

GHS Classification

ID496

CAS 598-62-9

Physical Hazards

Manganese carbonate

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 applicable	—	—	—	Containing no chemical groups with explosive properties
2 Flammable gases	Not applicable	—	—	—	Classified as "solid" according to GHS definition
3 Flammable aerosols	Not applicable	—	—	—	Not aerosol products
4 Oxidizing gases	Not applicable	—	—	—	Classified as "solid" according to GHS definition
5 Gases under pressure	Not applicable	—	—	—	Classified as "solid" according to GHS definition
6 Flammable liquids	Not applicable	—	—	—	Classified as "solid" according to GHS definition
7 Flammable solids	Classification not possible	—	—	—	No data available
8 Self-reactive substances and mixtures	Not applicable	—	—	—	Containing no chemical groups with explosive or self-reactive properties
9 Pyrophoric liquids	Not applicable	—	—	—	Classified as "solid" according to GHS definition
10 Pyrophoric solids	Not classified	—	—	—	Not pyrophoric when in contact with air at ordinary temperatures (when heated to above 200degC, manganese (II) carbonate decomposes to non-flammable manganese oxide (II) (MnO) and carbon dioxide (CO2) (HSDB, 2006)).
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	—	—	—	Stable to water (water solubility: 0.00008g/100g (20degC), Lide (84th, 2003))
13 Oxidizing liquids	Not applicable	—	—	—	Classified as "solid" according to GHS definition
14 Oxidizing solids	Classification not possible	—	—	—	Classification not possible due to lack of data, though being inorganic compounds containing oxygen
15 Organic peroxides	Not applicable	—	—	—	Not organic compounds
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)	Classification not possible	—	—	—	No data available
1 Acute toxicity (dermal)	Classification not possible	—	—	—	No data available
1 Acute toxicity (inhalation: gas)	Not applicable	—	—	—	Due to the fact that the substance is "solid" according to the GHS definition and inhalation of its gas is not expected.
1 Acute toxicity (inhalation: dust, mist)	Classification not possible	—	—	—	No data available
2 Skin corrosion / irritation	Classification not possible	—	—	—	IUCLID (2000) presents epidemiological evidence: "slightly irritating" to the human skin. However, classification is not possible in the absence of study detail.
3 Serious eye damage / eye irritation	Classification not possible	—	—	—	IUCLID (2000) presents epidemiological evidence: "slightly irritating" to the human eye. However, classification is not possible in the absence of study detail.
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) —	Respiratory sensitization: No data available Skin sensitization: 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 1 (respiratory organs)	Health hazard	Danger	Causes damage to organs (respiratory organs)	"Acute inhalation exposure to high concentrations of manganese dusts (specifically MnO2 and Mn3O4) can cause an inflammatory response in the lung, which, over time, can result in impaired lung function. Lung toxicity is manifested as an increased susceptibility to infections such as bronchitis and can result in manganic pneumonia" (CICAD 12 (1999)).
9 Specific target organs/systemic toxicity following repeated exposure	Category 1 (respiratory organs, nervous system)	Health hazard	Danger	Causes damage to organs through prolonged or repeated exposure (respiratory organs, nervous system)	The most commonly occurring manganese-bearing minerals include manganese dioxide, manganese carbonate, manganese silicate and manganese trioxide. In general, the available data indicate that exposure to excess manganese for 14 days or less (acute duration) or up to a year (intermediate duration) has an effect on the respiratory system and the nervous system, with little to no effect on other organ systems (CICAD 63 (2004), CICAD 12 (1999)).
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	-	-	-	Classification not possible due to lack of data
11 Hazardous to the aquatic environment (chronic)	Classification not possible	-	-	-	Classification not possible due to lack of data