GHS Classification

ID1106 **zinc permanganate**

CAS 23414-72-4 Date Classified: Mar. 15, 2007 (Environmental Hazards: Mar. 31, 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. The substance is high reactive and a contact of the substance with organic compounds could cause an explosion. (Bretherick, 6th, 1999)
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	Not classified	–	–	–	Nonflammable (HSDB, 2002). (However, this product is a strong oxidizers and when it contacts with a reducing agent, it may burn. (Sax, 11th, 2004))
8	Self-reactive substances and mixtures	Not applicable	–	–	–	Classified in oxidizing solids
9	Pyrophoric liquids	Not applicable	–	–	–	Solid (GHS definition)
10	Pyrophoric solids	Not classified	–	–	–	Nonflammable (HSDB, 2002). (However, this substance is highly reactive, and when it contacts an organic matter, it may ignite spontaneously. (HSDB, 2002))
11	Self-heating substances and mixtures	Not classified	–	–	–	Not combustible. (HSDB (2002))
12	Substances and mixtures, which in contact with water, emit flammable gases	Not classified	–	–	–	Stable to water (soluble in water)
13	Oxidizing liquids	Not applicable	–	–	–	Solid (GHS definition)
14	Oxidizing solids	Category 2	Flame over circle	Danger	May intensify fire; oxidizer	UNRTDG No. 1515, Class: 5.1; PG II.
15	Organic peroxides	Not applicable	–	–	–	Inorganic compound
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	–	–	–	Solid (GHS definition)
1	Acute toxicity (inhalation: vapour)	Classification not possible	–	–	–	No data available
1	Acute toxicity (inhalation: dust, mist)	Classification not possible	–	–	–	No data available
2	Skin corrosion / irritation	Classification not possible	–	–	–	There is description that skin irritation is present in humans (HSFS (2000)). But there is no data which is supported, and since data is insufficient, it cannot be classified.
3	Serious eye damage / eye irritation	Classification not possible	–	–	–	Although there is the description that it irritates to human eye in HSFS (2000), there is no data which is supported, and data is insufficient. Therefore, it cannot be classified.
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	–	–	–	No data available
6	Carcinogenicity	Classification not possible	–	–	–	Although it is categorized as zinc compounds into I in IRIS (2005) (corresponding to outer Category) , due to insufficient data, it cannot be classified.

7	Toxic to reproduction	Classification not possible	–	–	–	Although it is assumed that there is reproductive toxicity as a manganese compounds (ACGIH–TLV (2004)), MAK/BAT (2004) has statement that it has no reproductive toxicity. There is no data of this product, so it cannot be classified due to insufficient data.
8	Specific target organs/systemic toxicity following single exposure	Classification not possible	–	–	–	Although there are reports of airway irritant properties in HSFS (2000), there are no supporting data, so the substance cannot be classified due to insufficient data.
9	Specific target organs/systemic toxicity following repeated exposure	Category 1 (central nervous system, lung)	Health hazard	Danger	Causes damage to organs (central nervous system, lung) through prolonged or repeated exposure	Although there is no data about this product, in ACGIH–TLV (2004) of Priority 1 document, it is supposed that it has effects on a central nervous systems (manganism) and lungs by repeated exposure of manganese compounds. It was classified into Category 1 (a central nervous systems, lung).
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.