

GHS Classification

ID750

2-Propenoic acid, 2-cyano-, ethyl ester

CAS 7085-85-0

Date Classified: Feb. 20, 2007 (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	-	-	-	No data available
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: 75degC (ICSC, 2001).
7 Flammable solids	Not applicable	-	-	-	Liquid (GHS definition)
8 Self-reactive substances and mixtures	Classification not possible	-	-	-	No data available
9 Pyrophoric liquids	Not classified	-	-	-	Even if it contacts the air of normal temperature, it does not ignite spontaneously (485 degC (an organic compounds dictionary, 1985) of ignition points).
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 (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	-	-	-	Steel and aluminum can be used as a container. (HSDB,2005)

Health Hazards

Hazard class	Classification	symbol	signal word	hazard statement	Rational for the classification
1 Acute toxicity (oral)	Not classified	-	-	-	Since the death of one in six rat is reported in oral 5000mg/kg (CICAD, 2001), LD50> 5000mg/kg is presumed. Signs of other toxicity are not acknowledged. Therefore, it was set as outside of Category.
1 Acute toxicity (dermal)	Not classified	-	-	-	Death is not reported at rabbit 2000mg/kg bw (CICAD, 2001). Therefore, it was considered as the outside of Category.
1 Acute toxicity (inhalation: gas)	Not applicable	-	-	-	Liquid (GHS definition)
1 Acute toxicity (inhalation: vapour)	Classification not possible	-	-	-	No data available
1 Acute toxicity (inhalation: dust, mist)	Classification not possible	-	-	-	Classification not possible due to lack of data
2 Skin corrosion / irritation	Category 2	Exclamation mark	Warning	Causes skin irritation	Mild irritation is reported for the skin irritation study on rabbits (CICAD, 2001). Although irritation is not observed with single exposure on human skin (CICAD, 2001), reversible skin irritation is reported for repeated exposure (CICAD, 2001; ACGIH, 2001). Therefore, it was classified as Category 2.
3 Serious eye damage / eye irritation	Category 2B	-	Warning	Causes eye irritation	Although the stimulative influence (corneal epithelium damages, blurred visions) on eye was seen in humans, it has recovered completely within one week (CICAD, 2001). Moreover, the mild irritation to be recovered in eye of rabbit in three days is reported (CICAD, 2001). Therefore, it was set as Category 2B.
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	The animal data is not obtained. Two cases of skin sensitization in humans have been reported (CICAD, 2001). Therefore, skin sensitization was set to Category 1. Respiratory sensitization cannot be classified due to the lack of data.
5 Germ cell mutagenicity	Classification not possible	-	-	-	Classification not possible due to lack of data
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 3 (respiratory tract irritation)	Exclamation mark	Warning	may cause respiratory irritation or may cause drowsiness and dizziness (respiratory tract irritation)	It is classified into Category 3 (respiratory irritation) based on the report that the respiratory irritation by inhalation exposure of a rat (ACGIH, 2001), and the respiratory irritation in humans (CICAD, 2001; ACGIH, 2001).
9	Specific target organs/systemic toxicity following repeated exposure	Classification not possible	-	-	-	Classification not possible due to lack of data
10	Aspiration hazard	Classification not possible	-	-	-	The dynamic viscosity (40 degrees C) may be <14mm ² /s (kinematic viscosity = 1.7mm ² /s (25 degrees C)), however, we have no data of aspiration breathing apparatus hazards, therefore we could not classify it.

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.