

GHS Classification

ID726

Butyl acetate

CAS 123-86-4

Date Classified: Feb. 20, 2007 (Environmental Hazards: Nov. 20, 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 2	Flame	Danger	Highly flammable liquid and vapour	Flash point: 22degC. Boiling point: 126degC
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	-	-	-	It is danger of fire (class3) in the UN Recommendations.
10 Pyrophoric solids	Not applicable	-	-	-	Liquid (GHS definition)
11 Self-heating substances and mixtures	Not classified	-	-	-	UNRTDG Class: 3 (flammable)
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 metalloids(B, Si, P, Ge, As, Se, Sn, Sb, Te, Bi, Po, At).
13 Oxidizing liquids	Not applicable	-	-	-	Organic compounds containing oxygen 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	Not classified	-	-	-	There is information that it can carry with a metal container by IMDGcode (Packing Instruction is P001).

Health Hazards

Hazard class	Classification	symbol	signal word	hazard statement	Rational for the classification
1 Acute toxicity (oral)	Not classified	-	-	-	The rat oral toxicity value was 14.13g/kg (ACGIH (2001)), and it was set as the outside of Category.
1 Acute toxicity (dermal)	Not classified	-	-	-	Since the rabbit dermal toxicity value was 17,600mg/kg (RTECS (2004)), it was set as the outside of Category.
1 Acute toxicity (inhalation: gas)	Not applicable	-	-	-	Liquid (GHS definition)
1 Acute toxicity (inhalation: vapour)	Category 3	Skull and crossbones	Danger	Toxic if inhaled	It was classified as Category 3 with the rat inhalation toxicity value of 2000ppm (ACGIH (2001)). Since it was 90% or less of saturated vapor concentrations, it was classified based on gas standard value.
1 Acute toxicity (inhalation: dust, mist)	Category 4	Exclamation mark	Warning	Harmful if inhaled	It was set as Category 4 based on the rat inhalation test toxicity value of 391ppm (1.85mg/L) (ACGIH (2001)).
2 Skin corrosion / irritation	Category 3	-	Warning	Causes mild skin irritation	Since there was a report of mild skin irritation on humans (ACGIH (2001)), it was classified as Category 3.
3 Serious eye damage / eye irritation	Category 2B	-	Warning	Causes eye irritation	Corneal opacity recovery on the second day, iris was not seeing impact, and redness of the conjunctive had recovered on the 7th day and 14th day. So it was taken as Category 2B.
4 Respiratory/skin sensitization	respiratory sensitization: Classification not possible; Skin sensitization: Not classified	(Respiratory sensitization)-; (Skin sensitization)-	(Respiratory sensitization)-; (Skin sensitization)-	(Respiratory sensitization)-; (Skin sensitization)-	Since the 3rd volume of MOE Risk Assessment (2002) does not recognize skin sensitization, it was put outside of the Category. Respiratory sensitization It was decided that it could not be classified since there is no data.
5 Germ cell mutagenicity	Classification not possible	-	-	-	In the in vitro examination it gave the negative result, however, there was no in vivo test result. Therefore we presupposed that we could not classify it according to the technical guideline.
6 Carcinogenicity	Classification not possible	-	-	-	Classification not possible due to lack of data
7 Toxic to reproduction	Not classified	-	-	-	MOE Risk Assessment The 3rd volume (2002) and ACGIH (2001) are coming from the same reference. Since significant differences were not observed as compared with the control, it was assumed as the outside of Category.

8	Specific target organs/systemic toxicity following single exposure	Category 1 (central nervous system); Category 2 (lung); Category 3 (respiratory tract irritation)	Health hazard; Exclamation mark	Danger; Warning	Cause damage to organs (central nervous system); May cause damage to organs (lung); May cause respiratory irritation or may cause drowsiness and dizziness (respiratory tract irritation)	Pulmonary edemas was seen by the central nerves Category 1 in human data (ACGIH (2001)), and was seen in the range of the guidance value of Category 2 by animal studies. So it was set as Category 2, and it is classified into Category 3 (respiratory irritation).
9	Specific target organs/systemic toxicity following repeated exposure	Classification not possible	-	-	-	Classification not possible due to lack of data
10	Aspiration hazard	Classification not possible	-	-	-	The dynamic viscosity at 20 degree C is 0.838mm [2/sec] (calculated value). Since we have no animal data of chemical pneumonia, we could not classify it.

Environmental Hazards

Hazard class	Classification	symbol	signal word	hazard statement	Rational for the classification
11 Hazardous to the aquatic environment (acute)	Category 3	-	-	Harmful to aquatic life	It was classified into Category 3 from 96-hour LC50=100000microg/L of fishes (Bluegill) (MOE Risk Assessment No.1, 2002).
11 Hazardous to the aquatic environment (chronic)	Not classified	-	-	-	Since rapidly degrading (BOD: 98% (IUCRID, 2000)), and less bio-accumulative (log Kow=1.78 (PHYSPROP Database, 2005)).