GHS Classification

ID322 2-Chloro-1-(2,4-dichlorophenyl)vinyl diethyl phosphate; Chlorfenvinphos; CVP

CAS 470-90-6 Date Classified: Oct. 23, 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	—	—	—	Classified as non-flammable (HSDB (2006))
7	Flammable solids	Not applicable	—	—	—	Classified as "liquid" according to GHS definition
8	Self-reactive substances and mixtures	Not classified	—	—	—	No data available, though containing unsaturated bonds (olefin). Classified into Division 6.1 (UN#3018 Organophosphorous Pesticide, liquid, toxic (ICSC, 2004) (UN Recommendation on the Transport of Dangerous Goods).
9	Pyrophoric liquids	Not classified	—	—	—	Although classified as flammable, the substance does not catch fire easily (HSDB, 2006). Classified into Division 6.1 (UN#3018 Organophosphorous Pesticide, liquid, toxic (ICSC, 2004) (UN Recommendation on the Transport of Dangerous Goods).
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.
12	Substances and mixtures, which in contact with water, emit flammable gases	Not classified	—	—	—	Stable to water (water solubility: 145ppm (23degC), Merck (13th, 2001))
13	Oxidizing liquids	Not classified	—	—	—	No data available, though being organic compounds containing oxygen bound to the elements other than carbon and hydrogen. Classified into Division 6.1 (UN#3018 Organophosphorous Pesticide, liquid, toxic (ICSC, 2004) (UN Recommendation on the Transport of Dangerous Goods).
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	Not classified	—	—	—	The substance acts on iron and steel according to ICSC (2004). Classified into Division 6.1 (UN#3018 Organophosphorous Pesticide, liquid, toxic (ICSC, 2004) (UN Recommendation on the Transport of Dangerous Goods).

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 9.66mg/kg representing the lower of the two testing data, 10mg/kg (RTECS (2006)) and 9.66mg/kg (HSDB (2006)).
1	Acute toxicity (dermal)	Category 1	Skull and crossbones	Danger	Fatal in contact with skin	Based on the LD50 value of 26.4mg/kg calculated from the testing data of rat LD50 (dermal route) of 26.4mg/kg (RTECS (2006)), 31mg/kg (HSDB (2006)) and 108mg/kg (HSDB (2006)).
1	Acute toxicity (inhalation: gas)	Not applicable	—	—	—	Due to the fact that the substance is "liquid" according to the GHS definition and inhalation of its gas is not expected.
1	Acute toxicity (inhalation:	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 of dust/mist) value of 0.05mg/L (4 hours) (HSDB (2006)).
2	Skin corrosion / irritation	Classification not possible	—	—	—	No data available
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	Classification not possible	—	—	—	Classification not possible due to the insufficiency of data (no data available on in vivo mutagenicity/genotoxicity tests)
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)	Health hazard	Warning	May cause damage to organs (nervous system)	Based on the description in ICSC (J) (1998): "The substance adversely affects the nervous system; can induce spasm and respiratory failure. As a cholinesterase inhibitor, it may cause loss of consciousness, and in some instances, death. These effects may be delayed." Since the priority rating of the referenced study is 2, the substance is classified into Category 2 (nervous system).
9	Specific target organs/systemic toxicity following repeated exposure	Category 2 (adrenal)	Health hazard	Warning	May cause damage to organs through prolonged or repeated exposure (adrenal)	Based on the evidence from animal studies: "changes in the adrenal cortex of males, which included increased incidence and intensity of ceroid pigment and focal hypertrophy and increased severity of nodular hyperplasia" (JMPR 877 (1994)). The effects on experimental animals 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)	Classification not possible	-	-	-	Classification not possible due to lack of data
11	Hazardous to the aquatic environment (chronic)	Classification not possible	-	-	-	Classification not possible due to lack of data