GHS Classification

ID1087 tricalcium diarsenite

CAS 27152-57-4 Date Classified: Jun. 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	Not classified	–	–	–	It is classified into 6.1 and II according to the U.N. number (1574) as a mixture with calcium arsenate. Since 4.1 was not assigned, it was considered as out of Category.
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	–	–	–	It is classified into 6.1, II according to the U.N. number (1574) as a mixture with calcium arsenate. Since 4.2 was not attached, it was defined as "out of Category".
11	Self-heating substances and mixtures	Not classified	–	–	–	It is classified into 6.1 and II according to the U.N. number (1574) as a mixture with calcium arsenate. Since 4.2 was not attached, it carried out the outside of Category.
12	Substances and mixtures, which in contact with water, emit flammable gases	Not classified	–	–	–	It is classified into 6.1 and II according to the U.N. number (1574) as a mixture with calcium arsenate. Since 4.3 was not attached, it carried out the outside of Category.
13	Oxidizing liquids	Not applicable	–	–	–	Solid (GHS definition)
14	Oxidizing solids	Not classified	–	–	–	Not classified because of UNRTDG No. 1574 (compounds with calcium arsenate), Class: 6.1, PG II (not Class: 5.1).
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)	Category 1	Skull and crossbones	Danger	Fatal if swallowed	SPECIES: Mouse; ENDPOINT: LD50; VALUE: 1mg/kg; REFERENCE SOURCE: RTECS (2004)
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	Category 3	–	Warning	Causes mild skin irritation	From description that irritation is indicated as an inorganic arsenic compound (PIM 042, 1996;DFGOT vol.21, 2005), it was judged that it had slight irritation and it was set as Category 3.
3	Serious eye damage / eye irritation	Category 2B	–	Warning	Causes eye irritation	Since there is the description that inorganic arsenic compounds particulate irritates to the eye (HSG 70, 1992; PIM 042, 1996), it was classified into Category 2B.
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: it is not firm conclusions although skin sensitization may be shown to humans as an inorganic arsenic compound (ATSDR, 2005; PIM 42, 1996), in addition, the description in the humans "development of the skin sensitization of inorganic arsenic is rare"of EHC 224 (2001), and there is a negative report in a guinea pig examination (maximization test) as an inorganic arsenic compound (ATSDR, 2005; EHC 224, 2001), it was presupposed that it cannot classify according to the shortage of data.
5	Germ cell mutagenicity	Category 2	Health hazard	Warning	Suspected of causing genetic defects (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)	Although there is no this product data, chromosome aberration or micronucleus is induced to humans (peripheral blood) or rodents (marrow) as an inorganic arsenic compound (DFGOT vol.21, 2005; EHC 224, 2001; PATTY 5th, 2001; IARC Suppl.7, 1987; IARC 84, 2004; ATSDR draft, 2005). So it is set as Category 2. In addition, the inorganic arsenic (As+3) was negative in the dominant fatality examination and the mouse energy proto-cell chromosomal aberration test (ATSDR draft, 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)	No finding of this product is observed. But inorganic arsenic compound is categorized into human carcinogen in IARC(IARC Suppl.7, 1987; IARC 84, 2004), ACGIH(ACGIH, 7th, 2001), DFG(MAK/BAT, 2005), NTP(NTP RoC 11th, 2005). Therefore, it was clasiffied into Category 1A.
7	Toxic to reproduction	Category 2	Health hazard	Warning	Suspected of damaging fertility or the undorn child	There is no data of this product, but in ACGIH (7th, 2001), ATSDR (draft, 2005), EHC 224 (2001), and DFGOT vol.21 (2005) there was an opposite report. Since the reproductive and developmental toxicity knowledge by inorganic arsenic was indicated in laboratory animals, it was considered as category 2.
8	Specific target organs/systemic toxicity following single exposure	Category 2 (digestive system, cardiovascular system, kidneys, nervous system); Category 3 (respiratory tract irritation)	Health hazard; Exclamation mark	Warning	May cause damage to organs (digestive system, cardiovascular system, kidneys, nervous system); May cause respiratory irritation or may cause drowsiness and dizziness (respiratory tract	Although there are no data for this substance itself, it was classified as Category 2 (gastrointestinal system, cardio-vascular system, kidneys, nervous system) and Category 3 (airway irritant). Based on the report of the effects of the substance in the form of an inorganic arsenic compound on the gastrointestinal system, cardio-vascular system, kidneys, liver and nervous system (EHC 224, 2001; HSG 70, 1992), and of its airway irritant properties (HSG 70, 1992; PIM 042, 1996).
9	Specific target organs/systemic toxicity following repeated exposure	Category 2 (skin, digestive system, nervous system, lung, liver, cardiovascular system)	Health hazard	Warning	May cause damage to organs (skin, digestive system, nervous system, lung, liver, cardiovascular system) through prolonged or repeated exposure	Although there is no data of this product itself, since it effects on the skin, a gastrointestinal, nervous systems, lungs, liver, and a cardiovascular system by as inorganic arsenic compounds (EHC 224, 2001;HSG 70, 1992), it was classified into Category 2 (the skin, a gastrointestinal, a nervous systems, lungs, liver, cardiovascular 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.