GHS Classification

ID620 Methomyl

CAS 16752-77-5 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	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	Classification not possible	–	–	–	No data available
11	Self-heating substances and mixtures	Classification not possible	–	–	–	Test methods applicable to liquid or solid substances at 140degC are not available.
12	Substances and mixtures, which in contact with water, emit flammable gases	Not applicable	–	–	–	The chemical structure of the substance does not contain metals or metaloids(B, Si, P, Ge, As, Se, Sn, Sb, Te, Bi, Po, At).
13	Oxidizing liquids	Not applicable	–	–	–	Solid (GHS definition)
14	Oxidizing solids	Not applicable	–	–	–	Organic compounds containing oxygen (but not chlorine and fluorine) and the oxygen is chemically bonded only to carbon and hydrogen (but not to other elements).
15	Organic peroxides	Not applicable	–	–	–	Containing no -O-O- structure
16	Corrosive to metals	Classification not possible	–	–	–	Liquid at a test temperature, 55degC. 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 3	Skull and crossbones	Danger	Toxic if swallowed	SPECIES: Rat (male) ENDPOINT: LD50 VALUE: 51 mg/kg REFERENCE SOURCE: Agricultural Chemicals abstracts
1	Acute toxicity (dermal)	Category 4	Exclamation mark	Warning	Harmful in contact with skin	It was set as Category 4 based on rat (female) LD50 value: 1050mg/kg (Agricultural Chemicals abstracts).
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	Based on 25% wettable powder rat (male) LC50 (1 hour) value: 1.99mg/L (4-hour equivalent 0.498mg/L), and 35.56% liquid medicine rat (female) LC50 (1 hour) value: 0.61mg/L (4-hour equivalent 0.15mg/L) (all are agricultural-chemicals abstracts), the lower value was adopted and it was set as Category 2.
2	Skin corrosion / irritation	Not classified	–	–	–	Since it was judged to have no stimulativeness in the skin irritation test on rabbits (Agricultural-Chemicals abstracts), it was classified as out of Category.
3	Serious eye damage / eye irritation	Not classified	–	–	–	Since change of the eye which was adapted to criteria for assessments of irritation in eye irritation tests using rabbits was not admitted (Agricultural-Chemicals abstracts), it was set as the outside of Category.
4	Respiratory/skin sensitization	Respiratory sensitization: Classification not possible; Skin sensitization: Not classified	(Respiratory sensitization)-; (Skin sensitization)-	(Respiratory sensitization)-; (Skin sensitization)-	(Respiratory sensitization)-; (Skin sensitization)-	Respiratory sensitization: No data Skin sensitization: Since the rate of a positivity in the Buehler method test using the guinea pigs was 0% (Agricultural Chemicals abstracts), it was put outside of the Category.
5	Germ cell mutagenicity	Not classified	–	–	–	Since we found the negative results by the micronucleus examination which used the mouse marrow cells, and by the chromosomal aberration test which used the rat marrow cells, which were the in vivo mutagenicity tests using the somatic cells (Agrichemical Abstracts), we classified it as Out Of Category.
6	Carcinogenicity	Not classified	–	–	–	Since it was classified into A4 (ACGIH 7th, 2001) according to ACGIH, it carried out the outside of Category.

7	Toxic to reproduction	Not classified	–	–	–	Since there is no reproductive toxicity in the dose causing general toxicity to parent animals in teratogenicity test of rat and rabbit, and in the reproduction study on rat (Agricultural-Chemicals abstracts), it was considered as on the outside of Categry.
8	Specific target organs/systemic toxicity following single exposure	Category 1 (nervous system)	Health hazard	Danger	Cause damage to organs (nervous system)	In the oral administration and inhalation exposure tests using rats, symptoms suggesting the influences on the nerve systems such as clonic convulsion, shivering, salivation etc. were observed with the given dosage of guidance value range of Category 1 (Agricultural chemical abstracts). So it was set as Category1 (nerve systems).
9	Specific target organs/systemic toxicity following repeated exposure	Category 2 (nervous system, blood)	Health hazard	Warning	May cause damage to organs (nervous system, blood) through prolonged or repeated	It was classified to as category 2 (nervous systems, blood) according to the symptoms which shows the effects on nervous systems such as decreased brain cholinesterase activity, tremor, aggressive behavior, and hyperreactivity, and the effects on blood systems such as decreased haemoglobin, reduction of red cell count, increased reticulocyte counts, and erythroid hyperplasia in marrow in the repeated oral test using rats were acknowledged with the given dose of the guidance value range of Category 2 (all by agricultural-chemicals abstracts).
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 48-hour EC50=0.009mg/L of Crustacea (Daphnia magna) (EHC64, 1996) .
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=0.6(PHYSPROP Database, 2005)).