

## GHS Classification

**ID653**

**Disulfur dichloride**

**CAS 10025-67-9**

Date Classified: Apr. 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	-	-	-	Liquid (GHS definition)
3 Flammable aerosols	Not applicable	-	-	-	Not aerosol products
4 Oxidizing gases	Not applicable	-	-	-	Liquid (GHS definition)
5 Gases under pressure	Not applicable	-	-	-	Liquid (GHS definition)
6 Flammable liquids	Not classified	-	-	-	Not classified because of its flash point: 118.5degC(ACGIH, 2001) and boiling point: 138degC (Merk, 13th, 2001)
7 Flammable solids	Not applicable	-	-	-	Liquid (GHS definition)
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 classified	-	-	-	Flash point: 230degC(Hommel(1991)) (>70degC)
10 Pyrophoric solids	Not applicable	-	-	-	Liquid (GHS definition)
11 Self-heating substances and mixtures	Classification not possible	-	-	-	Test methods applicable to liquid substances 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 classified	-	-	-	UNRTDG No. 1828, Class: 8; PG 1
14 Oxidizing solids	Not applicable	-	-	-	Liquid (GHS definition)
15 Organic peroxides	Not applicable	-	-	-	Containing no -O-O- structure
16 Corrosive to metals	Classification not possible	-	-	-	No data 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 ENDPOINT: LD50 VALUE: 130 mg/kg REFERENCE SOURCE: IUCLID 2000
1 Acute toxicity (dermal)	Classification not possible	-	-	-	No data available
1 Acute toxicity (inhalation: gas)	Not applicable	-	-	-	Liquid (GHS definition)
1 Acute toxicity (inhalation: vapour)	Category 2	Skull and crossbones	Danger	Fatal if inhaled	Based on rat LC50 = 2.5mg/L = 452ppm [vapour] (IUCLID 2000), the gaseous classification Category was applied, and it was classified as Category 2.
1 Acute toxicity (inhalation: dust, mist)	Classification not possible	-	-	-	No data available
2 Skin corrosion / irritation	Category 1A-1C	Corrosion	Danger	Causes severe skin burns and eye damage	It is estimated to be "corrosive" in the skin irritation test on rabbits(IUCLID 2000), and there is also a statement that chemical burns and dermatitis are caused with exposure on humans (HSDB (2005)). Therefore, it was classified as Category 1A-1C.
3 Serious eye damage / eye irritation	Category 1	Corrosion	Danger	Causes serious eye damage	It is described that when human eye was touched, "important ocular burn" would be caused, and its recovery took 14 months (IUCLID (2000)). Moreover, there are statements of "corrosive" and "a permanent deficit is caused," to a human eye (HSDB 2005). As mentioned above, it was judged that it had irreversible impacts and it was set as Category 1.
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)-	With no [respiratory sensitization] data. [Skin sensitization] No data.
5 Germ cell mutagenicity	Classification not possible	-	-	-	Classification not possible due to lack of data
6 Carcinogenicity	Classification not possible	-	-	-	No data available
7 Toxic to reproduction	Classification not possible	-	-	-	No data available

8	Specific target organs/systemic toxicity following single exposure	Category 2 (respiratory organs)	Health hazard	Warning	May cause damage to organs (respiratory organs)	There is the description saying "this compound is considered to be respiratory irritation substance" in human (ACGIH (2001)), and there is the statement saying "the cough by inhalation" (RTECS(2004)). Furthermore, there is the statement that it may cause pulmonary oedemas as the effect of short term exposure in ICSC (1999), it is classified into Category 2 (respiratory tracts).
9	Specific target organs/systemic toxicity following repeated exposure	Classification not possible	-	-	-	It is described that it has the influence on a liver, lungs, and a kidney in animal studies (IUCLID (2000)) , but there is no statement besides it, so it cannot be classified because the details of data is unknown.
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)	Not classified	-	-	-	It carried out the outside of Category from 96-hour LC50 $\geq$ 3000mg/L of fishes (Zebrafish) (IUCLID, 2000).
11 Hazardous to the aquatic environment (chronic)	Not classified	-	-	-	Since not water-insoluble (it was hydrolyzed and hydrogen chloride and sulfur were generated (IUCLID, 2000)) and acute toxicity is low.