

GHS Classification

ID942

1-Hexene

CAS 592-41-6

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 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 2	Flame	Danger	Highly flammable liquid and vapour	Flash point: <23degC, Initial boiling point: >35degC, UNRTDG Class: 3, PG II
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: 253degC (ICSC (J), 1990)
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)	Not classified	-	-	-	SPECIES: Rat ENDPOINT: LD50 VALUE: > 5600 mg/kg REFERENCE SOURCE: SIDS (2000), ACGIH (2002)
1 Acute toxicity (dermal)	Not classified	-	-	-	From the description that death was not observed at 2000mg/kg in the test using rabbits (SIDS (2000), ACGIH (2002)), it was set as the outside of Category.
1 Acute toxicity (inhalation: gas)	Not applicable	-	-	-	Liquid (GHS definition)
1 Acute toxicity (inhalation: vapour)	Not classified	-	-	-	Based on rat LC50 (4 hours) value: 32000ppm (equivalent: 109.92mg/L), which vapor pressure indicate steam with almost no mist. It was classified as out of Category by the ppm concentration standard.
1 Acute toxicity (inhalation: dust, mist)	Classification not possible	-	-	-	No data available
2 Skin corrosion / irritation	Not classified	-	-	-	From description that the average Draize scores was 0-1.0 in the skin irritation test using the rabbit (SIDS (2000) and ACGIH (2002)), it was judged that there was no irritation and was carried out the outside of Category.
3 Serious eye damage / eye irritation	Not classified	-	-	-	Since change of the eyes which corresponded to the standard of irritant property was not acknowledged in the ocular irritation tests using the rabbits (SIDS (2000) and ACGIH (2002)), we classified it as Out Of Category.
4 Respiratory/skin sensitization	respiratory sensitization: Classification not possible; Skin sensitization: Not possible	-	-	-	Respiratory organ: No data. Skin: Based on the description that sensitizing property was not acknowledged in Buehler test using the guinea pigs of SIDS (2000), and the description that in the test using the guinea pigs of ACGIH (2002) sensitizing property was not acknowledged, we categorized it as Out Of Category.
5 Germ cell mutagenicity	Not classified	-	-	-	There is a negative result (SIDS, 2000; ACGIH, 2002) by the micronucleus test using the mouse erythrocyte, which is an in vivo mutagenicity test using a somatic. So it carried out the outside of Category.
6 Carcinogenicity	Classification not possible	-	-	-	No data available
7 Toxic to reproduction	Not classified	-	-	-	It was considered as out of Category based on the description that reproduction toxicity was not observed at a 1000mg/kg high dose in the reproductive examination in the oral administration using rat (SIDS (2000), ACGIH (2002)).

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 SIDS (2000), ACGIH (2002), and PATTY (4th, 1994) referring to confirmation of central nervous system depressions, dizziness, nausea, cyanosis, and mucosal irritation through inhalation exposure to humans, they were judged as transient conditions which all has recovery properties, and determined to be Category 3 (anesthetic actions, respiratory irritant).
9	Specific target organs/systemic toxicity following repeated exposure	Not classified	-	-	-	The toxicity was not acknowledged with the dosage of the guidance value range of Category 2 in the repeated oral administration test using the rat (SIDS, 2000), and in the 90-day inhalation exposure test using the rat (SIDS, 2000, ACGIH, 2002), therefore we categorized it as Out Of Category.
10	Aspiration hazard	Category 1	Health hazard	Danger	May be fatal if swallowed and enters airways	Category 1 because of a hydrocarbon and the dynamic viscosity: 0.39mm ² /s at 25degC.

Environmental Hazards

Hazard class	Classification	symbol	signal word	hazard statement	Rational for the classification
11 Hazardous to the aquatic environment (acute)	Category 2	-	-	Toxic to aquatic life	It was classified into Category 2 from 96-hour LC50=5.6mg/L of fishes (Rainbow trout) (SIDS, 2004).
11 Hazardous to the aquatic environment (chronic)	Not classified	-	-	-	Since rapidly degrading (BOD: 77% (existing chemical safety inspections data)), and less bio-accumulative (log Kow=3.39 (PHYSPROP Database, 2005)).