

## GHS Classification

**ID885**

**Propane, 2-nitro-**

**CAS 79-46-9**

Date Classified: Jun. 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	Not classified	-	-	-	UNRTDG Class: 3
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 3	Flame	Warning	Flammable liquid and vapour	Flash point: >=23degC and <=60degC, UNRTDG Class: 3, PGIII
7 Flammable solids	Not applicable	-	-	-	Liquid (GHS definition)
8 Self-reactive substances and mixtures	Not classified	-	-	-	Classified in UNRTDG Class: 3
9 Pyrophoric liquids	Not classified	-	-	-	Flash point: 425degC (Hommel, 1991 Card No.298)
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 classified	-	-	-	UNRTDG Class: 3
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: 3

### Health Hazards

Hazard class	Classification	symbol	signal word	hazard statement	Rational for the classification
1 Acute toxicity (oral)	Category 4	Exclamation mark	Warning	Harmful if swallowed	Category 4 based on SPECIES: Rat; ENDPOINT: LD50; VALUE: :720mg/kg; REFERENCE SOURCE: ACGIH 7th (2001)
1 Acute toxicity (dermal)	Not classified	-	-	-	From the description that effect was not observed at 2000mg/kg in the single dermal administration test using rabbits (EHC 138 (1992)), it was set as the outside of Category.
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 (6 hours) value: 400ppm (4-hour converted values 1.78mg/L) (ACGIH 7th, 2001, IARC 29, 1982, EHC 138, 1992), 1.78mg/L was judged to be vapor with almost no mist from its vapor pressure, and it was classified by the ppm concentration standard. 1.78mg/L was converted to 489ppm using conversion factor 1ppm = 3.64mg/m3, and it was classified as Category 2.
1 Acute toxicity (inhalation: dust, mist)	Classification not possible	-	-	-	No data available
2 Skin corrosion / irritation	Not classified	-	-	-	From description that when applied to the skin of the rabbit on EHC 138 (1992), local effects were not admitted, it was carried out the outside of Category.
3 Serious eye damage / eye irritation	Classification not possible	-	-	-	There is the description that in the test applied to the eye of the rabbit, irritation was not acknowledged (IUCLID (2000)). It could be set as the outside of Category, but there is no data which negates hazard clearly in Priority1. So it cannot be classified.
4 Respiratory/skin sensitization	respiratory sensitization: Classification not possible; Skin sensitization: Classification not possible	-	-	-	Respiratory organ: No data. Skin: Although there was a possibility that it is classified as Out Of Category based on the description that skin sensitizing property was not acknowledged in the study using the guinea pigs in IUCLID (2000), we presupposed that we could not classify it since there was no data in Priority 1 which negates hazardousness clearly.
5 Germ cell mutagenicity	Not classified	-	-	-	There are negative results with dominant lethal test on rats and mice (ACGIH 7th, 2001, DFGOT vol.3, 1992, EHC 138, 1992), micronucleus test on rat and mouse red corpuscles, which is an in vivo mutagenicity test using somatic cells (IARC 71, 1999, ACGIH 7th, 2001, DFGOT vol.3, 1992, PATTY 4th, 1994, EHC 138, 1992), mouse spot test (DFGOT vol.3, 1992) and chromosome aberration test on rat myeloid cells (EHC 138, 1992). So it was classified as out of Category.

6	Carcinogenicity	Category 2	Health hazard	Warning	Suspected of causing cancer (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)	It was classified into a category 2 in EU (EU-Annex 1, 2005). But it was classified into 2B (IARC 71, 1999) in IARC and in Japan Assoc. of Industrial Health (industrial hygiene academic society magazine 47, 2005), A3 (ACGIH 7th, 2001) in ACGIH and R (NTP RoC 11th, 2005) in NTP. So it was considered as Category 2.
7	Toxic to reproduction	Classification not possible	-	-	-	No data available
8	Specific target organs/systemic toxicity following single exposure	Category 1 (liver, blood system)	Health hazard	Danger	Cause damage to organs (liver, blood system)	From description in IARC 71(1999), ACGIH (7th, 2001), DFGOT (vol.3, 1992), EHC 138 (1992) PATTY (4th, 1994) and IRIS (2005) that a liver damages was seen in humans by high exposure levels, and from description in ACGIH (7th, 2001) and EHC 138 (1992) that the effects on blood was seen at the concentration of the guidance value range of Category 1 in the inhalation exposure test using the rabbits, it was set as Category 1 (liver, blood).
9	Specific target organs/systemic toxicity following repeated exposure	Category 1 (nervous system); Category 2 (liver, blood, lung, kidneys)	Health hazard	Danger; Warning	Causes damage to organs (nervous system) through prolonged or repeated exposure; May cause damage to organs (liver, blood, lung, kidneys) through prolonged or repeated exposure	Based on the description that in the occupational evidence of exposure in humans, the nausea, emesis, lanorexia, severe headaches are observed (IARC 29 (1982), ACGIH (7th, 2001), DFGOT (3 vol. 1992), and EHC 138 (1992)), it was classified into Category 1(nervous systems), since it is assumed that the nervous systems was affected. Moreover, based on the description that in the repeated oral administration test using the rat, the effects on the liver and blood were observed with the dosage in the Category 2 guidance value range (EHC 138 (1992)), and the description that in the repeated inhalation exposures test using the rat, mouse, and rabbit, the effects on the liver, lung, and kidney were observed with concentration in the Category 2 guidance value range (IARC 29 (1982), EHC 138 (1992), and IRIS (2005)), it was classified into Category 2(liver, blood, lung, and kidney).
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 96-hour LC50>210 mg/L of fishes (Fathead minnows) (EHC138, 1992).
11 Hazardous to the aquatic environment (chronic)	Not classified	-	-	-	Since not water-insoluble (water solubility=17000mg/L(PHYSPROP Database, 2005)) and acute toxicity is low.