

GHS Classification

ID569

Phosphoryl trichloride

CAS 10025-87-3

Date Classified: May 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	-	-	-	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	-	-	-	Non-combustible (Weiss, 2nd, 1985).
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	-	-	-	Non-combustible (Weiss (2nd, 1985)
10 Pyrophoric solids	Not applicable	-	-	-	Liquid (GHS definition)
11 Self-heating substances and mixtures	Not classified	-	-	-	Non-combustible (Weiss, 2nd, 1985)
12 Substances and mixtures, which in contact with water, emit flammable gases	Not applicable	-	-	-	Metal or half-metal (B, Si, P, Ge, As, Se, Sn, Sb, Te, Bi, Po, At) is not included. Although it reacts intensely to the water (dangerous DB (the 2nd edition, 1993)), the occurring gas is hydrogen chlorides (inert gas).
13 Oxidizing liquids	Not classified	-	-	-	Not classified because of UNRTDG Class: 8 though inorganic compounds containing oxygen and chlorine.
14 Oxidizing solids	Not applicable	-	-	-	Liquid (GHS definition)
15 Organic peroxides	Not applicable	-	-	-	Inorganic substance
16 Corrosive to metals	Classification not possible	-	-	-	Classification not possible due to lack of data metal corrosion. UNRTDG Class: 8.

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	SPECIES: Rat ENDPOINT: LD50 VALUE: 380 mg/kg REFERENCE SOURCE: RTECS (2005), 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 1	Skull and crossbones	Danger	Fatal if inhaled	Since the saturated vapor pressure concentration of this product is 5248ppm, it is thought that the inhalation test was by with vapor. It was classified as Category 1 based on rat LC50 = 48ppm (ACGIH (7th, 2001)).
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	Based on the descriptions that it indicates corrosivity and severe irritation on animals (IUCLID (2000)) and also on humans (ACGIH (7th, 2001) and HSDB (2000), Institut national de recherche, and CDRMCD 613 (May 2000.3p.)), it was classified as Category 1A-1C.
3 Serious eye damage / eye irritation	Category 1	Corrosion	Danger	Causes serious eye damage	This product is a skin corrosive substance. With a rabbit, there is a statement of strong eye stimulativeness and a strong necrosis, and loss of eyesight (IUCLID (2000), GESTIS (2005)), and with humans, there is a statement of strong eye stimulativeness, corrosiveness, and loss of eyesight is (ACGIH (7th, 2001), ICSC (J), (2002), HSDB (2005)). So 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)-	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	-	-	-	No data available
8	Specific target organs/systemic toxicity following single exposure	Category 1 (central nervous system, respiratory)	Health hazard	Danger	Cause damage to organs (central nervous system, respiratory)	The effects to the central nervous systems on dizziness, headaches, loss of appetite, weakness, nausea, vomiting, etc. are described in humans (ICSC (J) (2002), HSDB (2005)), and since the denaturation of the nerve cell was observed in the repeat-dose studies in the rat, it was classified into Category 1 (central nervous system). Due to the descriptions that chest pain, cough, breathing difficulties, bronchitis, bronchopneumonia and pulmonary edema are observed in humans (ACGIH (2001)), and that breathing difficulties is described in guinea pigs (RTECS (2005)). So it was classified into Category 1 (respiratory systems).
9	Specific target organs/systemic toxicity following repeated exposure	Category 1 (central nervous system, respiratory organs, kidneys)	Health hazard	Danger	Causes damage to organs (central nervous system, respiratory organs, kidneys) through prolonged or repeated exposure	Since symptoms, such as giddiness, headache, loss of appetite, sluggishness, nausea, and vomiting, etc., in humans was indicated (ACGIH and (7th 2001), (HSDV(2005)), and there was the statement (IUCILID (2000)) that the degeneration of the brain-cell was seen in the rat with the dose of guidance value range of category 1, it was classified in Category 1 (central nervous systems). It was classified into Category 1 (respiratory systems) based on the description of the influence on the respiratory systems, such as bronchitis, bronchopneumonia, and accumulation of fluid in the lungs, in humans (ACGIH (7th, 2001)), and the description of the respiratory distress in a rat with the dosage of the guidance value range of Category 1 (IUCILID (2000)). It was classified in Category 1 (kidney) based on a description of the fatty degenerations of kidney with the dosage of the guidance value range of Category 1 with a rat, and a description of a glomerulonephritis in humans.
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	-	-	-	No data available
11 Hazardous to the aquatic environment (chronic)	Classification not possible	-	-	-	No data available.