

GHS Classification

ID1083

trifluoroarsine

CAS 7784-35-2

Date Classified: Sep. 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	-	-	-	Liquid (GHS definition)
3 Flammable aerosols	Not applicable	-	-	-	Not aerosol products
4 Oxidizing gases	Not applicable	-	-	-	Liquid (GHS definition)
5 Gases under pressure	Not applicable	-	-	-	Liquid (GHS definition)
6 Flammable liquids	Not classified	-	-	-	Non-combustible structurally
7 Flammable solids	Not applicable	-	-	-	Liquid (GHS definition)
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 classified	-	-	-	It was judged as nonflammability by composition.
10 Pyrophoric solids	Not applicable	-	-	-	Liquid (GHS definition)
11 Self-heating substances and mixtures	Not classified	-	-	-	Considered as non-combustible substances structurally
12 Substances and mixtures, which in contact with water, emit flammable gases	Not classified	-	-	-	Although it reacts with water and hydrogen fluoride gas occurs, the gas is nonflammable
13 Oxidizing liquids	Classification not possible	-	-	-	No data available
14 Oxidizing solids	Not applicable	-	-	-	Liquid (GHS definition)
15 Organic peroxides	Not applicable	-	-	-	Inorganic compound
16 Corrosive to metals	Classification not possible	-	-	-	No data 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	-	-	-	Liquid (GHS definition)
1 Acute toxicity (inhalation: vapour)	Category 2	Skull and crossbones	Danger	Fatal if inhaled	There is only a description of the lowest mouse fatal dose 2000mg (= 370ppm)/m3/10m (RTECS, 2004). Saturated concentration is considered to be 13000ppm from vapor pressure of 100mmHg (=13.3kPa) of this substance, and it is presumed to be steam exposure. This lowest lethal doses is converted to 0.4mg/L/4h, and this value is close to the upper limit of Category 1 (0.5mg/L/4h). So LC50 value was thought to be equivalent of Category 2.
1 Acute toxicity (inhalation: dust, mist)	Classification not possible	-	-	-	No data available
2 Skin corrosion / irritation	Category 3	-	Warning	Causes mild skin irritation	The knowledge of this product was not acknowledged. But from description that an inorganic arsenic compound indicates skin irritation (DFGOT 21, 2005), and that an arsenic compound of 3 values indicates skin corrosivity (HSDB, 2003). So it was judged that this product had mild irritation, and it was set as Category 3.
3 Serious eye damage / eye irritation	Category 2B	-	Warning	Causes eye irritation	Although no findings of this product was not observed, due to the description that the fluoride shows eye irritation (ACGIH-TLV, 2005; ACGIH 7th, 2001), 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 a deterministic conclusion (ATSDR, 2005; HSG, 1992) although there is no knowledge of the quality of a genuine article itself and skin sensitization may be shown to humans as an inorganic arsenic compound, 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) in Germany 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), ACGHI-TLV (2004), 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 the knowledge of this product was not observed, it was considered as Category 2 based on the description related to human of EHC 224 (2001) which is Priority 1 document, about arsenic and arsenic compound, "the effect on reproduction is suggested", and knowledge of animals "fetus toxicity and teratogenicity in dose in which maternal toxicity is observed". In addition, there is the description that "the conclusion which is inorganic arsenic is not teratogen in humans is advocated" in Catalog of teratogenic agents (2004) equivalent to Priority 1.
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 was no information about this substance, it was classified as Category 1 (gastrointestinal system, cardiovascular system, nervous system, kidneys, liver, respiratory system). Based on the report 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 (EHC 224 (2001)), and based on a similar report in PIM (Poisons Information Monographs) G042 (WHO/IPCS, 1996). In addition, there are reports in ACGIH (7th, 2001) that it affects the liver, upper airways and lungs, and that the fluorides display airway irritant properties (ACGIH-TLV, 2005; ACGIH 7th, 2001).
9	Specific target organs/systemic toxicity following repeated exposure	Category 1 (digestive system, nervous system, blood system, cardiovascular system, kidneys, liver, skin, respiratory organs, bone)	Health hazard	Danger	Causes damage to organs (digestive system, nervous system, blood system, cardiovascular system, kidneys, liver, skin, respiratory organs, bone) through prolonged or	Although the knowledge of this product was not observed, the description in the humans of EHC 224 (2001), and PIM(Poisons Information Monographs) G042 (WHO/IPCS, 1996) about arsenic and inorganic arsenics compounds, "gastrointestinal disturbances, neuropathy, affect to blood systems, and disorder of cardiovascular systems, kidney, and liver were observed with the long term administration of inorganic arsenic. Target organ are gastrointestinal,heart,brains and kidney. The skin, marrow and peripheral nerves were also affected" and in addition, the description of the effect on the upper respiratory tract and lungs (ACGIH (7th, 2001)), and fluorides indicates the effect (fluorosis) on respiratory tract stimulative and a bone (ACGIH-TLV, 2005;ACGIH 7th, 2001) . Therefore, it was classified into Category 1 (digestive tract,cardiovascular systems, a nervous systems, the kidney, liver, a blood system, the skin, a respiratory system, bone)
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.