

## GHS Classification

**ID792**

**Diphenyl ether**

**CAS 101-84-8**

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	Classification not possible	-	-	-	Classification not possible due to lack of experimental data
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	-	-	-	Flash point: 610degC. Non-pyrophoric at room temperature.
11 Self-heating substances and mixtures	Classification not possible	-	-	-	Since the melting points is 28 degC, test is inapplicable.
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 (but not to other elements).
15 Organic peroxides	Not applicable	-	-	-	Organic compounds containing no -O-O- structure
16 Corrosive to metals	Classification not possible	-	-	-	No data available on corrosion to metals

## 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	Statistical calculations of the rat oral administration data of (ACGIH(2001), PATTY(5th, 2001), RTECS (2004)) show LD50 value: 2786mg/kg, and it is set as Category 5.
1 Acute toxicity (dermal)	Not classified	-	-	-	It was set as the outside of Category from rabbit LD50 value >7940mg/kg (RETCS (2004)).
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 3	-	Warning	Causes mild skin irritation	It was classified as Category 3 according to the result of MILD (RTECS (2004)).
3 Serious eye damage / eye irritation	Category 2B	-	Warning	Causes eye irritation	Since there was information of mild irritation in the data of HSDB (2005), it was set as Category 2B.
4 Respiratory/skin sensitization	Classification not possible	-	-	-	No data available
5 Germ cell mutagenicity	Classification not possible	-	-	-	Although it was negative for the in vitro Ames test, there was no in vivo data, therefore we could not classify it.
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	Classification not possible	-	-	-	No data available.
9 Specific target organs/systemic toxicity following repeated exposure	Classification not possible	-	-	-	There is only data of no toxicity except for that a stimulus of an eye, and a stimulus of an upper airway at repetitive inhalation exposure in a rat, a mouse, and a dog (ACGIH (2001)). Moreover, diphenylether single toxicity is not observed in the case of human occupational exposure (ACGIH (2001)). Since there is only these data, it cannot be classified.
10 Aspiration hazard	Classification not possible	-	-	-	No data available on chemical pneumonia

## Environmental Hazards

Hazard class	Classification	symbol	signal word	hazard statement	Rational for the classification
11 Hazardous to the aquatic environment (acute)	Category 2	-	-	Toxic to aquatic life	It was classified into Category 2 from 48-hour LC50=1.7mg/L of Crustacea (Daphnia magna) (IUCRID, 2000).
11 Hazardous to the aquatic environment (chronic)	Category 2	Environment	-	Toxic to aquatic life with long lasting effects	Classified into Category 2, since acute toxicity was Category 2, not rapidly degrading (BOD: 6.3% (existing chemical safety inspections data)), and bioaccumulative (BCF=594 (existing chemical safety inspections data)).