

GHS Classification

ID133

Diuron

CAS 330-54-1

Date Classified: Mar. 15, 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	-	-	-	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 (HSDB, 2005)
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 (HSDB, 2005)
11 Self-heating substances and mixtures	Not classified	-	-	-	Not combustible. (HSDB (2005))
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 and chlorine and these elements are chemically bonded only to carbon (but not to other elements).
15 Organic peroxides	Not applicable	-	-	-	Organic compounds containing no -O-O- structure
16 Corrosive to metals	Classification not possible	-	-	-	Although HSDB (2005) has the description "it has no corrosiveness," the test suitable for a solids material is not established.

Health Hazards

Hazard class	Classification	symbol	signal word	hazard statement	Rational for the classification
1 Acute toxicity (oral)	Category 5	-	Warning	May be harmful if swallowed	Category 5 based on SPECIES: Rat(male); ENDPOINT: LD50; VALUE: 4990mg/kg; REFERENCE SOURCE: Agricultural Chemicals Registration Data(1996)
1 Acute toxicity (dermal)	Not classified	-	-	-	Rat LD50 >2000mg/kg of Agricultural Chemical Registration Data (1996) corresponds to Category 5 or outside of Category. But rat LD50 >5g/kg of RTECS (2004) corresponded to outside of Category, it was set as the outside of
1 Acute toxicity (inhalation: gas)	Not applicable	-	-	-	Solid (GHS definition)
1 Acute toxicity (inhalation: vapour)	Not applicable	-	-	-	This product has very low vapor pressure (less than 0.00115mPa at 25degC), and since vapor exposure was considered to be difficult, it was out of classification.
1 Acute toxicity (inhalation: dust, mist)	Not classified	-	-	-	According to Agricultural Chemical Registration Data (1996) of the rat LC50 >5.0mg/L, it was set as the outside of Category.
2 Skin corrosion / irritation	Category 3	-	Warning	Causes mild skin irritation	Agricultural Chemical Registration Data (1996) Since slight erythema was seen on the healthy skin of three among ten in the primary skin irritation test on guinea pigs, it was classified as Category 3. ACGIH (7th, 2001) and ACGIH-TLV (2005) report that there are skin irritations.
3 Serious eye damage / eye irritation	Category 2B	-	Warning	Causes eye irritation	Although very slight redness, swelling, and a secretion were acknowledged in the conjunctiva by the eye primary irritation examination of the rabbit (Agricultural Chemical Registration Data (1996)), symptom was recovered by the 4th day of application. So it was set as Category 2B. In addition, it is supposed that there is eye irritation (ACGIH (7th, 2001) and ACGIH-TLV (2005)).
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: Classified as out of category because the skin sensitization test using guinea pigs found no skin sensitization in Agricultural Chemical Registration Data (1996).
5 Germ cell mutagenicity	Not classified	-	-	-	The substance was regarded as outside the categories because of the negative result of the in vivo mutagenicity test using somatic cells (the chromosome aberration test in bone-marrow cells) in Agricultural Chemical Registration Data (1996).
6 Carcinogenicity	Not classified	-	-	-	In rat and mouse carcinogenic examination in Agricultural Chemical Registration Data (1996), the neoplastic lesions relevant to this substance was not observed. So it was set as the outside of Category. In addition, it is classified into A4 (corresponding to out of Category) according to ACGIH-TLV (2005).

7	Toxic to reproduction	Not classified	-	-	-	In the three-generation reproductive toxicity test of the rat, and teratogenicity test of rat and rabbit (Agricultural Chemical Registration Data (1996)), there was no obvious effect involved with the material. So it was considered as on the outside of Category.
8	Specific target organs/systemic toxicity following single exposure	Category 3 (respiratory tract irritation)	Exclamation mark	Warning	may cause respiratory irritation or may cause drowsiness and dizziness (respiratory tract irritation)	Due to the descriptions that the red secreted material was observed in nose or mouth in the acute inhalation toxicity study in rat in Agricultural Chemical Registration Data (1996), and that this product had weak irritation to the skin and eye. So it was classified into Category 3 (respiratory irritant). In addition, it has respiratory irritant in ACGIH (7th, 2001) and ACGIH-TLV (2005).
9	Specific target organs/systemic toxicity following repeated exposure	Category 2 (blood)	Health hazard	Warning	May cause damage to organs (blood) through prolonged or repeated exposure	The effects on the blood was observed in the repeated exposure test (feeding administration) in the dogs and rats of Agricultural Chemical Registration Data (2005) (especially reduction of red corpuscle parameters, such as a red blood cells and hemoglobin concentration). It was classified into Category 2 (blood) due to comparison with the dosage in which toxicity appeared and the guidance value. (Although other effects on the kidney, liver, etc. were also observed, it was not considered serious effect and they were not included in target organs.)
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=0.013mg/L of algae (Green algae) (Agricultural Chemical Registration Data, 2004).
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=14 (existing chemical safety inspections data)).