

GHS Classification

ID915

2-Propanol, 2-methyl-

CAS 75-65-0

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	-	-	-	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	Classification not possible	-	-	-	Although there are information, flash point, flame range, etc., which indicate it is a flammable liquid (ICSC (J) (1995) and others) there is no data with these test methods.
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 applicable	-	-	-	Solid (GHS definition)
10 Pyrophoric solids	Not classified	-	-	-	Flash point: 470degC (ICSC (J), 1995)
11 Self-heating substances and mixtures	Classification not possible	-	-	-	Test suitable for a liquid state substance (melting points: 25 degC) has not been established.
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	-	-	-	Solid (GHS definition)
14 Oxidizing solids	Not applicable	-	-	-	Organic compounds containing oxygen (but not chlorine and fluorine) and the oxygen is chemically bonded only to carbon and hydrogen (but not to other elements).
15 Organic peroxides	Not applicable	-	-	-	Containing no -O-O- structure
16 Corrosive to metals	Classification not possible	-	-	-	No data 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	It was classified to category 5 based on the following values. Rat LD50 value: 2200mg/kg (DFGOT vol.19 (2003)) and 3500mg/kg (CERI Hazard Data (1997), ACGIH 7th (2001), DFGOT vol.19 (2003), PATTY 4th (1994), NTP TR53(1997), EHC 65 (1987) and Advice of Sanei Academy (1993)).
1 Acute toxicity (dermal)	Not classified	-	-	-	From the description that death was not observed at 2000mg/kg in the test using rabbits (DFGOT (vol.19, 2003)), it was set as the outside of Category.
1 Acute toxicity (inhalation: gas)	Not applicable	-	-	-	Solid (GHS definition)
1 Acute toxicity (inhalation: vapour)	Classification not possible	-	-	-	There is description that 1 of 10 rats died from 4 hour exposure to 7060 ppm (equivalent 21.36mg/L) (DFGOT (vol.19, 2003)). But the existence of the death with LC50 value and with the upper limit of Category 4 is unknown. Since data is insufficient, it cannot be classified.
1 Acute toxicity (inhalation: dust, mist)	Classification not possible	-	-	-	No data available
2 Skin corrosion / irritation	Category 3	-	Warning	Causes mild skin irritation	There is description that skin irritation was not admitted by the test which used the rabbit (DFGOT (vol.19, 2003)). But it was set as Category 3 from description that there was slight skin irritation by the humans (CERI Hazard Data (1997), DFGOT (vol.19, 2003), PATTY (4th, 1994), NTP TR53 (1997), Occupational Health Recommendation of Occupational Exposure Limits (1993), ACGIH (7th, 2001), and EHC 65 (1987)).
3 Serious eye damage / eye irritation	Category 2A-2B	Exclamation mark	Warning	Causes serious eye irritation	We classified it as Category 2A-2B based on the description that by application to eye, the moderate irritation was acknowledged in the test using the rabbits (DFGOT (vol.19, 2003)), and on the description that it stimulated the human eye (CERI Hazard Data, PATTY (4th, 1994), and ACGIH (7th, 2001)).
4 Respiratory/skin sensitization	respiratory sensitization: Classification not possible; Skin sensitization: Classification not possible	-	-	-	Respiratory organ: No data. Skin : About cutaneous allergic response, there is only one case report (NTP TR53, 1997, ACGIH 7th, 2001 and EHC 65, 1987; they refer the same document) and DFGOT (vol.19, 2003) had description of the two tests which was negative for the first test and weakly positive for the second one using the guinea pigs, therefore we presupposed that we could not classify it for the insufficiency of data.
5 Germ cell mutagenicity	Not classified	-	-	-	There is a negative result (CERI Hazard Data, 1997, DFGOT vol. 19, 2003, and NTP TR53 and 1997) by the micronucleus test which used the mouse and rat erythrocyte, which are an in vivo mutagenicity test using a somatic. So it considered as the outside of Category.

6	Carcinogenicity	Not classified	-	-	-	Not classified because of "A4" (ACGIH, 7th, 2001)
7	Toxic to reproduction	Category 2	Health hazard	Warning	Suspected of damaging fertility or the unborn child	As a result of the examination using a mouse, there is a description in CERI hazard data collection (1997), DFGOT (vol.19, 2003), PATTY (4th, 1994), ACGIH (7th, 2001), NTP (TR53, 1997, TR436, 1995) and EHC 65 (1987) that the decrease in newborn and the increase in stillbirth were observed at the dose in which general toxicity is seen in parental animals. Or, although the general toxicity in parental animals is unknown, there is a description that increase in embryo absorption was observed. Therefore, it was classified into Category 2. In addition, the reproduction toxicity is not clearly observed in parent animals by the dose in which general toxicity was seen in oral administration and an inhalation exposure examination using pregnant rats shown in the CERI hazard data collection (1997), DFGOT (19 vol. 2003), PATTY (4th, 1994), ACGIH (7th, 2001), and NTP (TR 53, 1997 and TR 436, 1995). However, the above developmental toxicity cannot be denied for this result.
8	Specific target organs/systemic toxicity following single exposure	Category 2 (liver); Category 3 (respiratory tract irritation, narcotic effects)	Health hazard; Exclamation mark	Warning	May cause damage to organs (liver); May cause respiratory irritation or may cause drowsiness and dizziness (respiratory tract irritation, narcotic effects)	From description in ACGIH (7th, 2001), NTP TR53 (1997), and EHC 65 (1987) that affects on liver function were seen with the given dose of the guidance value range of Category 2 in the single-dose oral study using rats, it was set as Category 2 (liver). Moreover, from description in DFGOT (vol.19, 2003), PATTY (4th, 1994), and ACGIH (7th, 2001) that the anesthetic actions were seen in the inhalation exposure test using rats and in the oral study using rabbits, description in CERI Hazard Data (1997) that as affect on humans, headache, muscular asthenia, giddiness, ataxia, and distraction are caused, and description in PATTY (4th, 1994), and DFGOT (vol.19, 2003) that nose and throat are stimulated as affect on humans. So it was set as Category 3 (anesthetic actions, respiratory stimulatory).
9	Specific target organs/systemic toxicity following repeated exposure	Not classified	-	-	-	We categorized it to be Out Of Category because significant toxicity was not observed with the dose of the guidance value range of Category 2 in the repetitive oral administration test and inhalation exposure test using the rat and mouse (CERI Hazard Data (1997), DFGOT (vol.19, 2003), PATTY (4th, 1994), and NTP TR436 (1995)).
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	-	-	-	It carried out the outside of Category from 48-hour EC50=5504mg/L of Crustacea (Daphnia magna) (CERI Hazard Data, 1997).
11 Hazardous to the aquatic environment (chronic)	Not classified	-	-	-	Since not water-insoluble (water solubility=1.00*106mg/L(PHYSROP Database, 2005)) and acute toxicity is low.