GHS Classification

ID1139 fosthiazate

CAS 98886-44-3 Date Classified: Feb. 20, 2007 (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	–	–	–	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	Classification not possible	–	–	–	No data available
7	Flammable solids	Not applicable	–	–	–	Liquid (GHS definition)
8	Self-reactive substances and mixtures	Classification not possible	–	–	–	Classification not possible due to lack of data, though the substance contains N–O bonds as chemical groups with explosive or self-reactive properties present
9	Pyrophoric liquids	Classification not possible	–	–	–	No data available
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	Not classified	–	–	–	Based on the water solubility measurement was performed (Agricultural Chemical Registration Data), it is judged that it is stable in the water.
13	Oxidizing liquids	Classification not possible	–	–	–	No data available
14	Oxidizing solids	Not applicable	–	–	–	Liquid (GHS definition)
15	Organic peroxides	Not applicable	–	–	–	Organic compounds 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 3	Skull and crossbones	Danger	Toxic if swallowed	Based on the rat oral LD50: 97mg/kg (Agricultural Chemical Registration Data), the substance was classified as Category 3.
1	Acute toxicity (dermal)	Category 3	Skull and crossbones	Danger	Toxic in contact with skin	It was set as Category 3 based on rat dermal LD50 = 861mg/kg (Agricultural Chemical Registration Data).
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)	Category 3	Skull and crossbones	Danger	Toxic if inhaled	It was set as category 3 based on 4-hour exposure LC50 = 0.558mg/L (Agricultural Chemical Registration Data) of rat inhalation (mist).
2	Skin corrosion / irritation	Not classified	–	–	–	Based on the statement (Agricultural Chemical Registration Data) by very slight erythema only having been seen in the rabbit, it carried out the outside of Category.
3	Serious eye damage / eye irritation	Category 2B	–	Warning	Causes eye irritation	Although conjunctival vascular hyperaemia, chemosis of conjunctiva, and discharges in eye were observed in the rabbit (Agricultural Chemical Registration Data), it recovered after seven days. Therefore, it was classified into Category 2B.
4	Respiratory/skin sensitization	Respiratory sensitization: Classification not possible; Skin sensitization: Category1	(Respiratory sensitization)–; (Skin sensitization)Exclamation mark	(Respiratory sensitization)–; (Skin sensitization)Warning	(Respiratory sensitization)–; (Skin sensitization)May cause allergic skin reaction	Respiratory sensitization: no data available. Skin sensitization: based on the statement (Agricultural Chemical Registration Data) that skin sensitization was seen in the guinea pig, it was referred to as Category 1.
5	Germ cell mutagenicity	Not classified	–	–	–	There is no result of human administration cost epidemiology, an administration cost mutagenicity test, and a productive cell in vivo mutagenicity test. And the statement (Agricultural Chemical Registration Data) with negativity by the somatic cell in vivo mutagenicity test (micronucleus test which uses mouse bone marrow). So it carried out the outside of Category.
6	Carcinogenicity	Not classified	–	–	–	Based on the description that carcinogenicity was not observed in the mouse and the rat (Agricultural Chemical Registration Data), it was out the Category.

7	Toxic to reproduction	Category 1	–	–	–	In the two-generation reduction study, the statement that the survival rate of F1 baby and reduction of weight were seen with the dose (30ppm) that toxicity was not observed for parental animals, and in the teratogenicity test of a rabbit, although a fetas did not have teratogenicity, the frequency of appearance of the slight fall of fetus weight and small fetas increased slightly by the dose which does not have toxicity in parental animals (Agricultural Chemical Registration Data). So it was set as Category 1.)
8	Specific target organs/systemic toxicity following single exposure	Category 1 (systemic toxicity, nervous system)	Health hazard	Danger	Cause damage to organs (systemic toxicity, nervous system)	It was considered as Category 1 (generalized, nervous system) based on the description that lethargy, diminished spontaneous activity, proneness, prone position, kyphosis position, muscle tremor, irregular breathing, piloerection, ataxia, grooming-disappeared, colored eye secretions, colored contamination in nasal meatus part, tabefaction, salivation, breathing rate slowed, limb palsy, contamination within the oral cavity, bleed nose, eye haemorrhage, and dacryorrhea were observed with oral administration, dermal administration, and inhalation in a mouse and a rat at the dose within the range of guidance value in Category 1 (41-128mg/kg, 312-786mg/kg, 0.532-0.9mg/L).
9	Specific target organs/systemic toxicity following repeated exposure	Category 1 (nervous system, adrenal)	Health hazard	Danger	Causes damage to organs (nervous system, adrenal) through prolonged or repeated exposure	There are the description that in a rat, with the dose (30.9 mg/kg) within the range of guidance value in Category 2, hyper cholinesterase inhibition and a neurological disorders were occured, and the description that in a dog, with the dose (5.4 mg/kg/day) within the range of guidance value in Category 1, pathological change of adrenal glant, inhibition of erythrocyte and brain cholinesterase and decrease of erythrocyte numbers were observed (Agricultural Chemical Registration Data). It was classified into Category 1 (a nervous systems, the adrenal glant) based on these informations.
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)	Not classified	–	–	–	It carried out the outside of Category from ErC50>100mg/L of algae (Green algae) (Agricultural Chemical Registration Data, 2004) .
11	Hazardous to the aquatic environment (chronic)	Not classified	–	–	–	Since not water-insoluble (aqueous solubility = 9850mg/L(PHYSPROP Database, 2005)) and acute toxicity is low.