

GHS Classification

ID768

CAS 12079-65-1

Physical Hazards

tricarbonyl(eta-cyclopentadienyl)manganese

Date Classified: May 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 applicable	-	-	-	There are no chemical groups associated with explosive properties present in the molecules.
2 Flammable gases	Not applicable	-	-	-	Solid (GHS definition)
3 Flammable aerosols	Not applicable	-	-	-	Not aerosol products
4 Oxidizing gases	Not applicable	-	-	-	Solid (GHS definition)
5 Gases under pressure	Not applicable	-	-	-	Solid (GHS definition)
6 Flammable liquids	Not applicable	-	-	-	Solid (GHS definition)
7 Flammable solids	Classification not possible	-	-	-	No data available
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 applicable	-	-	-	Solid (GHS definition)
10 Pyrophoric solids	Not classified	-	-	-	There is no information that it ignites spontaneously in the air.
11 Self-heating substances and mixtures	Classification not possible	-	-	-	No data available
12 Substances and mixtures, which in contact with water, emit flammable gases	Not classified	-	-	-	Although manganese is included as a metal, it only dissolves into the water slightly and does not start an intense reaction.
13 Oxidizing liquids	Not applicable	-	-	-	Solid (GHS definition)
14 Oxidizing solids	Not applicable	-	-	-	Organic compounds containing oxygen (but not chlorine and fluorine) and the oxygen is chemically bonded only to carbon (but not to other elements).
15 Organic peroxides	Not applicable	-	-	-	Containing no -O-O- structure
16 Corrosive to metals	Classification not possible	-	-	-	Test methods applicable to solid substances are not available.

Health Hazards

Hazard class	Classification	symbol	signal word	hazard statement	Rational for the classification
1 Acute toxicity (oral)	Category 2	Skull and crossbones	Danger	Fatal if swallowed	Category 2 based on SPECIES: Rat; ENDPOINT: LD50; 22mg/kg; REFERENCE SOURCE: RTECS (2004)
1 Acute toxicity (dermal)	Classification not possible	-	-	-	Since data are insufficient, it cannot be classified. MCT melted in tetrahydrofurans as manufacturing solvents indicated high lethal dermal toxicity to the mouse. (ACGIH(2001))
1 Acute toxicity (inhalation: gas)	Not applicable	-	-	-	Solid (GHS definition)
1 Acute toxicity (inhalation: vapour)	Classification not possible	-	-	-	No data available
1 Acute toxicity (inhalation: dust, mist)	Category 1	Skull and crossbones	Danger	Fatal if inhaled	There was information (ACGIH (2001)) that 80% died from 4-hour exchange 0.06mg/L, and that LC50 was near 0.05 mg/L. So it was set as Category 1.
2 Skin corrosion / irritation	Category 2-3	Exclamation mark	Warning	Causes skin irritation	There is information that the skin is stimulated (ACGIH (2001), ICSC (1995)). But there was no data on the level of irritation, it was classified as Category 2-3.
3 Serious eye damage / eye irritation	Classification not possible	-	-	-	No data available
4 Respiratory/skin 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	-	-	-	Classification not possible due to lack of data
6 Carcinogenicity	Classification not possible	-	-	-	Classification not possible due to lack of data
7 Toxic to reproduction	Classification not possible	-	-	-	Classification not possible due to lack of data
8 Specific target organs/systemic toxicity following single exposure	Category 1 (lung, nervous system)	Health hazard	Danger	Cause damage to organs (lung, nervous system)	Although there was no statement of a given dose in two animal data (Patty (5th,2001)), the dropsy of pulmonaries and a spasm were seen (ICSC (1995)), and there was description that the possibility of influence to pulmonaries and a nervous system. So it was set as "Category 1 (pulmonaries, nervous system)."

9	Specific target organs/systemic toxicity following repeated exposure	Category 1 (kidneys)	Health hazard	Danger	Causes damage to organs (kidneys) through prolonged or repeated	It was classified into "Category 1 (kidney)" according to that the renal effects is observed in inhalation exposure below the guidance value (0.02 mg/L) of Category 1 (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	-	-	-	No data available
11 Hazardous to the aquatic environment (chronic)	Classification not possible	-	-	-	No data available.