

GHS Classification

ID275

CAS 17109-49-8

Physical Hazards

O-Ethyl S,S-diphenyl phosphorodithioate; Edifenphos; EDDP

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 "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	Classification not possible	—	—	—	No data available
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	Classification not possible	—	—	—	No data available
10 Pyrophoric solids	Not applicable	—	—	—	Classified as "liquid" according to GHS definition
11 Self-heating substances and mixtures	Classification not possible	—	—	—	Test methods applicable to liquid substances are not available (test temperature: 140degC).
12 Substances and mixtures, which in contact with water, emit flammable gases	Not classified	—	—	—	Stable to water (water solubility: 56mg/L (20degC), HSDB (2006))
13 Oxidizing liquids	Classification not possible	—	—	—	Classification not possible due to lack of data, though being organic compounds containing oxygen (but not chlorine and fluorine) bound to the elements other than carbon and hydrogen
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 3	Skull and crossbones	Danger	Toxic if swallowed	Based on the rat LD50 (oral route) value of 100mg/kg (HSDB (2006) and RTECS (2006)).
1 Acute toxicity (dermal)	Category 3	Skull and crossbones	Danger	Toxic in contact with skin	Based on the rat LD50 (dermal route) value of 615mg/kg (RTECS (2006)).
1 Acute toxicity (inhalation: gas)	Not applicable	—	—	—	Due to the fact that the substance is a liquid 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 3	Skull and crossbones	Danger	Toxic if inhaled	Based on the rat LC50 (4 hour inhalation of vapour) value of 0.65mg/L (HSDB (2006)) exceeded 90% of the saturated vapour concentration (3.6*10 ⁻⁴ ppm) under a saturated vapour pressure of 2.70*10 ⁻⁷ mmHg (25degC) [equivalent to 36.0microPa (25degC)] (HSDB (2006)), the substance was considered as "mist exposure" and was classified as Category 3.
2 Skin corrosion / irritation	Category 3	—	Warning	Causes mild skin irritation	Based on the description in the report on rabbit skin irritation tests (exposure duration unknown) (HSDB (2006)): "Slightly irritating."
3 Serious eye damage / eye irritation	Category 2B	—	Warning	Causes eye irritation	The results of rabbit eye irritation tests suggest that the substance is "not irritating" (HSDB (2006)), that is, "Not classified." However, as the skin irritation effects are assigned Category 3, the substance is considered to possess a mild eye irritation potential and thus classified into Category 2B.
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	Classification not possible	—	—	—	No data available
6 Carcinogenicity	Classification not possible	—	—	—	No data available
7 Toxic to reproduction	Classification not possible	—	—	—	No data available
8 Specific target organs/systemic toxicity following single exposure	Category 2 (nervous system), Category 3 (narcotic effects)	Health hazard	Warning	May cause damage to organs (nervous system) (Narcotic effects) May cause drowsiness or dizziness	Based on the evidence from animal studies including "lethargy and convulsions" (RTECS (1998)). The effects on experimental animals were observed at dosing levels within the guidance value ranges for Category 1. However, as the referenced study is assigned a priority rating of 2, which does not meet the criteria for 1b (3) specified in the "Technical Guideline for GHS Health Hazard Classification," the substance is placed in Category 2.

9	Specific target organs/systemic toxicity following repeated exposure	Category 1 (liver, kidneys, adrenal), Category 2 (blood system)	Health hazard	Danger	Causes damage to organs through prolonged or repeated exposure (liver, kidneys, adrenal) May cause damage to organs through prolonged or repeated	Based on the evidence from animal studies: "hepatocellular hypertrophy, phospholipid deposition, along with adrenal hypertrophy/pigmentation were seen," "decreased RBC/hemoglobin/hematocrit levels, decreased SGOT/SGTP/SAP, hepatocellular hypertrophy/fatty degeneration, nephritis, renal/adrenal hypertrophy were noted" (JMPR (1976)). The effects on experimental animals were observed at dosing levels within the guidance value ranges for Category 1 (liver, kidneys, adrenal) and Category 2 (blood system).
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=0.021ppm of the crustacea (<i>Daphnia magna</i>) (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=3.48(PHYSPROP Database, 2005)), since there was no rapidly degrading (BIOWIN), it was classified into Category 1.