

## GHS Classification

**ID1096**

**sulphuryl difluoride**

**CAS 2699-79-8**

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	-	-	-	Gas (GHS definition)
2 Flammable gases	Not classified	-	-	-	Non-combustible (ICSC(J), 2001)
3 Flammable aerosols	Not applicable	-	-	-	Not aerosol products
4 Oxidizing gases	Not classified	-	-	-	Not classified because it is UNRTDG No. 2191, Class: 2.3(8) but not Subsidiary risks Class: 5.1.
5 Gases under pressure	Liquefied gas	Gas cylinder	Warning	Contains gas under pressure; may explode if heated	Liquefied gas because of "the critical temp: -20 or 96degC" (HSDB, 2002).
6 Flammable liquids	Not applicable	-	-	-	Gas (GHS definition)
7 Flammable solids	Not applicable	-	-	-	Gas (GHS definition)
8 Self-reactive substances and mixtures	Not applicable	-	-	-	Gas (GHS definition)
9 Pyrophoric liquids	Not applicable	-	-	-	Gas (GHS definition)
10 Pyrophoric solids	Not applicable	-	-	-	Gas (GHS definition)
11 Self-heating substances and mixtures	Not applicable	-	-	-	Gas (GHS definition)
12 Substances and mixtures, which in contact with water, emit flammable gases	Not applicable	-	-	-	Gas (GHS definition)
13 Oxidizing liquids	Not applicable	-	-	-	Gas (GHS definition)
14 Oxidizing solids	Not applicable	-	-	-	Gas (GHS definition)
15 Organic peroxides	Not applicable	-	-	-	Gas (GHS definition)
16 Corrosive to metals	Classification not possible	-	-	-	Test methods applicable to gas substances are not 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	Category 3 based on SPECIES: Rat; ENDPOINT: LD50; VALUE: 100 mg/kg; REFERENCE SOURCE: RTECS(2004)
1 Acute toxicity (dermal)	Classification not possible	-	-	-	No data available
1 Acute toxicity (inhalation: gas)	Category 3	Skull and crossbones	Danger	Toxic if inhaled	Rad LC50 value (4-hour equivalent) = 1865ppm (male) and 1510ppm (female) (all are ACGIH(s) (7th, 2001)) (in the information on Priority 1), and the higher toxic value (1510ppm) was adopted, and it was considered as Category 3.
1 Acute toxicity (inhalation: dust, mist)	Not applicable	-	-	-	Gas (GHS definition)
2 Skin corrosion / irritation	Category 2	Exclamation mark	Warning	Causes skin irritation	There is no data about skin corrosivity/stimulativeness. It was set as category 2 in order to call attention, since chilblain may be started by touching the liquid when the this product is in state of a compressed liquefied gas (ICSC (J), (2001), SITTIG (4th, 2002)).
3 Serious eye damage / eye irritation	Category 2A-2B	Exclamation mark	Warning	Causes serious eye irritation	Although there is the description that it irritates to human eyes (ACGIH (7th, 2001), SITTIG (4th, 2002), ICSC (J), (2001), HSFS (2000)), its level of irritation is unknown. Therefore, it was classified into Category 2A-2B. [Indication] 2A is recommended based on the safety, when the Category needs to subdivide.
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)-	No data available
5 Germ cell mutagenicity	Classification not possible	-	-	-	No data available
6 Carcinogenicity	Classification not possible	-	-	-	No data available
7 Toxic to reproduction	Classification not possible	-	-	-	Although a teratogenic effects was not acknowledged in rats and rabbits (Catalog of Teratogenic Agents, 11th ed. (2004)), there is no data which performed evaluation to the fertility of this product and it cannot be classified for the insufficient data.

8	Specific target organs/systemic toxicity following single exposure	Category 1 (central nervous system); Category 2 (respiratory)	Health hazard	Danger	Cause damage to organs (central nervous system); May cause damage to organs (respiratory)	The substance was classified as Category 1 (central nervous system) because there is a report in Priority 1 that "it affects the central nervous system" in humans (ACGIH (7th, 2001)), and there are also mentions of effects CNS in the ACGIH-TLV (2005). The substance was also classified as Category 2 (respiratory system) because there are reports concerning humans in Priority 2 that it "causes serious irritation to the airways," "inhalation of the gas may cause pulmonary edema," etc. (ICSC (J) (2001), SITTIG (4th, 2002).
9	Specific target organs/systemic toxicity following repeated exposure	Category 2 (kidneys, respiratory organs, central nervous system, tooth/bone)	Health hazard	Warning	May cause damage to organs (kidneys, respiratory organs, central nervous system, tooth/bone) through prolonged or repeated	In the evaluation report of Priority 1, it is described that the result of the repetitive toxicity examination to a rat and a rabbit is effect on the kidney, respiratory tract, a central nervous system, and a tooth (fluorosis) in the inhalation of 300 ppm / 6 h/day (partially 100 ppm / 6 h/day) (5 days/wk) (ACGIH (7th, 2001)). Since this figure is almost equivalent to the guidance value which helps the classification to Category 2 and in an assessment report of Priority 2 to human, the influence to the kidney and fluorosis (the dental/bone) are occurred (SITTIG (4th, 2002)), it was classified into Category 2 (the kidney, respiratory tract, a central nervous system, a dental/bone).
10	Aspiration hazard	Not applicable	-	-	-	Gas (GHS definition)

### Environmental Hazards

Hazard class	Classification	symbol	signal word	hazard statement	Rational for the classification
11 Hazardous to the aquatic environment (acute)	Classification not possible	-	-	-	No data available
11 Hazardous to the aquatic environment (chronic)	Classification not possible	-	-	-	No data available.