

GHS Classification

ID507

CAS 2439-01-2

Physical Hazards

6-methyl-1,3-dithiolo[4,5-b]quinoxalin-2-one

Date Classified: Dec. 18, 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 "solid" according to GHS definition
3 Flammable aerosols	Not applicable	—	—	—	Not aerosol products
4 Oxidizing gases	Not applicable	—	—	—	Classified as "solid" according to GHS definition
5 Gases under pressure	Not applicable	—	—	—	Classified as "solid" according to GHS definition
6 Flammable liquids	Not applicable	—	—	—	Classified as "solid" according to GHS definition
7 Flammable solids	Classification not possible	—	—	—	Classification not possible due to lack of data
8 Self-reactive substances and mixtures	Not applicable	—	—	—	Containing no chemical groups with explosive or self-reactive properties
9 Pyrophoric liquids	Not applicable	—	—	—	Classified as "solid" according to GHS definition
10 Pyrophoric solids	Classification not possible	—	—	—	Classification not possible due to lack of data
11 Self-heating substances and mixtures	Classification not possible	—	—	—	Classification not possible due to lack of data
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	—	—	—	Classified as "solid" according to GHS definition
14 Oxidizing solids	Not applicable	—	—	—	Organic compounds containing oxygen (but not fluorine and chlorine), with the oxygen bound to carbon and hydrogen (but not to other elements)
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 with melting point of >55degC are not available (melting point: 170.2degC (Agricultural Chemical Registration Data)).

Health Hazards

Hazard class	Classification	symbol	signal word	hazard statement	Rational for the classification
1 Acute toxicity (oral)	Not classified	—	—	—	Based on the rat LD50 (oral route) value of >3,000mg/kg, together with the absence of mortality (Agricultural Chemical Registration Data).
1 Acute toxicity (dermal)	Classification not possible	—	—	—	Classification cannot be determined, though the available rat dermal study reported the LC50 value of >500mg/kg (Agricultural Chemical Registration Data).
1 Acute toxicity (inhalation: gas)	Not applicable	—	—	—	Due to the fact that the substance is a solid according to the GHS criteria 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 2.16mg/L (4 hours) (Agricultural Chemical Registration Data).
2 Skin corrosion / irritation	Not classified	—	—	—	Based on no evidence of irritation observed in rabbit skin irritation tests (Agricultural Chemical Registration Data).
3 Serious eye damage / eye irritation	Category 1	Corrosion	Danger	Causes serious eye damage	Based on the evidence of moderate to severe eye irritation, with effects persisting for at least 14 days of observation in rabbit eye irritation tests (Agricultural Chemical Registration Data).
4 Respiratory/skin sensitization	Respiratory sensitization: Classification not possible Skin sensitization: Category 1	(Respiratory sensitization) — (Skin sensitization) Exclamation mark	(Respiratory sensitization) — (Skin sensitization) Warning	(Respiratory sensitization) — (Skin sensitization) May cause an allergic skin reaction	Respiratory sensitization: No data available Skin sensitization: Based on positive results in guinea pig skin sensitization tests employing the Maximization method (Agricultural Chemical Registration Data).
5 Germ cell mutagenicity	Not classified	—	—	—	Based on negative data in in vitro reverse mutation tests and mouse in vivo micronucleus tests, though in vitro chromosome aberration tests showed positive (Agricultural Chemical Registration Data).
6 Carcinogenicity	Not classified	—	—	—	There was no treatment-related increase in tumor incidence observed in mouse carcinogenicity studies (Agricultural Chemical Registration Data).
7 Toxic to reproduction	Not classified	—	—	—	Based on no evidence of adverse effects on reproduction or offspring development observed in rat 2-generation reproduction studies and rat/rabbit teratogenicity studies (Agricultural Chemical Registration Data).
8 Specific target organs/systemic toxicity following single exposure	Category 2 (nervous system)	Health hazard	Warning	May cause damage to organs (nervous system)	In single dose toxicity studies in chickens, "flaccid paralysis without sensory loss (generally, neuromuscular block), somnolency (general suppression of activity), and convulsions" (RTECS (2003)) were found. These effects were observed at dosing levels within the guidance value ranges for Category 2.

9	Specific target organs/systemic toxicity following repeated exposure	Classification not possible	—	—	—	Insufficient data 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 48 hours EC50=0.015mg/L of the crustacea (Daphnia magna) (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=3.78(PHYSROP Database, 2005)), since there was no rapidly degrading (the decomposition by BOD: 0%(Existing Chemical Safety Inspections Data)), it was classified into Category 1.