

GHS Classification

ID270

CAS 52315-07-8

Physical Hazards

alpha-Cyano-3-phenoxybenzyl 3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate; Cypermethrin

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	Not classified	—	—	—	Classified into Division 6.1 (UN#3352 Pyrethroid Pesticide, liquid, toxic (ICSC (2004)) (UN Recommendation on the Transport of Dangerous Goods).
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	Not classified	—	—	—	Classified into Division 6.1 (UN#3352 Pyrethroid Pesticide, liquid, toxic (ICSC (2004)) (UN Recommendation on the Transport of Dangerous Goods).
11 Self-heating substances and mixtures	Not classified	—	—	—	Classified into Division 6.1 (UN#3352 Pyrethroid Pesticide, liquid, toxic (ICSC (2004)) (UN Recommendation on the Transport of Dangerous Goods).
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 chlorine and oxygen (but not fluorine), with the 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	—	—	—	Test methods applicable to solid substances with melting point of >55degC are not available, whereas No data available on those with melting point of <55degC.

Health Hazards

Hazard class	Classification	symbol	signal word	hazard statement	Rational for the classification
1 Acute toxicity (oral)	Category 3	Skull and crossbones	Danger	Toxic if swallowed	Based on the rat LD50 (oral route) value of 195mg/kg (Agricultural Chemical Registration Data (1986)).
1 Acute toxicity (dermal)	Not classified	—	—	—	Based on the rat LD50 (dermal route) value of >5,000mg/kg, together with the absence of mortality at doses of not more than 5,000mg/kg (Agricultural Chemical Registration Data (1986)).
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)	Classification not possible	—	—	—	Classification not possible since the available rat inhalation LC50 value of >0.25mg/L is not classifiable (Agricultural Chemical Registration Data (1986)).
2 Skin corrosion / irritation	Not classified	—	—	—	Based on no evidence of local responses observed in rabbit skin irritation tests (Agricultural Chemical Registration Data (1986)).
3 Serious eye damage / eye irritation	Category 2B	—	Warning	Causes eye irritation	Based on the evidence of mild irritation (the highest mean Draize score of 2.3) with effects fully reversible by 48 hours, observed in rabbit eye irritation tests (Agricultural Chemical Registration Data (1986)).
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 no evidence of skin reactions observed in guinea pig skin sensitization studies (Agricultural Chemical Registration Data (1986)).
5 Germ cell mutagenicity	Not classified	—	—	—	Based on negative data on in vitro reverse mutation tests, in vivo mouse dominant lethal tests and chinese hamster somatic cell chromosome aberration tests (Agricultural Chemical Registration Data (1986)).
6 Carcinogenicity	Not classified	—	—	—	The available carcinogenicity studies in rats and mice provide no evidence of treatment-related increase in the incidence of tumor formation, reported in Agricultural Chemical Registration Data (1986). Also due to the fact that the substance is classified as Group C by EPA.
7 Toxic to reproduction	Not classified	—	—	—	Based on no evidence of adverse effects on reproductive function/capacity and pup development observed in 2-generation reproduction studies in rats and gestation studies in rats and mice (Agricultural Chemical Registration Data (1986)).
8 Specific target organs/systemic toxicity following single exposure	Category 1 (nervous system)	Health hazard	Danger	Causes damage to organs (nervous system)	In the oral toxicity studies using rats or mouse, lethargy, sedation, ataxic gait, piloerection, vocalization, rolling, jumping, loose stool and stained fur have been observed with both males and females, and salivation has been observed only with males (Technical Reports for Agricultural Chemical Registration (1986)) within the guidance values for Category 1. So the substance was classified as Category 1 (nervous system) based on these
9 Specific target organs/systemic toxicity following repeated exposure	Category 2 (nervous system)	Health hazard	Warning	May cause damage to organs through prolonged or repeated exposure (nervous)	Based on the evidence from animal studies including self-licking/biting, generalized tremors, rigid gait, ataxia, incoordination, hyperesthesia (Agricultural Chemical Registration Data (1986)). 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 96 hours EC50=0.004microg/L of the crustacea (Amphipod) (EHC82, 1989).
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=6.6 (PHYSPROP Database, 2005)), it was classified into Category 1.