

GHS Classification

ID1076

manganese hydrogenarsenate

CAS 7784-38-5

Date Classified: Nov. 20, 2006 (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.
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	-	-	-	Since it was actually used as an agrochemical, it was thought that there was no spontaneous combustibility and it was defined as "out of Category".
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 (almost insoluble in water)
13 Oxidizing liquids	Not applicable	-	-	-	Solid (GHS definition)
14 Oxidizing solids	Classification not possible	-	-	-	No data available
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	-	-	-	No data available
3 Serious eye damage / eye irritation	Classification not possible	-	-	-	No data available
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 : although there is no data of this substance itself, skin sensitization may be indicated to humans as an inorganic arsenic, but it is not a deterministic conclusion (ATSDR, 2005; HSG, 1992), in addition, it was presupposed that it cannot classify from the description in the humans of EHC 224 (2001) "development of the skin sensitization of inorganic arsenic is rare" since data is insufficient.
5 Germ cell mutagenicity	Classification not possible	-	-	-	Without data. In addition, arsenic and inorganic arsenic compound are classified into the germ-cell mutagenicity category 3A (equivalent for GHS Category 1B-2) according to DFG (MAK/BAT, 2005).

6	Carcinogenicity	Category 1A	Health hazard	Danger	May cause cancer (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)	Since arsenic and arsenic compound are categorized into the human carcinogens in IARC Suppl.7 (1987), ACGIH-TLV, and MAK/BAT (2004), it was classified into Category 1A.
7	Toxic to reproduction	Category 2	Health hazard	Warning	Suspected of damaging fertility or the unborn child	Although there is no data of this product, in ACGIH (7th, 2001), ATSDR (draft, 2005), EHC 224 (2001), and DFGOT Vol.21 (2005), there was an opposite report. But the reproductive and developmental toxicity knowledge by inorganic arsenic was indicated to laboratory animals, it was considered as Category 2.
8	Specific target organs/systemic toxicity following single exposure	Category 1 (digestive system, cardiovascular system, nervous system, kidneys, liver, respiratory)	Health hazard	Danger	Cause damage to organs (digestive system, cardiovascular system, nervous system, kidneys, liver, respiratory)	Although there are no data for this substance itself, it was classified as Category 1 (gastrointestinal system, cardiovascular system, nervous system, kidneys, liver, respiratory system). Because of the reports in EHC 224 (2001) that in the forms of the arsenic and inorganic arsenic compounds it causes "symptoms in the gastrointestinal organs, disorders in the functions of the cardio-vascular and nervous systems, myelosuppression, alteration in the blood system and nephropathy" in humans, and that it affects the liver, upper airways and lungs (ACGIH (7th, 2001)).
9	Specific target organs/systemic toxicity following repeated exposure	Category 1 (digestive system, cardiovascular system, nervous system, kidneys, liver, blood system, skin, respiratory organs)	Health hazard	Danger	Causes damage to organs (digestive system, cardiovascular system, nervous system, kidneys, liver, blood system, skin, respiratory organs) through prolonged or repeated exposure	Although there was no data of this product itself, the description in human of EHC 224 (2001) about arsenic and inorganic arsenics compounds "gastrointestinal tract disorder, neuropathy, effect on blood system, disorder of cardiovascular system, kidney and liver were observed. Target organ are gastrointestinal, heart, brains and kidney. Skin, marrow and peripheral nerves were also affected" and in addition, based on the effect on the upper respiratory tract and lungs (ACGIH (7th, 2001)) moreover, it is supposed that manganese compounds has effect on a central nervous systems (CICAD 12 (1999) and ACGIH-TLV (2006), and lungs in CICAD 12 (1999)), therefore it was classified into Category 1 (digestive tract, cardiovascular systems, nervous systems, kidney, liver, blood systems, skin, respiratory system).
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.