

## GHS Classification

**ID1366**

**CAS 21609-90-5**

### Physical Hazards

**O-4-Bromo-2,5-dichlorophenyl O-methyl phenylphosphorothioate**

Date Classified: Sep. 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	-	-	-	There are no chemical groups associated with explosive properties present in the molecules.
2 Flammable gases	Not applicable	-	-	-	Solid (GHS definition)
3 Flammable aerosols	Not applicable	-	-	-	Not aerosol products
4 Oxidizing gases	Not applicable	-	-	-	Solid (GHS definition)
5 Gases under pressure	Not applicable	-	-	-	Solid (GHS definition)
6 Flammable liquids	Not applicable	-	-	-	Solid (GHS definition)
7 Flammable solids	Classification not possible	-	-	-	No data available
8 Self-reactive substances and mixtures	Not applicable	-	-	-	There are no chemical groups associated with explosive or self-reactive properties present in the molecule.
9 Pyrophoric liquids	Not applicable	-	-	-	Solid (GHS definition)
10 Pyrophoric solids	Not classified	-	-	-	HSDB (2003) has a description that "it is stabilized at normal temperature", and it was thought that there was no spontaneous combustibility. Thus, it was defined as "out of Category".
11 Self-heating substances and mixtures	Classification not possible	-	-	-	Test methods applicable to solid (melting point <= 140degC) substances are not available.
12 Substances and mixtures, which in contact with water, emit flammable gases	Not classified	-	-	-	Stable to water (the water solubility is obtained)
13 Oxidizing liquids	Not applicable	-	-	-	Solid (GHS definition)
14 Oxidizing solids	Classification not possible	-	-	-	No data available
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 are not available.

### 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 = 31.1mg/kg obtained by statistically processing 8 data in JMPR (WHO Pesticide Residues Series 5, 1975) in the Priority 1 document, the substance was classified as Category 2.
1 Acute toxicity (dermal)	Category 3	Skull and crossbones	Danger	Toxic in contact with skin	It was set as Category 3 according to rat LD50 = 800mg/kg (JMPR (WHO Pesticide Residues Series 5, 1975) of Priority 1 document).
1 Acute toxicity (inhalation: gas)	Not applicable	-	-	-	Solid (GHS definition)
1 Acute toxicity (inhalation: vapour)	Not applicable	-	-	-	The vapor pressure of this product is very low (it is 0.0000031Pa at 20degC), and it was considered to be difficult to carry out vapor exposure, it was out of a classification.
1 Acute toxicity (inhalation: dust, mist)	Category 3	Skull and crossbones	Danger	Toxic if inhaled	It was set as Category 3 based on 0.9mg/kg/4H which is the lower value among the rat LC50 = 0.9 and 1.65mg/kg/4H of JMPR (WHO Pesticide Residues Series 5, 1975) in Priority 1 document.
2 Skin corrosion / irritation	Not classified	-	-	-	In the test of the rabbit of JMPR (WHO Pesticide Residues Series 5, 1975), since it did not indicate skin stimulative to be also drug substances and a tablet, it considered as the outside of Category.
3 Serious eye damage / eye irritation	Category 2B	-	Warning	Causes eye irritation	In the test of the rabbit, the eye irritations condition had disappeared in 72 hours after-exposure PDS (WHO/FAO, 1979). So it was set as 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)-	No data available
5 Germ cell mutagenicity	Not classified	-	-	-	In the dominant fatality test of the mouse of JMPR (WHO Pesticide Residues Series 5, 1975), it was negative, and it is classified as the out of the Category.
6 Carcinogenicity	Not classified	-	-	-	In the long-term feed-mix administration test of mice by JMPR (WHO Pesticide Residues Series 5, 1975), and of rats by PDS (WHO/FAO, 1979), the carcinogenic resulting from the this product was not acknowledged. Therefore, it was carried out the outside of category.

7	Toxic to reproduction	Category 1B	Health hazard	Danger	May damage fertility or the unborn child	In three-generation studies in rats of JMPR (WHO Pesticide Residues Series 5, 1975) of Priority 1 document, the survival rate of baby animals was significantly decreased at the dose (60ppm) which any specific toxicity was not observed in parent animals. So it was set as Category 1B.
8	Specific target organs/systemic toxicity following single exposure	Category 2 (nervous system)	Health hazard	Warning	May cause damage to organs (nervous system)	Since there is description that in HSDB (2003) and SITTIG (4th, 2002) of Priority 2 document, this product which is the organophosphorus insecticide has an inhibition of cholinesterase, and it affects the human nervous system, and it was considered as Category 2 (nervous systems).
9	Specific target organs/systemic toxicity following repeated exposure	Classification not possible	-	-	-	Although erythrocyte (or brain) cholinesterase inhibition was observed in rat repeated oral administration test with different dosing periods (for 90 days and for two years)(JMPR (WHO Pesticide Residues Series 5, 1975) and PDS (WHO/FAO, 1979) in Priority 1 document), since distinct toxic symptom resulting from the this product was not observed, and target organ was not specified either, it could not be classified.
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-hour LC50=0.0019mg/L of Crustacea (Pink shrimp) (ECETOC TR 91, and 2003).
11 Hazardous to the aquatic environment (chronic)	Category 1	Environment	Warning	Very toxic to aquatic life with long lasting effects	Classified into Category 1, since acute toxicity is Category 1, supposed not rapidly degrading (BIOWIN), and bioaccumulative (log Kow=6.31 (PHYSPROP Database, 2005)).