

GHS Classification

ID888

CAS 111-84-2

Physical Hazards

Nonane

Date Classified: Jun. 20, 2006 (Environmental Hazards: Mar. 31, 2006)

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 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 applicable	-	-	-	There are no chemical groups associated with explosive or self-reactive properties present in the molecule.
9 Pyrophoric liquids	Not classified	-	-	-	UNRTDG Class: 3
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 no oxygen, fluorine and chlorine.
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)	Classification not possible	-	-	-	No data available
1 Acute toxicity (dermal)	Classification not possible	-	-	-	No data available
1 Acute toxicity (inhalation: gas)	Not applicable	-	-	-	Liquid (GHS definition)
1 Acute toxicity (inhalation: vapour)	Category 4	Exclamation mark	Warning	Harmful if inhaled	Based on rat LC50 (4 hours) value: 3200ppm (equivalent: 16.75mg/L) (ACGIH 7th, 2001, PATTY 4th, 1994, and industrial hygiene-society 1993), it was judged as the vapor with almost no mist from vapor pressure. And it was classified by the ppm concentration standard as Category 4.
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 seto as Category 2 from description that the skin was stimulated (ICSC (J) (1995), HSDB (2005), HSFS (2000), SITTIG (4th, 2002)).
3 Serious eye damage / eye irritation	Category 2A-2B	Exclamation mark	Warning	Causes serious eye irritation	Based on the description that the eyes are stimulated seriously (ICSC (J), (1995), HSDB (2005), HSFS (2000), and SITTIG (4th, 2002)), it was set as Category 2A-2B.
4 Respiratory/skin sensitization	Respiratory sensitization: Classification not possible; Skin sensitization: Classification not possible	-	-	-	No data available
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, narcotic effects)	Exclamation mark	Warning	may cause respiratory irritation or may cause drowsiness and dizziness (respiratory tract irritation, narcotic effects)	It was set as Category 3 (respiratory irritation, anesthetic actions). From description in ICSC (J) (1995), HSDB (2005), HSFS (2000), and SITTIG (4th, 2002) that the respiratory tracts are stimulated, description in ICSC (J) (1995) that the central nervous systems may be affected, and description in SITTIG (4th, 2002) that the high concentration indicates an anesthetic actions.
9	Specific target organs/systemic toxicity following repeated exposure	Classification not possible	-	-	-	Although there is description that in the 13-week inhalation exposure test using the rat, the toxicity was not observed with the concentration in the Category 2 guidance value range (PATTY (4th, 1994)), it was presupposed that it cannot be classified, since there is no other data and for classification as the outside of Category, the data is insufficient.
10	Aspiration hazard	Category 1	Health hazard	Danger	May be fatal if swallowed and enters airways	Since it is a hydrocarbon and its dynamic viscosity is 20.5mm ² /s or less at 40 degrees C (the dynamic viscosity converted from viscosity 0.55cP at 40 degrees C using density 0.7176-0.7192 g/cm ³ is 0.8mm ² /s), we classified it as Category 1.

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.