

## GHS Classification

**ID360**

**CAS 2212-67-1**

### Physical Hazards

**S-Ethyl hexahydro-1H-azepine-1-carbothioate; Molinate**

Date Classified: Nov. 20, 2006 (Environmental Hazards: Mar. 31, 2006)

Reference Manual: GHS Classification Manual (Feb. 10, 2006)

Hazard class	Classification	symbol	signal word	hazard statement	Rational for the classification
1 Explosives	Not applicable	—	—	—	Containing no chemical groups with explosive properties
2 Flammable gases	Not applicable	—	—	—	Classified as "liquid" according to GHS definition
3 Flammable aerosols	Not applicable	—	—	—	Not aerosol products
4 Oxidizing gases	Not applicable	—	—	—	Classified as "liquid" according to GHS definition
5 Gases under pressure	Not applicable	—	—	—	Classified as "liquid" according to GHS definition
6 Flammable liquids	Not classified	—	—	—	The flash point is 139degC (open cup flash test) (HSDB (2006)).
7 Flammable solids	Not applicable	—	—	—	Classified as "liquid" according to GHS definition
8 Self-reactive substances and mixtures	Not applicable	—	—	—	Containing no chemical groups with explosive or self-reactive properties
9 Pyrophoric liquids	Classification not possible	—	—	—	No data available
10 Pyrophoric solids	Not applicable	—	—	—	Classified as "liquid" according to GHS definition
11 Self-heating substances and mixtures	Classification not possible	—	—	—	Test methods applicable to liquid substances are not available (test temperature: 140degC).
12 Substances and mixtures, which in contact with water, emit flammable gases	Not applicable	—	—	—	Containing no metals or metalloids (B, Si, P, Ge, As, Se, Sn, Sb, Te, Bi, Po, At)
13 Oxidizing liquids	Not applicable	—	—	—	Organic compounds containing oxygen (but not chlorine and fluorine), with the oxygen bound to carbon and hydrogen (but not to other elements)
14 Oxidizing solids	Not applicable	—	—	—	Classified as "liquid" according to GHS definition
15 Organic peroxides	Not applicable	—	—	—	Organic compounds containing no "O-O-" structure
16 Corrosive to metals	Classification not possible	—	—	—	Classification not possible due to lack of data.

### Health Hazards

Hazard class	Classification	symbol	signal word	hazard statement	Rational for the classification
1 Acute toxicity (oral)	Category 4	Exclamation mark	Warning	Harmful if swallowed	Based on the rat LD50 (oral route) value of 584mg/kg (Agricultural Chemical Registration Data (1970)).
1 Acute toxicity (dermal)	Category 4	Exclamation mark	Warning	Harmful in contact with skin	Based on the mouse LD50 (dermal route) value of 1,220mg/kg (Agricultural Chemical Registration Data (1970)).
1 Acute toxicity (inhalation: gas)	Not applicable	—	—	—	Due to the fact that the substance is a liquid according to the GHS definition and inhalation of its gas is not expected.
1 Acute toxicity (inhalation: dust, mist)	Category 4	Exclamation mark	Warning	Harmful if inhaled	Based on the rat LC50 (inhalation route) value of 1.39mg/L (Agricultural Chemical Registration Data (1989)).
2 Skin corrosion / irritation	Category 3	—	Warning	Causes mild skin irritation	Based on the evidence of mild irritation with a Draize score of 1.83 at 24 hours, observed in rabbit skin irritation tests (Agricultural Chemical Registration Data (1985)).
3 Serious eye damage / eye irritation	Category 2B	—	Warning	Causes eye irritation	Based on the data from rabbit eye irritation tests (Agricultural Chemical Registration Data (1977)): "The substance caused irritation with effects resolving after 5 days."
4 Respiratory/skin sensitization	Respiratory sensitization: Classification not possible Skin sensitization: Not classified	(Respiratory sensitization) — (Skin sensitization) —	(Respiratory sensitization) — (Skin sensitization) —	(Respiratory sensitization) — (Skin sensitization) —	Respiratory sensitization: No data available Skin sensitization: No skin sensitizing potential was found in guinea-pig skin sensitization studies (Agricultural Chemical Registration Data (1986)).
5 Germ cell mutagenicity	Not classified	—	—	—	Based on negative data on in vivo micronucleus tests on mouse bone marrow cells, though in vitro reverse mutation tests and mouse lymphoma tests gave negative and positive results, respectively (Agricultural Chemical Registration Data (1986)).
6 Carcinogenicity	Classification not possible	—	—	—	Insufficient data available
7 Toxic to reproduction	Not classified	—	—	—	Based on no evidence of adverse effects on reproduction and offspring development in rat 3-generation reproduction studies and rat/rabbit teratogenicity studies (Agricultural Chemical Registration Data (1977, 1986)).
8 Specific target organs/systemic toxicity following single exposure	Category 3 (narcotic effects)	Exclamation mark	Warning	(Narcotic effects) May cause drowsiness or dizziness	In rat single dose toxicity studies, clinical signs and symptoms including sedation and decreased body temperature were reported (Agricultural Chemical Registration Data (1970)).
9 Specific target organs/systemic toxicity following repeated exposure	Classification not possible	—	—	—	In the available rat repeated dose toxicity studies, reduced body weight gains and decreased relative liver/kidney weights were reported (Agricultural Chemical Registration Data (1977)). However, classification is not possible since no evidence of other general symptoms or pathological findings which can be used to identify the target organs is available.
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 1	Environment	Warning	Very toxic to aquatic life	It was classified into Category 1 from 72 hours ErC50=0.0025mg/L of the algae (Green Algae) (Agricultural Chemical Registration Data, 2004).
11 Hazardous to the aquatic environment (chronic)	Category 1	Environment	Warning	Very toxic to aquatic life with long lasting effects	Although acute toxicity is Category 1 and bio-accumulation is low (log Kow=3.21(PHYSROP Database, 2005)), since there was no rapidly degrading (BIOWIN), it was classified into Category 1.