

GHS Classification

ID154

Fenitrothion

CAS 122-14-5

Date Classified: Jul. 24, 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	Classification not possible	-	-	-	Insufficient data available
2 Flammable gases	Not applicable	-	-	-	Liquid (GHS definition)
3 Flammable aerosols	Not applicable	-	-	-	Not aerosol products
4 Oxidizing gases	Not applicable	-	-	-	Liquid (GHS definition)
5 Gases under pressure	Not applicable	-	-	-	Liquid (GHS definition)
6 Flammable liquids	Not classified	-	-	-	Flash point: >93degC
7 Flammable solids	Not applicable	-	-	-	Liquid (GHS definition)
8 Self-reactive substances and mixtures	Classification not possible	-	-	-	No data available
9 Pyrophoric liquids	Not classified	-	-	-	The flash points is 157 degC (ICSC (J) (1996)), and even if it contacts the normal temperature air, it does not ignite.
10 Pyrophoric solids	Not applicable	-	-	-	Liquid (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	Classification not possible	-	-	-	Insufficient data available
13 Oxidizing liquids	Classification not possible	-	-	-	Insufficient data available
14 Oxidizing solids	Not applicable	-	-	-	Liquid (GHS definition)
15 Organic peroxides	Not applicable	-	-	-	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 4	Exclamation mark	Warning	Harmful if swallowed	Calculated based on rat LD50 value: 330mg/kg, 415mg/kg, 1700mg/kg, and 660mg/kg (all are Agricultural-Chemicals abstracts). Since the calculation values were lower than these lowest values, 330mg/kg was adopted and was set as Category 4.
1 Acute toxicity (dermal)	Category 4	Exclamation mark	Warning	Harmful in contact with skin	Based on rat LD50 value: 1260mg/kg and 2700mg/kg (all are Agricultural-Chemicals abstracts), the value of the lower one was adopted and it was set as Category 4.
1 Acute toxicity (inhalation: gas)	Not applicable	-	-	-	Liquid (GHS definition)
1 Acute toxicity (inhalation: vapour)	Classification not possible	-	-	-	No data available
1 Acute toxicity (inhalation: dust, mist)	Classification not possible	-	-	-	Rat LC50 (4 hours) value was >2.210mg/L (Agricultural-Chemicals abstracts). But Category could not be specified, it cannot classify since data is insufficient.
2 Skin corrosion / irritation	Not classified	-	-	-	Since no irritant effect was seen in the test on rabbits (Agricultural-Chemicals abstracts), it was classified as out of Category.
3 Serious eye damage / eye irritation	Not classified	-	-	-	Since change which suited to acceptance criteria of irritation by the test using a rabbit was not admitted (Agricultural-Chemicals abstracts), it was set as the outside of Category.
4 Respiratory/skin sensitization	respiratory sensitization: Not classified; Skin sensitization: Not classified	-	-	-	Respiratory : Classified as out of category because the systemic exposure test using guinea pigs judged that this had no allergic asthma-inducing effect (agrochemical abstract). Skin: Classified as out of category because the Landsteiner & Draize method test using guinea pigs judged skin sensitization as negative (agrochemical abstract).
5 Germ cell mutagenicity	Not classified	-	-	-	The substance was regarded as outside the categories. Because there are negative results from dominant lethal tests using rats and mice, and there are negative results from the chromosome aberration tests using mammalian bone-marrow cells, which are in vivo mutagenicity tests using somatic cells, and micronucleus tests (both from Agricultural-Chemicals abstracts).
6 Carcinogenicity	Not classified	-	-	-	Since it was classified into Group E according to EPA, it was set as the outside of Category.
7 Toxic to reproduction	Not classified	-	-	-	There is no bad effect to the reproductive function, the reproductive potential, and the development of neonatal in the three generation breeding test of rats, and in the administration test during pregnancy using rat and mouse (all are from Agricultural-Chemicals abstracts). So it was considered as on the outside of Category.

8	Specific target organs/systemic toxicity following single exposure	Category 1 (nervous system)	Health hazard	Danger	Cause damage to organs (nervous system)	By oral, transdermal and inhalation exposures tests using rat and dog, the symptoms which indicates the effects on the nervous systems, and the inhibitions of plasma, blood cells and brain cholinesterase activity were observed in the dosage range of the guidance value of Category 1 (all were Agricultural-Chemical abstracts). So it was classified into Category 1(nervous systems).
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	In the six-month feeding oral administration tests using rat and rabbit, and in inhalation exposure test using rat and mouse, since the inhibition of the activity of plasma, blood cell, and brains cholinesterase was observed by exposure of the guidance value range of Category 1 (all are Agricultural Chemicals abstracts), it was classified into Category 1 (nervous systems).
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=0.0015mg/L of Crustacea (Northern Brown shrimp) (EHC133, 1992).
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, not rapidly degrading (BOD: 0% (existing chemical safety inspections data)), though less bioaccumulative (BCF=101.7 (existing chemical safety inspections data)).