

## GHS Classification

**ID857**

**D.D.T.**

**CAS 50-29-3**

Date Classified: Jun. 20, 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	-	-	-	Although there are information that it is combustible or that it is incombustible or flame proofs (ICSC (J) (2004)) and (HSDB (2006)), there is no data with defined test method.
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 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 chlorine (but not oxygen and fluorine) and the chlorine 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	-	-	-	Although there is information that it has some corrosiveness to iron or aluminum (HSDB (2006)), test methods suitable for a solids material are not established.

**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 values: 250mg/kg (ACGIH 7th, 2001, PATTY 4th, 1994), 113mg (MOE Risk Assessment the 1st volume, 2002), 240, 280, 420, 940 and 1400mg/kg (PATTY 4th, 1994), 500 - 2500 mg/kg and 113 - 450 mg/kg (EHC 9, 1979) 300, 800, 113, 355.2, 194.5, and 437.8mg/kg (ATSDR, 2002). Since the calculated values was 313mg/kg, it was set as Category 4.
1 Acute toxicity (dermal)	Category 3	Skull and crossbones	Danger	Toxic in contact with skin	Calculation was applied by animal classification. Based on rat LD50 values: 2500mg/kg (ACGIH 7th, 2001, MOE Risk Assessment the 1st volume, 2002), 250 - 3000 mg/kg (EHC 9, 1979), 2500 - 3000 mg/kg (ATSDR, 2002), rabbit LD50 values: 300 - 2820 mg/kg (EHC 9, 1979), and 300mg/kg (ATSDR, 2002). The calculated value of rat was 1602mg/kg. And the rabbit one was lower than the lowest value ,the lowest value of 300mg/kg was adopted. Based on the lower toxic value of a rabbit, it was set as Category 3.
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	-	-	-	No data available
2 Skin corrosion / irritation	Category 2	Exclamation mark	Warning	Causes skin irritation	There is description that irritation was not admitted by a human dermal exposure tests (EHC 9 (1979)). But from description that the slight or moderate skin irritation was suggested in the test using the rabbit (PATTY (4th, 1994)), it was set as Category 2.
3 Serious eye damage / eye irritation	Category 2B	-	Warning	Causes eye irritation	Based on the description that in the part of in evidence of exposure in humans, the mild irritation which is considered to be by the contact directly to the eyes was acknowledged (ATSDR (2002)), it was set as Category 2B.
4 Respiratory/skin sensitization	respiratory sensitization: Classification not possible; Skin sensitization: Classification not possible	-	-	-	No data available

5	Germ cell mutagenicity	Category 1B	Health hazard	Danger	May cause genetic defects (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)	There were results as positive (ATSDR, 2002) or weakly positive (IARC 53, 1991) with the dominant lethal test on mice which is an in vivo generation mutagenicity test using germ cells. So it was classified as Category 1B.
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)	It was classified into group 2B (ARC 53, 1991) in IARC, A3 (ACGIH 7th, 2001) in ACGIH, B-2 (IRIS, 2006) in EPA, R (NTP RoC 11th, 2005) in NTP, category 3 (EU-Annex 1, 2006) in EU, and 2B (industrial hygiene academic society recommendation, 2005) in Japan Assoc. of Industrial Health. So it was considered as Category 2.
7	Toxic to reproduction	Category 2	Health hazard	Warning	Suspected of damaging fertility or the unborn child	It was classified into Category 2 based on the description that it is observed of clear reproductive toxicity as reduction of male/female reproductive potential and increase miscarriage and preterm delivery in rat, mouse and rabbit oral administration test (IARC 53 (1991), ATSDR (2002), PATTY (4th, 1994), and EHC 9 (1979)).
8	Specific target organs/systemic toxicity following single exposure	Category 1 (nervous system, liver)	Health hazard	Danger	Cause damage to organs (nervous system, liver)	It was set as Category 1 (a nervous systems, liver). Based on the descriptions that the effects on the liver and nervous systems in the single-dose oral study used the rat and monkey at the doses of guidance value range of category 1 (ATSDR (2002)), and description that the symptom indicating nervous systems damage as acute effects on humans (MOE Risk Assessment vol. 1(2002), ACGIH (7th, 2001), EHC 9 (1979), IARC 53 (1991), and NTP TR131 (1978)) were acknowledged, and from description that the target organ in the humans after acute exposure is a nervous systems of ATSDR (2002).
9	Specific target organs/systemic toxicity following repeated exposure	Category 1 (liver, nervous system)	Health hazard	Danger	Causes damage to organs (liver, nervous system) through prolonged or repeated	Based on the description that in the repeated oral administration tests using the rat, the effects on the liver were observed with dosage in the Category 1 guidance value range (MOE Risk Assessment the 1st volume (2002), IRIS (2006), ATSDR (2002), PATTY (4th, 1994), ACGIH (7th, 2001), EHC 9 (1979)), and the description that in the repeated oral administrations test using the rat, the effects on the nervous systems were observed with the dosage a little exceeding the Category 1 guidance value range (NTP TR131 (1978), ATSDR (2002)), it was classified into Category 1 (liver, nervous system).
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 two days EC50=0.36microg/L of Crustacea (Daphnia magna), and others (MOE Risk Assessment No.1, 2002).
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 is Category 1, not rapidly degrading (BOD: 0% (existing chemical substances safety inspections data)), and bioaccumulative (BCF=25900 (existing chemical substances safety inspections data)).