

GHS Classification

ID1086

potassium arsonate

CAS 10124-50-2

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.
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	-	-	-	Non-combustible (ICSC (J) (1999))
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	-	-	-	Non-combustible (ICSC (J), 1999)
11 Self-heating substances and mixtures	Not classified	-	-	-	Not combustible (ICSC(J) (1999))
12 Substances and mixtures, which in contact with water, emit flammable gases	Not classified	-	-	-	Stable to water (readily soluble)
13 Oxidizing liquids	Not applicable	-	-	-	Solid (GHS definition)
14 Oxidizing solids	Not classified	-	-	-	UNRTDG No. 1678, Class: 6.1; PG II (Not 5.1).
15 Organic peroxides	Not applicable	-	-	-	Inorganic compound
16 Corrosive to metals	Classification not possible	-	-	-	Although ICSC (J) (1999) have the description "it corrodes many metals and inflammable/explosive gases (hydrogen) is produced," test methods suitable for solid materials are not established.

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	SPECIES: Rat; ENDPOINT: LD50; VALUE: 14 mg/kg; REFERENCE SOURCE: RTECS (2004)
1 Acute toxicity (dermal)	Category 2	Skull and crossbones	Danger	Fatal in contact with skin	It is based on rat dermal LD50 value 150mg/kg (RTECS, 2004).
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 the irritation accompanied by redness and pain is indicated in the human skin (ICSC, 1999), that irritation may be indicated (SITTIG, 4th, 2002; HSFS, 1999), and that irritation is indicated as an inorganic arsenic compound (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	There is the descriptions that this product irritates to the eye (ICSC, 1999), may irritate (SITTIG 4th, 2002; HSFS, 1999), and the dust of this product or arsenic compound (dust) irritates to eyes (HSDB, 2002; HSG 70, 1992; PIM 042, 1996). So 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 this substance (ICSC, 1999; SITTIG, 4th, 2002) and an inorganic arsenic compound, 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 only in vitro chromosomal aberration test data (positive) in this product (HSDB, 2002), 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)	With the epidemiological data which induction of cancer by this product was observed (HSDB, 2002), in IARC(IARC Suppl.7, 1987; IARC 84, 2004), ACGIH(ACGIH 7th, 2001), DFG(MAK/BAT, 2005), NTP(NTP RoC 11th, 2005) the inorganic arsenic compound was categorized into human carcinogen, it was classified into Category 1A.
7	Toxic to reproduction	Category 2	Health hazard	Warning	Suspected of damaging fertility or the unborn child	Although the specific data of this product was not observed within the range of investigation, since there is the description that this product is suggested the teratogenicity in humans based animal studies (ICSC (1999)), in addition, in ACGIH (7th, 2001), ATSDR (draft, 2005), EHC 224 (2001), and DFGOT vol.21 (2005), although there was an opposite report, the reproductive and developmental toxicity knowledge by inorganic arsenic was indicated to laboratory animals. So it was considered as Category 2.
8	Specific target organs/systemic toxicity following single exposure	Category 2 (digestive system, cardiovascular system, kidneys, central nervous system); Category 3 (respiratory tract irritation)	Health hazard	Warning	May cause damage to organs (digestive system, cardiovascular system, kidneys, central nervous system); May cause respiratory irritation or may cause drowsiness and dizziness (respiratory tract irritation)	The substance was classified as Category 2 (gastrointestinal system, cardio-vascular system, kidneys, central nervous system). Based on the reports of the effects on the gastrointestinal system, cardio-vascular system, central nervous system and kidneys in humans (ICSC, 1999), and of its effects in the form of inorganic arsenic compound on the gastrointestinal system, cardio-vascular system, kidneys, liver and central nervous system (EHC 224, 2001; HSG 70, 1992), and of its airway irritant properties (HSDB, 2002; HSG 70, 1992; HSFS, 1999; ICSC, 1999).
9	Specific target organs/systemic toxicity following repeated exposure	Category 2 (skin, digestive system, nervous system, cardiovascular system, lung, liver, kidneys)	Health hazard	Warning	May cause damage to organs (skin, digestive system, nervous system, cardiovascular system, lung, liver, kidneys) through prolonged or repeated exposure	It was classified into Category 2 (the skin, a gastrointestinal, a nervous systems, a cardiovascular systems, lungs, liver, kidney) based on the description that the influence on the peripheral nervous systems, the skin, membrane, marrow, the kidney, and liver of the humans by this product (ICSC, 1999), and that the influence on the skin, a gastrointestinal, a nervous systems, lungs, liver, and a cardiovascular systems by inorganic arsenic compounds (EHC 224, 2001; HSG 70, 1992).
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)	Category 3	-	-	Harmful to aquatic life	It was classified into Category 3 from 96-hour LC50=24700microg/L of Crustacea (white shrimp) (HSDB, 2004).
11 Hazardous to the aquatic environment (chronic)	Category 3	-	-	Harmful to aquatic life with long lasting effects	Classified into Category 3, since acute toxicity was Category 3, and it is a metallic compound, behavior in water and bioaccumulative potential are unknown.