

GHS Classification

ID329

CAS 79538-32-2

Physical Hazards

2,3,5,6-Tetrafluoro-4-methylbenzyl (Z)-3-(2-chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethylcyclopropanecarboxylate; Tefluthrin

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 "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	—	—	—	No data available
8 Self-reactive substances and mixtures	Classification not possible	—	—	—	Classification not possible due to lack of data, though containing unsaturated bonds (olefin).
9 Pyrophoric liquids	Not applicable	—	—	—	Classified as "solid" according to GHS definition
10 Pyrophoric solids	Classification not possible	—	—	—	No data available
11 Self-heating substances and mixtures	Classification not possible	—	—	—	Test methods applicable to liquid substances are not available (melting point: 44.6degC (Agricultural Chemical Registration Data (2005)), 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	—	—	—	Classified as "solid" according to GHS definition
14 Oxidizing solids	Not applicable	—	—	—	Organic compounds containing fluorine, chlorine and 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	—	—	—	No data available on substances with melting point of >55degC (melting point: 44.6degC (Agricultural Chemical Registration Data (2005))).

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	Based on the rat LD50 (oral route) value of 21.8mg/kg (Agricultural Chemical Registration Data (1992)).
1 Acute toxicity (dermal)	Category 2	Skull and crossbones	Danger	Fatal in contact with skin	Based on the rat LD50 (dermal route) value of 177mg/kg (Agricultural Chemical Registration Data (1992)).
1 Acute toxicity (inhalation: gas)	Not applicable	—	—	—	Due to the fact that the substance is a solid according to the GHS definition 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 1	Skull and crossbones	Danger	Fatal if inhaled	Based on the rat LC50 (inhalation route) value of 0.0371mg/L (Agricultural Chemical Registration Data (1992)).
2 Skin corrosion / irritation	Not classified	—	—	—	Based on the evidence of only mild irritation (a mean Draize score of <=0.5), with effects resolving within 48 hours, observed in rabbit skin irritation tests (Agricultural Chemical Registration Data (1992)).
3 Serious eye damage / eye irritation	Category 2A	Exclamation mark	Warning	Causes serious eye irritation	Based on the description in the report on rabbit eye irritation tests: "The substance induced reversible irritation reactions of the eyes. Conjunctival effects disappeared after 2 weeks" (Agricultural Chemical Registration Data (1992)).
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: Based on the report on guinea pig skin sensitization tests using the Maximization method: "Skin sensitization: negative" (Agricultural Chemical Registration Data (1992)).
5 Germ cell mutagenicity	Not classified	—	—	—	Based on negative data on in vitro reverse mutation tests, DNA repair tests and unscheduled DNA synthesis tests, and in vivo micronucleus tests on mouse bone marrow cells and rat chromosome aberration tests (Agricultural Chemical Registration Data (1992)).
6 Carcinogenicity	Not classified	—	—	—	There was no treatment-related increase in tumor incidence observed in 2-year (rats) and 18-month (mice) carcinogenicity studies (Agricultural Chemical Registration Data (1992)).
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, reported in Agricultural Chemical Registration Data (1992).
8 Specific target organs/systemic toxicity following single exposure	Category 1 (nervous system)	Health hazard	Danger	Causes damage to organs (nervous system)	In rat single dose toxicity studies, clinical signs and symptoms including wide base gait, lack of stability, incontinence, salivation and upward curve of the spine, reduced motor activity and abnormal gait, tremors, tonic convulsions and ataxia were found (Agricultural Chemical Registration Data (1992)). These effects were observed at dosing levels within the guidance value ranges for Category 1.
9 Specific target organs/systemic toxicity following repeated exposure	Classification not possible	—	—	—	In rat subacute toxicity studies, decreased food consumption and reduced body weight gains were reported (Agricultural Chemical Registration Data (1992)). However, classification is not possible since no other treatment-related general symptoms or pathological findings were observed.
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 96 hours LC50=0.053ppb of the crustacea (Mysid Shrimp)) (AQUIRE, 2003).
11	Hazardous to the aquatic environment (chronic)	Category 1	Environment	Warning	Very toxic to aquatic life with long lasting effects	Since acute toxicity was Category 1 and there was no rapidly degrading (BIOWIN), and since there was bio-accumulation (log Kow=6.5 (PHYSPROP Database, 2005)), it was classified into Category 1.