

GHS Classification

ID294

CAS 13593-03-8

Physical Hazards

O,O-Diethyl O-2-quinoxaliny phosphorothioate; Quinalphos

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	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	—	—	—	No data available
11 Self-heating substances and mixtures	Classification not possible	—	—	—	Test methods applicable to liquid substances are not available (melting point: 31-32degC (Agricultural Chemical Registration Data (1983)), test temperature: 140degC).
12 Substances and mixtures, which in contact with water, emit flammable gases	Not classified	—	—	—	Stable to water (water solubility: 17.8ppm (22-23degC), Agricultural Chemical Registration Data (1983))
13 Oxidizing liquids	Not applicable	—	—	—	Classified as "solid" according to GHS definition
14 Oxidizing solids	Classification not possible	—	—	—	Classification not possible due to lack of data, though being organic compounds containing oxygen bound to elements other than carbon and hydrogen
15 Organic peroxides	Not applicable	—	—	—	Organic compounds containing no "-O-O-" structure
16 Corrosive to metals	Classification not possible	—	—	—	No data available

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 51mg/L (Agricultural Chemical Registration Data (1983)).
1 Acute toxicity (dermal)	Category 3	Skull and crossbones	Danger	Toxic in contact with skin	Based on the rat LD50 (dermal route) value of 850mg/L (Agricultural Chemical Registration Data (1983)).
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 2	Skull and crossbones	Danger	Fatal if inhaled	Based on the rat LC50 (inhalation route) value of 0.45mg/L (Agricultural Chemical Registration Data (1983)).
2 Skin corrosion / irritation	Category 3	—	Warning	Causes mild skin irritation	Based on the description in the report on rabbit skin irritation tests (Agricultural Chemical Registration Data (1983)): "Slight erythematous responses were noted at 24 hours. By 72 hours, the reactions cleared up" (though the Draize score is not presented).
3 Serious eye damage / eye irritation	Not classified	—	—	—	Based on the description in the report on rabbit eye irritation tests (Agricultural Chemical Registration Data (1983)): "Non-irritating to the eye."
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 sensitization observed in guinea pig skin sensitization studies (Agricultural Chemical Registration Data (1980)).
5 Germ cell mutagenicity	Not classified	—	—	—	Based on negative data on in vitro reverse mutation tests, in vitro chromosome aberration tests, in vivo micronucleus tests on mouse somatic cells and in vivo chromosome aberration tests on rat somatic cells (Agricultural Chemical Registration Data (1983)).
6 Carcinogenicity	Not classified	—	—	—	There was no treatment-related increase in tumor incidence observed in 2-year (rats) and 18-month (mice) carcinogenicity studies, reported in Agricultural Chemical Registration Data (1992).
7 Toxic to reproduction	Not classified	—	—	—	Based on no evidence of parental reproduction and pup development toxicity observed in rat 3-generation reproduction studies (Agricultural Chemical Registration Data (1983)) and rabbit/rat teratogenicity studies (Agricultural Chemical Registration Data (1983, 1992)).
8 Specific target organs/systemic toxicity following single exposure	Category 1 (nervous system)	Health hazard	Danger	Causes damage to organs (nervous system)	Based on the evidence from animal studies including crouching position, tremors, relaxation, salivation and incontinence (Agricultural Chemical Registration Data (1983)). The effects on the nervous system 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 animal studies, plasma/corpuscular cholinesterase inhibition and increased liver weight were observed. However, classification is not possible due to lack of data, since no evidence of other common symptoms or histopathological abnormalities was reported (Agricultural Chemical Registration Data (1983)).
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 LC50=0.124microg/L of the crustacea (Peneus Monodon) (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=4.44 (PHYSPROP Database, 2005)), it was classified into Category 1.