GHS Classification

ID682 Benzoyl chloride

CAS 98-88-4 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	Category 4	–	Warning	Combustible liquid	Flash point: 88degC(Merck, 13th, 2001)
7	Flammable solids	Not applicable	–	–	–	Liquid (GHS definition)
8	Self-reactive substances and mixtures	Not classified	–	–	–	Classified in UNRTDG No.: 1736, Class: 8, PGII
9	Pyrophoric liquids	Not classified	–	–	–	Flash point: 600degC (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 metaloids(B, Si, P, Ge, As, Se, Sn, Sb, Te, Bi, Po, At).
13	Oxidizing liquids	Not applicable	–	–	–	Organic compounds containing oxygen and chlorine (but not fluorine) and these elements are chemically bonded only to carbon (but not to other elements).
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 4	Exclamation mark	Warning	Harmful if swallowed	Since both targeted two or more rat LD50 values: 1140-2018 mg/kg (unknown sex) (ACGIH (7th, 2001)), 3619mg/kg (male) and 1900 (female) (DFGOT vol.6 (1994)) had no reason which should be excluded, statisticals calculation was performed. 1453 mg/kg was obtained as a calculation value. It was set as Category 4 based on the classification standards.
1	Acute toxicity (dermal)	Category 3	Skull and crossbones	Danger	Toxic in contact with skin	It was set as Category 3 based on the lower value of 790 mg/kg which is from rabbit LD50 = 790 - >2000mg/kg (ACGIH (2001)).
1	Acute toxicity (inhalation: gas)	Not applicable	–	–	–	Liquid (GHS definition)
1	Acute toxicity (inhalation: vapour)	Category 2	Skull and crossbones	Danger	Fatal if inhaled	Taking the lowest value of 247ppm for rat LC50 (4h) = 247ppm - >377ppm (ACGIH (7th, 2001)), the gaseous Category standard value 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	As a result of rabbit test, it was judged to be "extremely irritating" or "corrosive" (ACGIH and (7th, 2001) and IUCLID (2000)). There is a description of burn and blister with exposure to the skin also on humans (ICSC (2002)). Therefore, since it was thought to cause irreversible damage to the skin, it was classified as Category 1A-1C.
3	Serious eye damage / eye irritation	Category 1	Corrosion	Danger	Causes serious eye damage	It is estimated "extremely irritating" or "corrosive" by the test result using a rabbit (ACGIH and (7th, 2001), IUCLID (2000), HSDB (2000)), and humans also have description of the severe burn by eyes exposures (ICSC (2002)). Therefore, since it was thought that critical damage was caused to an eye, 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)-	[Respiratory sensitization] No data [Skin sensitization] No data
5	Germ cell mutagenicity	Not classified	–	–	–	Based on the negative result (HSDB (2005)) in the somatic cell in vivo mutagenicity test (micronucleus examination which used mouse bone-marrow erythroblasts), we classified it as Out Of Category.
6	Carcinogenicity	Not classified	–	–	–	Based on being classified into A4 (1995) according to ACGIH, it carried out the outside of Category. In addition, the classification of IARC is classified into 2A as a mixture with alpha-chlorinated toluenes. However, benzoyl chloride is estimated as "There is inadequate evidence in experimental animals". This is equivalent to a group 3.

7	Toxic to reproduction	Classification not possible	–	–	–	No data available
8	Specific target organs/systemic toxicity following single exposure	Category 2 (respiratory)	Health hazard	Warning	May cause damage to organs (respiratory)	There is the statement about symptoms causing inhalation exposure in human such as cough, constrained respiration, pharyngeal pain (HSDB (2005)), addition to mucosal irritation (ACGIH (2001)), causticity of respiratory (ICSC (2002), SITTIG (47th, 2002)). Moreover, it is stated that pulmonary oedemas with a possibility of serious result is caused (ICSC (2002), SITTIG (47th, 2002)). It is classified into Category 2 (respiratory tract systems) based on the above fact.
9	Specific target organs/systemic toxicity following repeated exposure	Category 1 (respiratory organs)	Health hazard	Danger	Causes damage to organs (respiratory organs) through prolonged or repeated exposure	It was classified to as Category 1 (respiratory systems) based on that the symptoms such as chronic pharyngitis, chronic sinusitis, and a olfaction disorder are reported in the human occupational exposure (ACGIH (2001),HSDB (2005)), and that significant respiratory irritant,mild hypertrophy tonsils is admitted in the repetitive exposure examination of the mouse (ACGIH, 2001),IUCLID (2000)) .
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)	Category 1	Environment	Warning	Very toxic to aquatic life	It was classified into Category 1 from 96-hour LC50=0.12mg/L of Crustacea (glass shrimp) (ECETOC TR91, 2003).
11	Hazardous to the aquatic environment (chronic)	Not classified	–	–	–	Since rapidly degrading (it hydrolyzed and benzoic acid (BOD: 85%) is generated (Existing Chemicals Safety Check Data)), and supposed less bio-accumulative (log Kow=1.44 (PHYSPROP Database, 2005)).