

## GHS Classification

**ID742**

**CAS 141-79-7**

### Physical Hazards

**3-Penten-2-one, 4-methyl- (Mesityl oxide)**

Date Classified: Jul. 24, 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 classified	-	-	-	Not classified based on UNRTDG Class: 3, though containing unsaturated C-C bonds as chemical groups associated with explosive properties present.
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	It was classified as Category 3 (GHS standard: flash point being 23 degC or more and 60 degC or less) as flash point being 25 - 31 degC.
7 Flammable solids	Not applicable	-	-	-	Liquid (GHS definition)
8 Self-reactive substances and mixtures	Not classified	-	-	-	Not classified based on UNRTDG Class: 3, though containing unsaturated C-C bonds as chemical groups associated with self-reactive properties present
9 Pyrophoric liquids	Not classified	-	-	-	Flash point: 340-344degC (ICSC, 1998; NFPA, 13th, 2002; Sax, 11th, 2004)
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	-	-	-	Organic compounds containing no -O-O- structure
16 Corrosive to metals	Classification not possible	-	-	-	No data available

### Health Hazards

Hazard class	Classification	symbol	signal word	hazard statement	Rational for the classification
1 Acute toxicity (oral)	Category 4	Exclamation mark	Warning	Harmful if swallowed	It was set as Category 4 based on LD50= 710.0mg/kg calculated by rat three data (ACGIH (2001); PATTY(5th, 2001) vol.6).
1 Acute toxicity (dermal)	Not classified	-	-	-	Based on rabbit LD50= 5151mg/kg (PATTY(5th, 2001) vol.6), it was set as the outside of Category.
1 Acute toxicity (inhalation: gas)	Not applicable	-	-	-	Liquid (GHS definition)
1 Acute toxicity (inhalation: vapour)	Category 3	Skull and crossbones	Danger	Toxic if inhaled	Since the saturated vapor pressure concentration of this product is 11871ppm, it is thought that all inhalation tests were done with vapor. It was classified as Category 3 based on rat LC50 with 4 hour exposure = 1130ppm (PATTY(5th, 2001) vol.6).
1 Acute toxicity (inhalation: dust, mist)	Classification not possible	-	-	-	No data available
2 Skin corrosion / irritation	Category 2	Exclamation mark	Warning	Causes skin irritation	Based on descriptions that rabbits had mild or marked skin irritation (PATTY(5th, 2001) vol.6) and that redness, pains and dermatitis on humans are observed (ICSC (J) (1998), HSDB (2005)), it was classified as Category 2.
3 Serious eye damage / eye irritation	Category 2A	Exclamation mark	Warning	Causes serious eye irritation	There is a statement that there is a severe irritation with a rabbit (PATTY (5th, 2001) vol.6), and redness, a pain and irritation are produced in an eye in humans (ACGIH (2001), PATTY (5th, 2001) vol.6, ICSC (J) (1998)). So it was set as Category 2A based on the above statement.
4 Respiratory/skin sensitization	Respiratory sensitization: Classification not possible; Skin sensitization: Classification not possible	(Respiratory sensitization)-; (Skin sensitization)-	(Respiratory sensitization)-; (Skin sensitization)-	(Respiratory sensitization)-; (Skin sensitization)-	No data available
5 Germ cell mutagenicity	Classification not possible	-	-	-	There were no in vivo test results and there was no strong positive finding of multiple indices for in vitro test. Therefore we presupposed that we could not categorize it according to the technical guideline.
6 Carcinogenicity	Classification not possible	-	-	-	No data available
7 Toxic to reproduction	Category 2	Health hazard	Warning	Suspected of damaging fertility or the unborn child	Based on the description although the toxicity to parent animals was unknown, delivery count is decreased (PATTY(5th, 2001) vol.6), it was considered as Category 2. .

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)	In humans, it is classified into Category 3 (anesthetic actions) based on what central nerve inhibition, such as giddiness, hypesthesia, and headache, is seen (ICSC (J) (1998), HSDB (2005)). Since there was a statement (PATTY(5th, 2001) vol.6, ICSC (J) (1998), HSDB (2005)) of nasal and throat irritation, pharyngeal pain, etc. in humans, it is classified into Category 3 (respiratory irritation).
9	Specific target organs/systemic toxicity following repeated exposure	Category 1 (systemic toxicity)	Health hazard	Danger	Causes damage to organs (systemic toxicity) through prolonged or repeated exposure	It was classified into Category 1 (systemic toxicity) according to that the possibility of giddiness, headache, and respiratory distress are observed in humans (ACGIH (2001)).
10	Aspiration hazard	Classification not possible	-	-	-	No data available

### Environmental Hazards

Hazard class	Classification	symbol	signal word	hazard statement	Rational for the classification
11 Hazardous to the aquatic environment (acute)	Classification not possible	-	-	-	Insufficient data available.
11 Hazardous to the aquatic environment (chronic)	Classification not possible	-	-	-	Classification not possible due to lack of data