

GHS Classification

ID734

isopentyl acetate

CAS 123-92-2

Date Classified: Mar. 23, 2006 (Environmental Hazards: Feb. 10, 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: 33degC (closed cup) (Merk, 13th, 2001) or 23degC(Chapman, 2005)
7 Flammable solids	Not applicable	-	-	-	Liquid (GHS definition)
8 Self-reactive substances and mixtures	Not classified	-	-	-	Classified in UNRTDG No. 1104, Class: 3, PGIII
9 Pyrophoric liquids	Not classified	-	-	-	By the description, the ignition points is 360/379 degC (Chapman (2005)), and it is over 70 degC.
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 (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 No. 1104 Class: 3, PGIII

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: 16600 mg/kg REFERENCE SOURCE: RTECS (2004) Based on rabbit LD50 >5000mg/kg (RTECS (2004)), it was set as the outside of Category.
1 Acute toxicity (dermal)	Not classified	-	-	-	Based on rabbit LD50 >5000mg/kg (RTECS (2004)), it was set as the outside of Category.
1 Acute toxicity (inhalation: gas)	Not applicable	-	-	-	Liquid (GHS definition)
1 Acute toxicity (inhalation: vapour)	Classification not possible	-	-	-	Classification not possible due to lack of data
1 Acute toxicity (inhalation: dust, mist)	Classification not possible	-	-	-	No data available
2 Skin corrosion / irritation	Category 3	-	Warning	Causes mild skin irritation	It was classified as Category 3 based on the evaluation of "slight irritation" in the rabbit skin irritation test (isomer mixture as test substance) (DFGOTvol.11 (1996)). In addition, there is a description that "Disappearance of the test substance of a remarkable rate can be because of volatile at the time of application" on repetitive application test of this substance on human skin. And 197 subjects did not observe irritation at all (DFGOTvol.11 (1996)).
3 Serious eye damage / eye irritation	Category 2B	-	Warning	Causes eye irritation	The result of an eye irritation examination of the rabbit which used the isomer mixture as the test substance is mild (2nd of ten steps of stimulative scales) (ACGIH (2001)), and this substance or an isomer mixture by inhalation exposure irritation is reported to the eye or the conjunctiva in humans (ACGIH (2001), DFGOTvol.11 (1996)). It was referred to as Category 2B based on these facts.
4 Respiratory/skin sensitization	Respiratory sensitization: Classification not possible; Skin sensitization: Not classified	(Respiratory sensitization)-; (Skin sensitization)-	(Respiratory sensitization)-; (Skin sensitization)-	(Respiratory sensitization)-; (Skin sensitization)-	[respiratory sensitization] No data [Skin sensitization] Since the result of the guinea pig maximization test which used as the test substance an isomer mixture 5% of which consisted of this product states, "the sensitizing potential of the test substance is at most slight"(DFGOTvol.11 (1996)) , it was put outside of the Category. In addition, although it is mentioned in a test in which this substance was applied to the human skin, "It is considered that volatilization caused a remarkable disappearance of the test substance,"sensitization was not identified in any of the 197 test subjects. subjects.
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)	By this product or inhalation of a isomer mixture exposure, in humans, the upper respiratory conditions, such as nose, pharynx, respiratory tract, etc. is mainly reported (DFGOTvol.11 (1996), HSDB (2003)), and there is also description (DFGOTvol.11 (1996)) that it have strong irritation especially an respiratory tract (DFGOTvol.11 (1996)), and respiratory irritation was suggested. Furthermore, the anesthetic actions was observed in rat (ACGIH (2001)), and moderate central nerve inhibition in cat (HSDB (2005)), and drowsiness in dog (HSDB (2005)) was reported. So it is classified into Category 3 (respiratory irritation, anesthetic actions).
9	Specific target organs/systemic toxicity following repeated exposure	Category 1 (nervous system)	Health hazard	Danger	Causes damage to organs (nervous system) through prolonged or repeated exposure	There is a statement that visual field constriction is reported by part of humans who received occupation exposure of the isomer mixtures (DFGOT vol.11 (1996)) and also neurotoxicity is occurred (PATTY (5th, 2001)). Moreover, the histologically degeneration of the optic nerve is acknowledged in repeated exposure to the rabbit (DFGOTvol.11, (1996)). It wasclassified into Category 1 (nervous systems) according to these knowledge.
10	Aspiration hazard	Classification not possible	-	-	-	Classification not possible due to lack of data on an animal experimentation (chemical pneumonia, etc.), though Dynamic viscosity: <=14 mm ² /s.

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 24-hour EC50=205mg/L of Crustacea (Daphnia magna) (AQUIRE, 2003).
11 Hazardous to the aquatic environment (chronic)	Not classified	-	-	-	Since not water-insoluble (aqueous solubility=2000 mg/L (PHYSPROP Database, 2005)) and acute toxicity is low.