

GHS Classification

ID791

heptan-4-one

CAS 123-19-3

Date Classified: Jul. 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	-	-	-	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	-	-	-	Flash point: 430degC (ICSC, 2002)
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 and hydrogen (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	-	-	-	UNRTDG Class: 3

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 set as Category 5 based on rat LD50 value: 4ml/kg (equivalent : 3824mg/kg)(PATTY(5th, 2001) vol.6 p.202).
1 Acute toxicity (dermal)	Category 5	-	Warning	May be harmful in contact with skin	It was set as Category 5 based on rabbit LD50 value: 5.66mL/kg (reduced value: 4647mg/kg) (ACGIH (7th, 2001)).
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 value (6 hours): 2690ppm (4 hour equivalent: 3294ppm) (PATTY (5th, 2001)), since with this concentration, it was judged as steam vapor pressure. And it was classified as Category 4 by the ppm concentration standard.
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 a description that it has slight irritation on human skin (PATTY (5th, 2001)) and that it has slight irritation on rabbits (PATTY (5th, 2001)), therefore, classified as Category 3.
3 Serious eye damage / eye irritation	Category 2	-	-	-	Based on the description that in the eye irritation tests in rabbits, there is slight irritation (PATTY(5th, 2001) vol.6 p.283, RTECS (2004)), it was set as Category 2.
4 Respiratory/skin sensitization	Respiratory sensitization: Classification not possible; Skin sensitization: Classification not possible	-	-	-	No data available
5 Germ cell mutagenicity	Classification not possible	-	-	-	No data available
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 (narcotic effects, respiratory tract irritation)	Exclamation mark	Warning	May cause respiratory irritation or may cause drowsiness and dizziness (narcotic effects, respiratory tract irritation)	ACGIH (7th, 2001) describes that the rat inhalation study finds the respiratory depressant effect and anesthetic action. PATTY (5th, 2001) describes that the rat inhalation study finds decreased respiratory rate in the range of the guidance value to Category 1. In addition, HSFS (1998) and ICSC (J) (2002) report to central nervous system depressant symptoms, such as lethargy, hypoesthesia, giddiness, unconsciousness as well as cough and pharyngalgia in humans. Therefore we classified it as Category 3 (anesthetic action, respiratory irritant) judging that it has the anesthetic action and respiratory irritation.
9	Specific target organs/systemic toxicity following repeated exposure	Classification not possible	-	-	-	Classification not possible due to lack of data
10	Aspiration hazard	Category 2	Health hazard	Warning	May be harmful if swallowed and enters airways	Category 2 because of a ketone composed of 13 carbon atoms or less (though no data available on chemical pneumonia)

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.