

GHS Classification

ID935

bromacil

CAS 314-40-9

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	Not classified	-	-	-	Non-combustible (ICSC (J) (2003))
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	-	-	-	Non-combustible (ICSC (J), 2003)
11 Self-heating substances and mixtures	Not classified	-	-	-	Not combustible (ICSC(J) (2003))
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 metalloids(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 4	Exclamation mark	Warning	Harmful if swallowed	SPECIES: Rat (female) ENDPOINT: LD50 VALUE: 691 mg/kg REFERENCE SOURCE: Agricultural Chemicals abstracts
1 Acute toxicity (dermal)	Not classified	-	-	-	It was set as the outside of Category. Since rat LD50 value is >2000mg/kg and death is not observed at 2000mg/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)	Classification not possible	-	-	-	Rat LC50 (4 hours) value is >4.2mg/L (Agricultural-Chemicals abstracts). But the category could not be specified only by this data, it cannot be classified since data is insufficient.
2 Skin corrosion / irritation	Category 3	-	Warning	Causes mild skin irritation	In the skin irritation test using a guinea pigs, it was the effects of exposure, mild irritation was seen for 24 hours (Agricultural -Chemicals abstracts). So it was set as Category 3.
3 Serious eye damage / eye irritation	Category 2B	-	Warning	Causes eye irritation	The moderate irritant property was seen in the ocular irritation tests using the rabbits. However, the symptom disappeared after 7 days after administration (Agrichemical-Chemicals abstracts), therefore we classified it as Category 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: Since positive rate was 0% in the Buehler method test using the guinea pigs (Agrichemical Abstracts), we classified it to be Out Of Category.
5 Germ cell mutagenicity	Not classified	-	-	-	There is a negative result in the micronucleus test which used the mouse marrow, which is an in vivo mutagenicity test using a somatic (Agricultural-Chemicals abstracts). So it considered as the outside of Category.

6	Carcinogenicity	Category 2	Health hazard	Warning	Suspected of causing cancer (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)	Since it was classified into A3 (ACGIH 7th, 2001) in ACGIH, it was considered as Category 2.
7	Toxic to reproduction	Not classified	-	-	-	In the teratogenicity study using rats and rabbits, reproductive toxicity was not observed at the dose in which general toxicity is observed in parent animals (Agricultural-Chemicals abstracts). Therefore, it was out of the Category. Moreover, although it is an examination at the dose in which general toxicity is not observed in a parental animals, the effects on fertility is not observed in the reproduction study using a rat (Agricultural-Chemicals abstracts).
8	Specific target organs/systemic toxicity following single exposure	Category 3 (narcotic effects)	Exclamation mark	Warning	May cause respiratory irritation or may cause drowsiness and dizziness (narcotic effects)	Because of confirmation of sedation and comas in an oral administration study using rats, and confirmation of immediate lethargy after in a inhalation exposure test (Agricultural-Chemical abstracts), it was judged as Category 3 (anesthetic actions).
9	Specific target organs/systemic toxicity following repeated exposure	Not classified	-	-	-	In the repeated oral administration test using rats and dogs, toxicity was not observed with the dose of the guidance value range of Category 2, and since the significant toxicity which indicates the classification also with the dose exceeding the guidance value of Category 2 in the rats (feeding administration for 90 days) was not observed (Agrichemical Abstracts), it was judged to be Out Of Category.
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 72-hour EbC50=0.00844mg/L of algae (Green algae) (Agricultural Chemical Registration Data, 2005).
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=2.11 (PHYSPROP Database, 2005)).