

GHS Classification

ID366

5-ethoxy-3-trichloromethyl-1,2,4-thiadiazole

CAS 2593-15-9

Date Classified: Dec. 18, 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	—	—	—	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 154.5degC (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	Not classified	—	—	—	Considered non-pyrophoric when in contact with air at ordinary temperatures since the substance is stable to heat (up to 165degC) (Agricultural Chemical Registration Data).
10 Pyrophoric solids	Not applicable	—	—	—	Classified as "liquid" according to GHS definition
11 Self-heating substances and mixtures	Not classified	—	—	—	Stable to heat (up to 165degC) (Agricultural Chemical Registration 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	—	—	—	Organic compounds containing chlorine (but not fluorine and oxygen), with the chlorine 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 1,077mg/kg (Agricultural Chemical Registration Data (1987)).
1 Acute toxicity (dermal)	Not classified	—	—	—	Based on the rat LD50 (dermal route) value of >5,000mg/kg (Agricultural Chemical Registration Data (1985)).
1 Acute toxicity (inhalation: gas)	Not applicable	—	—	—	Due to the fact that the substance is a liquid according to the GHS criteria and inhalation of its gas is not expected.
1 Acute toxicity (inhalation: dust, mist)	Classification not possible	—	—	—	No data available
1 Acute toxicity (inhalation: dust, mist)	Category 3	Skull and crossbones	Danger	Toxic if inhaled	Based on the rat LC50 (inhalation route) value of 0.8mg/L (Agricultural Chemical Registration Data (1991)).
2 Skin corrosion / irritation	Category 3	—	Warning	Causes mild skin irritation	Based on the evidence of irritation reactions (Draize score of 1.7), with some improvement occurring during 72 hours of observation, observed in rabbit skin irritation tests (Agricultural Chemical Registration Data (1987)).
3 Serious eye damage / eye irritation	Classification not possible	—	—	—	No data available
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: No data available
5 Germ cell mutagenicity	Not classified	—	—	—	Based on negative data in in vivo studies (mouse micronucleus tests and rat chromosome aberration tests) (Agricultural Chemical Registration Data (1985, 1987)). The in vitro mutagenicity studies (chromosome aberration tests (Agricultural Chemical Registration Data (1985)) and reverse mutation tests in bacteria (Agricultural Chemical Registration Data (1987)) yielded weak positive results.
6 Carcinogenicity	Classification not possible	—	—	—	Classification not possible in the absence of existing classification, though the substance was suspected of causing an increase in rat-specific tumor incidence in the available carcinogenicity studies in rats and mice (Agricultural Chemical Registration Data (1986, 1989)).
7 Toxic to reproduction	Not classified	—	—	—	Based on no evidence of adverse effects on reproduction or offspring development observed in rat 3-generation reproduction studies and rat/mouse teratogenicity studies (Agricultural Chemical Registration Data (1987)).
8 Specific target organs/systemic toxicity following single exposure	Category 2 (nervous system)	Health hazard	Warning	May cause damage to organs (nervous system)	Based on the evidence from animal studies including tremors, piloerection, sedation, debility and convulsions (Agricultural Chemical Registration Data (1985)). These effects were observed at dosing levels within the guidance value ranges for Category 2.

9	Specific target organs/systemic toxicity following repeated exposure	Category 2 (liver)	Health hazard	Warning	May cause damage to organs through prolonged or repeated exposure (liver)	Based on the evidence from animal studies including increased liver weights and hepatic tissue lesions (Agricultural Chemical Registration Data (1987)). These effects were observed at dosing levels within the guidance value ranges for Category 2.
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 EC50=0.39mg/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=3.37(PHYSROP Database, 2005)), since there was no rapidly degrading (BIOWIN), it was classified into Category 1.