

GHS Classification

ID727

2-Methylpropyl acetate

CAS 110-19-0

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 2	Flame	Danger	Highly flammable liquid and vapour	Flash point: <23degC, Boiling point: >35degC
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	Not classified	-	-	-	UNRTDG Class: 3 (flammable liquids)
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	-	-	-	It is judged that there is no corrosion behavior. "steel, stainless steels and aluminum are durable as a container. Existence of acetylene will corrode copper. (Hommel (1991))"

Health Hazards

Hazard class	Classification	symbol	signal word	hazard statement	Rational for the classification
1 Acute toxicity (oral)	Not classified	-	-	-	Not classified because of SPECIES: Rat; 15400mg/kg; REFERENCE SOURCE: DFGOTvol.19 (2003)
1 Acute toxicity (dermal)	Not classified	-	-	-	It was set as the outside of Category from rabbit data of LD50 >17400mg/kg (DFGOT vol.19 (2003)).
1 Acute toxicity (inhalation: gas)	Not applicable	-	-	-	Liquid (GHS definition)
1 Acute toxicity (inhalation: vapour)	Category 5	-	Warning	May be harmful if inhaled	The value with which 4 out of 6 animals died was 8000ppm (37.93 mg/L) (DFGOT vol.19 (2003)), and LC50 was presumed to be larger than 5000 ppm of Category 4. So it was classified as Category 5.
1 Acute toxicity (inhalation: dust, mist)	Classification not possible	-	-	-	No data available
2 Skin corrosion / irritation	Category 3	-	Warning	Causes mild skin irritation	There was also a report of negative on humans (DFGOTvol.19 (2003)). But it was classified as Category 3 based on the results of MILD and Moderate as a result of animal examination on rabbits (RTECS (2004)).
3 Serious eye damage / eye irritation	Category 2B	-	Warning	Causes eye irritation	It was set as Category 2B by the test results of Moderate (RTECS (2004)) and slight eye irritation (DFGTO vol.19 (2003)) to the rabbit.
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)-	Skin sensitization was put outside of the division based on the report that sensitization was not identified by the the skin sensitization examination in both humans and animals(DFGOT vol.19, (2003)). Moreover, since there is no report, respiratory sensitization cannot be classified.
5 Germ cell mutagenicity	Classification not possible	-	-	-	There was a negative result (DFGOT vol.19 (2003)) for in vitro test, however, there were no in vivo test results. Therefore we presupposed that we could not classify it according to the technical guideline.
6 Carcinogenicity	Classification not possible	-	-	-	No data with IARC, NTP, Japan Society for Occupational Health, etc.
7 Toxic to reproduction	Classification not possible	-	-	-	There is no valid data of reproductive toxicity and developmental toxicity. However, it is classified into the pregnancy risk group C in MAK (DFGOTvol.19 (2003)).
8 Specific target organs/systemic toxicity following single exposure	Classification not possible	-	-	-	Insufficient data available.
9 Specific target organs/systemic toxicity following repeated exposure	Classification not possible	-	-	-	Classification not possible due to lack of data

10	Aspiration hazard	Classification not possible	-	-	-	Classification not possible due to lack of data on an animal experimentation, though the dynamic viscosity: 0.80mm ² /s at 20degC.
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Environmental Hazards

Hazard class	Classification	symbol	signal word	hazard statement	Rational for the classification
11 Hazardous to the aquatic environment (acute)	Category 3	-	-	Harmful to aquatic life	It was classified into Category 3 from 96-hour LC50=17mg/L of fishes (<i>Oryzias latipes</i>) (MOE eco-toxicity tests of chemicals, 1999).
11 Hazardous to the aquatic environment (chronic)	Not classified	-	-	-	Since rapidly degrading (it hydrolyzed and acetic acid and iso-butanol are generated), and supposed less bio-accumulative (log Kow=1.78 (PHYSPROP Database, 2005)).