

GHS Classification

ID1067

thiosemicarbazide

CAS 79-19-6

Date Classified: May 24, 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	-	-	-	It may be used as an agrochemical and even if it contacts the normal temperature air, it does not ignite spontaneously.
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 applicable	-	-	-	The chemical structure of the substance does not contain metals or metalloids(B, Si, P, Ge, As, Se, Sn, Sb, Te, Bi, Po, At).
13 Oxidizing liquids	Not applicable	-	-	-	Solid (GHS definition)
14 Oxidizing solids	Not applicable	-	-	-	Organic compounds containing no oxygen, fluorine and chlorine.
15 Organic peroxides	Not applicable	-	-	-	Organic compounds containing no -O-O- structure
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 2	Skull and crossbones	Danger	Fatal if swallowed	The higher toxic value (LD50=9.16mg/kg) was adopted among rat LD50=13mg/kg and 9.16mg/kg (HSDB (2003)), and it was classified as category 2.
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	-	-	-	Original literature is unknown although there is description which suggests the irritation on the human skin (SITTIG (4th, 2002), HSF5 (2002)). On the other hand, negative skin irritation is indicated with rat in dose finding study (HSDB (2003)). But data is insufficient for carrying out a GHS classification, and it could not be classified.
3 Serious eye damage / eye irritation	Classification not possible	-	-	-	Although there is the description which suggests the irritative against the human eyes (HSFS (2002)), the original literature is unknown. On the other hand, although the negative eye irritation is indicated to rabbit eyes with dose finding study (HSDB (2003)), data is insufficient for carrying out GHS classification. 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	-	-	-	The test results which indicates carcinogenicity clearly in the animal was not observed (mouse: negative (HSDB (2003)) and rat: unclear (no significant difference with a contrast group in female) (RTECS (2003))), and data was insufficient. Therefore, it cannot be classified.
7 Toxic to reproduction	Classification not possible	-	-	-	Classification not possible due to lack of data

8	Specific target organs/systemic toxicity following single exposure	Classification not possible	-	-	-	Although there is a report that "it causes pulmonary edema, and can cause irritation to nose and throat," there are no data supporting this report. Therefore, the substance cannot be classified due to insufficient data.
9	Specific target organs/systemic toxicity following repeated exposure	Classification not possible	-	-	-	Although there is description of "a disorder being done to a nervous systems by a repeated doses" (SITTIG (2002), HSFS (2002)) and "marrow may be affected and anemia may be occurred" (HSFS (2002)), to humans, there is no data which endorses these description, and it cannot be classified due to insufficient data.
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=20.8mg/L of fishes (Fathead minnows) (ECETOC TR91, 2003).
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 not rapidly degrading (BOD: 0% (existing chemical safety inspections data)), though less bio-accumulative (BCF=4.2 (existing chemical safety inspections data)).