTY (4th, 1994) with the guinea pigs, the testing methods were unknown, therefore we presupposed we could not classify because of the insufficiency of data.
5 Germ cell mutagenicity	Not classified	-	-	-	There is a negative result (NTP TR 482, 1999) in the chromosomal aberration test with the mouse marrow cells, which are the in vivo mutagenicity tests with a somatic, and in the micronucleus test with mouse erythrocyte. So it carried out the outside of Category.
6 Carcinogenicity	Classification not possible	-	-	-	Classification not possible due to lack of data
7 Toxic to reproduction	Classification not possible	-	-	-	No data available

8	Specific target organs/systemic toxicity following single exposure	Category 3 (narcotic effects, respiratory tract irritation)	Exclamation mark	Warning	May cause respiratory irritation or may cause drowsiness and dizziness (narcotic effects, respiratory tract irritation)	Because of descriptions in ACGIH (7th, 2001) and Japan Society for Occupational Health recommendation (1993) referring to confirmation of drowsiness through inhalation exposure test using rats, and of description in ACGIH (7th, 2001) referring to that respiratory tracts are stimulated as an effect on humans, it was judged as Category 3 (anesthesia action, respiratory irritation)
9	Specific target organs/systemic toxicity following repeated exposure	Category 1 (respiratory organs); Category 2 (liver, kidneys, central nervous system)	Health hazard	Danger; Warning	Causes damage to organs (respiratory organs) through prolonged or repeated exposure; May cause damage to organs (liver, kidneys, central nervous system) through prolonged or repeated	We classified it as Category 1 (respiratory systems) and Category 2 (liver, kidney, central nervous system), based on the descriptions that the effects on the respiratory system were observed with the concentration of the guidance value range of Category 1 in the repeated inhalation exposure test using rat and mouse (ACGIH (7th, 2001), NTP TR 482 (1999), and PATTY (4th, 1994)), based on the description that the effects on the kidney and the liver were observed with the dosage of the guidance value range of Category 2 in the 13-week oral study using rat (NTP TR 482 (1999)), and also based on the descriptions that the effect to brain was observed with the concentration of the guidance value range of Category 2 in the inhalation exposure test using rat (ACGIH (7th, 2001), DFGOT (vol.7, 1996), and NTP TR 482 (1999)).
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 3	-	-	Harmful to aquatic life	It was classified into Category 3 from 96-hour LC50=32mg/L of fishes (Fathead minnows) (HSDB, 2004).
11 Hazardous to the aquatic environment (chronic)	Not classified	-	-	-	Since rapidly degrading (BOD: 78% (existing chemical safety inspections data)), and less bio-accumulative (log Kow=0.28 (PHYSPROP Database, 2005)).