GHS Classification

ID777   disul

CAS 136-78-7

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	Not classified	–	–	–	Non-combustible substance
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
11	Self-heating substances and mixtures	Not classified	–	–	–	Not combustible
12	Substances and mixtures, which in contact with water, emit flammable gases	Not classified	–	–	–	Not reacts vigrously with water. The water solubility is obtained.
13	Oxidizing liquids	Not applicable	–	–	–	Solid (GHS definition)
14	Oxidizing solids	Not classified	–	–	–	Not Classified though containing oxygen bonded to sulfur (not Class: 5.1)
15	Organic peroxides	Not applicable	–	–	–	Containing no -0-0- structure
16	Corrosive to metals	Classification not possible	–	–	–	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	Since there were values of 730 mg/kg and 1500 mg/kg (ACGIH (2001)) as rat LD50 value, it was set as Category 4.
1	Acute toxicity (dermal)	Classification not possible	–	–	–	There is no dermal absorptions acute toxicity data, and it cannot be classified.
1	Acute toxicity (inhalation: gas)	Not applicable	–	–	–	Solid (GHS definition)
1	Acute toxicity (inhalation: vapour)	Classification not possible	–	–	–	There is no data, and it cannot be classified. From oral toxicities data, it is not lethal below the saturated vapor pressure at normal temperature.
1	Acute toxicity (inhalation: dust, mist)	Classification not possible	–	–	–	Classification not possible due to lack of data
2	Skin corrosion / irritation	Category 2	Exclamation mark	Warning	Causes skin irritation	Although there is a report that 5% or more of aqueous solutions caused the necrosis on the skin of the rabbit(ACGIH (2001)), irritation is taken in the ICSC card and the EU risk phrase. It is thought that the solution with 5% or less concentration and solid powder causes only irritation on skin contacts. It was classified as Category 2.
3	Serious eye damage / eye irritation	Category 2A	Exclamation mark	Warning	Causes serious eye irritation	There is a report that an irritation is started in the eye of rabbit (ACGIH (2001). Although the original text is unknown, it is indicated that in the rabbit the critical damage was caused by the aqueous solutions 5%. However, it was set as "Category 2A", since R41 was taken in the EU risks assessment phrases.
4	Respiratory/skin sensitization	Respiratory sensitization: Classification not possible; Skin sensitization: Classification not possible	(Respiratory sensitization)–; (Skin sensitization)–	(Respiratory sensitization)–; (Skin sensitization)–	(Respiratory sensitization)–; (Skin sensitization)–	There is no information on both respiratory sensitization and skin sensitization, and they cannot be classified.
5	Germ cell mutagenicity	Classification not possible	–	–	–	There were no in vivo test results, therefore we could not classify it. Likewise, for In vitro tests, there was only a report that the Ames test was carried out (HSDB 82005). The series of Chlorophenoxy herbicides including this substance may contain extremely small quantities of polychlorodibenzo dioxin as the impurities in manufacturing processes, and as a degradation products after production of the products. It is confirmed in the test that these are strong mutagenic substances. It is also suspected as mutagens for human (DHP (13th 2002)).
6	Carcinogenicity	Not classified	–	–	–	Since it had classified into A4 according to ACGIH (2001), it carried out "Category Outside." It is suggested that the impurities polychloro dibenzodioxin which described by paragraph of mutagenic, is carcinogenic.
7	Toxic to reproduction	Classification not possible	–	–	–	Classification not possible due to lack of data on toxic to rproduction

8	Specific target organs/systemic toxicity following single exposure	Category 2 (systemic toxicity); Category 3 (respiratory tract irritation)	Health hazard	Warning	May cause damage to organs (systemic toxicity); May cause respiratory irritation or may cause drowsiness and dizziness (respiratory tract irritation)	Although the report of the animal experiment was not found out, there are attack, a coma, contracted muscular, relaxation, low blood pressure, nauseousness, vomiting, diarrhea, an abdominal pains, etc. are indicated in human (HSDB (2005), HSFS (2001)). So it is classified into "Category 2 (systemic toxicity)". Moreover, the respiratory irritation was indicated to a ICSC cards (1995) and Sitting (47th. 2002), it was set as "Category 3 (respiratory irritation)."
9	Specific target organs/systemic toxicity following repeated exposure	Category 2 (liver, kidneys)	Health hazard	Warning	May cause damage to organs (liver, kidneys) through prolonged or repeated exposure	The influences on liver and the kidney were seen within the guidance value of Category 2 in two-year feeding administration to rats. In the given dose within the guidance value of Category 1, effect was not acknowledged with rats and dogs (ACGIH (2001)). There is the statement which is considered to be the human impact, too (HSFS (2001)). It was classified into "Category 2 (liver, kidney)" because of these information.
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)	Classification not possible	–	–	–	Insufficient data available.
11	Hazardous to the aquatic environment (chronic)	Classification not possible	–	–	–	Classification not possible due to lack of data