

## GHS Classification

**ID647**

**Fenamiphos**

**CAS 22224-92-6**

Date Classified: Jun. 20, 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	-	-	-	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	Classification not possible	-	-	-	No data available
9 Pyrophoric liquids	Not applicable	-	-	-	Solid (GHS definition)
10 Pyrophoric solids	Not classified	-	-	-	It was judged that it did not ignite spontaneously even if it contacts air from the description "it burns but it does not ignite easily" (NAEGG (J), (2001)).
11 Self-heating substances and mixtures	Classification not possible	-	-	-	No data available
12 Substances and mixtures, which in contact with water, emit flammable gases	Not classified	-	-	-	Since it was described as "In laboratory conditions and fenamiphos is stable at pH 5-7" (HSDB (2005)), it was judged that it was stable to the water.
13 Oxidizing liquids	Not applicable	-	-	-	Solid (GHS definition)
14 Oxidizing solids	Classification not possible	-	-	-	No data available
15 Organic peroxides	Not applicable	-	-	-	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 2	Skull and crossbones	Danger	Fatal if swallowed	For a classification, rat LD50 value (JMPR 929 (1997)) of eight pieces are corresponded. And it was set as Category 2 based on calculated values 5.23 mg/kg by statistical calculations.
1 Acute toxicity (dermal)	Category 2	Skull and crossbones	Danger	Fatal in contact with skin	For a classification, five rat LD50 value (JMPR 929 (1997), JMPR 300 (1974)) and two rabbit LD50 value (JMPR 929 (1997)) were corresponded. And 72mg/kg and 179mg/kg were obtained by statistical calculations, respectively. It was set as Category 2 based on 72mg/kg of the lower rat value.
1 Acute toxicity (inhalation: gas)	Not applicable	-	-	-	Solid (GHS definition)
1 Acute toxicity (inhalation: vapour)	Classification not possible	-	-	-	No data available
1 Acute toxicity (inhalation: dust, mist)	Category 2	Skull and crossbones	Danger	Fatal if inhaled	Category 2 because of "SPECIES: Rat; ENDPOINT: LC50 ; VALUE: 0.091-0.10 mg/L (4 h)" (JMPR 929, 1997)
2 Skin corrosion / irritation	Category 3	-	Warning	Causes mild skin irritation	From evaluation results of several rabbit skin irritation tests that "not a primary irritant" (JMPR 929 (1997)), "minimal irritation" (JMPR 929 (1997)) or "only slightly irritant" (PATTY (5th, 2001)), it was judged to have mild irritativeness and was classified as Category 3.
3 Serious eye damage / eye irritation	Category 2A-2B	Exclamation mark	Warning	Causes serious eye irritation	In the eye irritation test using a rabbit, range is seen in decision, including "mild irritation" (PATTY (5th, 2001)), "recovered within ten days in irritation of moderate" (JMPR 929 (1997)), "damage is not disappeared by 21 days after eye drop" (ACGIH (2001)), and "physical irritation rather than physiological irritation". However, since the description about the eye on ICSC (1998) was not referred to stimulativeness only the contracted pupil by inhalation, it was hard to consider that it had irreversible stimulativeness at least, and it was judged as mild to moderate stimulativeness. So it was taken as Category 2A-2B.
4 Respiratory/skin sensitization	Respiratory sensitization: Classification not possible; Skin sensitization: Not possible	(Respiratory sensitization)-; (Skin sensitization)-	(Respiratory sensitization)-; (Skin sensitization)-	(Respiratory sensitization)-; (Skin sensitization)-	[respiratory sensitization]: No data [Skin sensitization]: It has been estimated in a skin sensitivity test using a guinea pigs(Maximization test) that erythema was identified in part but it was below the standard as a skin reactions and therefore no sensitization seems to exist (JMPR 929 (1997)). Furthermore, since another information source states that no sensitization was identified(PATTY (5th, 2001), IUCALID (2000)), it was put outside of the Category.
5 Germ cell mutagenicity	Not classified	-	-	-	Based on the negative results (JMPR 300 (1974), PATTY (5th, 2001)) of the dominant lethality tests (in vivo over generation mutagenicity test) using the mouse, we classified it as Out Of Category.

6	Carcinogenicity	Not classified	-	-	-	Based on what is classified into A4 according to ACGIH (1996), it carried out the outside of category.
7	Toxic to reproduction	Category 2	Health hazard	Warning	Suspected of damaging fertility or the unborn child	It is not observed bad effect on reproductive potential and fetal development and teratogenicity in rat two-generation test or each administration test during pre-mating to pregnant and lacting period or organogenetic period (PATTY (5th, 2001), JMPR 929 (1997)). However, since it is observed of skeletal malformation (sternal fusion) in rabbit organogenetic period administration test with dose causing general toxicity to maternal animals (ACGIH (2001), PATTY (5th, 2001)), it is classified into Category 2.
8	Specific target organs/systemic toxicity following single exposure	Category 1 (nervous system)	Health hazard	Danger	Cause damage to organs (nervous system)	Cholinergic symptoms such as contraction of muscles, spasm, impaired coordination, and laborious breathing have been reported by oral administration (dosage of a few mg/kg weight) to rats causing inhibition of the cholinesterase activities (JMPR 929 (1997)). It was set as Category 1 (nervous systems) with reference to the guidance value. In addition, there is no direct information regarding humans and only report was the epidemiologic survey about organic phosphorus poisoning (HSDB (2005)).
9	Specific target organs/systemic toxicity following repeated exposure	Category 1 (nervous system)	Health hazard	Danger	Causes damage to organs (nervous system) through prolonged or repeated exposure	Cholinergic syndrome (spasm of a muscular etc.) is observed in a rat and a dog by dosage more than several mg/kg weight, and simultaneously the remarkable decrease of red corpuscle cholinesterase (about 50% of inhibition rate) is accepted (JMPR 929 (1997), PATTY (5th, 2001)). They are the symptoms caused by overstimulation of the nerve fiber receptor with cholinesterase inhibition that is characteristic of an organophosphorus agent, and it was classified to as Category 1 (nervous systems), considering a guidance value.
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=0.01-0.017mg/L of fishes (Bluegill) (PDS, 1994).
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 was Category 1, supposed not rapidly degrading (BIOWIN), though supposed less bioaccumulative (log Kow=3.23(PHYSROP Database, 2005)).