

## GHS Classification

**ID1031**

**phosphorous trifluoride**

**CAS 7783-55-3**

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	Classification not possible	-	-	-	No data available
3 Flammable aerosols	Not applicable	-	-	-	Not aerosol products
4 Oxidizing gases	Classification not possible	-	-	-	No data available
5 Gases under pressure	Liquefied gas(High pressure liquefied gas)	Gas cylinder	Warning	Contains gas under pressure; may explode if heated	High pressure liquefied gas because of "the critical temp: -2.05degC"(Merck, 13th, 2001)
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	-	-	-	Although 8 is given to Subsidiary risk in UNRTDG of Generic or N.O.S.entry, test methods suitable for gaseous substances are not established. (Merck (13th, 2001) has the description "it can be saved in steel cylinders (May be stored in steel cylinders)".)

**Health Hazards**

Hazard class	Classification	symbol	signal word	hazard statement	Rational for the classification
1 Acute toxicity (oral)	Classification not possible	-	-	-	No data available
1 Acute toxicity (dermal)	Classification not possible	-	-	-	No data available
1 Acute toxicity (inhalation: gas)	Category 1	Skin and crossbones	Danger	Fatal if inhaled	There was no data of LC50. So it was estimated by mouse LCLo = 33.52ppm/4H (equivalent) (RTECS (2004)), and it was considered as Category 1.
1 Acute toxicity (inhalation: dust, mist)	Not applicable	-	-	-	Gas (GHS definition)
1 Acute toxicity (inhalation: gas)	Not applicable	-	-	-	Gas (GHS definition)
2 Skin corrosion / irritation	Classification not possible	-	-	-	No data available
3 Serious eye damage / eye irritation	Category 2B	-	Warning	Causes eye irritation	There is no data about this product. But there is the description about eye irritation as fluoride in ACGIH-TLV (2004). It was classified into Category 2B.
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	-	-	-	It was classified into A4 (equivalent to out of Category ) in ACGIH-TLV (2004) as fluoride. But it cannot be classified due to insufficient data.

7	Toxic to reproduction	Classification not possible	-	-	-	Although there is no developmental toxicity as fluoride in MAK/BAT (2005) , data is insufficient, it cannot be classified.
8	Specific target organs/systemic toxicity following single exposure	Category 3 (respiratory tract irritation)	Exclamation mark	Warning	may cause respiratory irritation or may cause drowsiness and dizziness (respiratory tract)	There are no data for this substance, but ACGIH-TLV (2004), a Priority 1 document, reports that in the form of a fluoride the substance has airway irritant properties. The substance was classified as Category 3 (airway irritant).
9	Specific target organs/systemic toxicity following repeated exposure	Category 1 (bone)	Health hazard	Danger	causes damage to organs (bone) through prolonged or repeated	Although there was no data about this product, in ACGIH-TLV (2004; Priority 1 document), it is supposed that it had the influence (fluorosis) to the bone as fluoride. Therefore we classified it into Category 1 (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.