

GHS Classification

ID297

O,O-Dimethyl S-2-[1-(N-methylcarbamoyl)ethylthio]ethyl phosphorothioate; Vamidotion

CAS 2275-23-2

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 "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 as flammable according to ICSC (2002). Classified into Division 6.1 (UN#2783 Organophosphorous Pesticide, solid, toxic (ICSC, 2002)) (UN Recommendation on the Transport of Dangerous Goods).
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	Not classified	—	—	—	Classified into Division 6.1 (UN#2783 Organophosphorous Pesticide, solid, toxic (ICSC, 2002)) (UN Recommendation on the Transport of Dangerous Goods).
11 Self-heating substances and mixtures	Not classified	—	—	—	Classified into Division 6.1 (UN#2783 Organophosphorous Pesticide, solid, toxic (ICSC, 2002)) (UN Recommendation on the Transport of Dangerous Goods).
12 Substances and mixtures, which in contact with water, emit flammable gases	Not classified	—	—	—	Stable to water (water solubility: 1*10 ⁻⁶ mmHg (20degC), SRC (2006))
13 Oxidizing liquids	Not applicable	—	—	—	Classified as "solid" according to GHS definition
14 Oxidizing solids	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#2783 Organophosphorous Pesticide, solid, toxic (ICSC, 2002)) (UN Recommendation on the Transport of Dangerous Goods).
15 Organic peroxides	Not applicable	—	—	—	Organic compounds containing no "-O-O-" structure
16 Corrosive to metals	Not classified	—	—	—	Classified into Division 6.1 (UN#2783 Organophosphorous Pesticide, solid, toxic (ICSC, 2002)) (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 3	Skull and crossbones	Danger	Toxic if swallowed	Based on the rat LD50 (oral route) value of 64mg/kg representing the lower of the two testing data, 64mg/kg (HSDB (2006)) and 105mg/kg (HSDB (2006)).
1 Acute toxicity (dermal)	Category 4	Exclamation mark	Warning	Harmful in contact with skin	Based on the rabbit LD50 (dermal route) value of 1,160mg/kg (RTECS (2006)).
1 Acute toxicity (inhalation: gas)	Not applicable	—	—	—	Due to the fact that the substance is "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 4	Exclamation mark	Warning	Harmful if inhaled	Based on the rat LC50 (inhalation of dust/mist) value of 1.730mg/L (4 hours) (RTECS (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	—	—	—	Based on the absence of data on in vivo tests and only slightly positive data on two in vitro 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 evidence from animal studies including "tremor and spasm" (RTECS (1998)), "adversely affects the nervous system; may induce spasm and respiratory failure; at high doses, death may occur" (ICSC (J) (2001)). The effects on experimental animals were observed at dosing levels within the guidance value ranges for Category 1. Since all referenced studies are assigned a priority rating of 2, the effects are classified into
9 Specific target organs/systemic toxicity following repeated exposure	Category 1 (nervous system)	Health hazard	Danger	Causes damage to organs through prolonged or repeated exposure (nervous system)	Based on the evidence from animal studies: "in several instances, gait disorder due to rigidity of the hind limbs was observed" (PESTICIDE RESIDUES IN FOOD - 1988). The effects on experimental animals were observed at dosing levels within the guidance value ranges for Category 1.
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