GHS Classification

ID696 2-sec-Butylphenol

CAS 89-72-5 Date Classified: Feb. 20, 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	–	–	–	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	–	–	–	Not classified because of its flash point: >93degC and liquid
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	–	–	–	Not Classified in UNRTDG Class: 4.2
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 (but not chlorine and fluorine) chemically bonded only to carbon and hydrogen (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	Although there were two data of 2.7g/kg (ACGIH (2001)) and 320 mg/kg (RTECS (2004)) in rat LD50, the lower one was adopted and it was set as Category 4.
1	Acute toxicity (dermal)	Not classified	–	–	–	Since there were data of 5560mg/kg (RTECS (2004)) of a rabbit, it was set as outside of Category. The data (RTECS (2004)) of the guinea pig was not adopted by the guideline.
1	Acute toxicity (inhalation: gas)	Not applicable	–	–	–	Liquid (GHS definition)
1	Acute toxicity (inhalation: vapour)	Classification not possible	–	–	–	Since median lethal is not reached at the saturated vapor concentration at normal temperature of 20degC with 80ppm, and 30 degC with 196ppm, LC50 level is not acquired.
1	Acute toxicity (inhalation: dust, mist)	Classification not possible	–	–	–	Since the value of >290ppm (RTECS) was over saturated vapor concentrations, it was considered to be mist. It is thought that it is category 4 or category 5 since this value is equivalent to 1.78mg/L, but the LC50 value which becomes a decisive factors is not acquired.
2	Skin corrosion / irritation	Category 1C	Corrosion	Danger	Causes severe skin burns and eye damage	As for animal, there is a result of severe burn with exposure for 24 hours (ACGIH (2001), RTECS (2004)), and burn is reported with occupational exposure (ACGIH (2001)), it was classified as "Category 1C".
3	Serious eye damage / eye irritation	Category 1	Corrosion	Danger	Causes serious eye damage	It was set as "Category 1"since skin corrosivenesses was Category 1C and intense stimulus was also reported with the eye of a rabbit (ACGIH (2001)).
4	Respiratory/skin sensitization	Respiratory sensitization: Classification not possible; Skin sensitization: Classification not	(Respiratory sensitization)–; (Skin sensitization)–	(Respiratory sensitization)–; (Skin sensitization)–	(Respiratory sensitization)–; (Skin sensitization)–	The data on sensitizing was not found.
5	Germ cell mutagenicity	Classification not possible	–	–	–	Classification not possible due to lack of data
6	Carcinogenicity	Classification not possible	–	–	–	Since there is no test reports and there is also no classification evaluation of the institution, it cannot classify.
7	Toxic to reproduction	Classification not possible	–	–	–	Classification not possible due to lack of experimental data

8	Specific target organs/systemic toxicity following single exposure	Category 3 (respiratory tract irritation)	–	–	May cause respiratory irritation or may cause drowsiness and dizziness (respiratory tract irritation)	It is classified into "Category 3 (respiratory irritation)" by that which has statement of the respiratory irritation about humans (ACGIH (2001)).
9	Specific target organs/systemic toxicity following repeated exposure	Classification not possible	–	–	–	Since there are not a study reports and a report of occupation exposure influence, it cannot be classified.
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 2	–	–	Toxic to aquatic life	It was classified into Category 2 from 48-hour EC50=4.0mg/L of Crustacea (Daphnia magna) (MOE eco-toxicity tests of chemicals, 1998).
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 and not rapidly degrading (BOD: 0% (existing chemical safety inspections data)), though less bio-accumulative (BCF=50 (existing chemical safety inspections data)).