

GHS Classification

ID599

Sodium hydroxide

CAS 1310-73-2

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	-	-	-	There are no chemical groups associated with explosive properties present in the molecules.
2 Flammable gases	Not applicable	-	-	-	Solid (GHS definition)
3 Flammable aerosols	Not applicable	-	-	-	Not aerosol products
4 Oxidizing gases	Not applicable	-	-	-	Solid (GHS definition)
5 Gases under pressure	Not applicable	-	-	-	Solid (GHS definition)
6 Flammable liquids	Not applicable	-	-	-	Solid (GHS definition)
7 Flammable solids	Not classified	-	-	-	Non-combustible (ICSC, 2000;Hommel, 1991; Weiss, 2nd, 1985)
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 applicable	-	-	-	Solid (GHS definition)
10 Pyrophoric solids	Not classified	-	-	-	Non-combustible (ICSC, 2000; Hommel, 1991; Weiss, 2nd, 1985)
11 Self-heating substances and mixtures	Not classified	-	-	-	Not combustible (ICSC (2000))
12 Substances and mixtures, which in contact with water, emit flammable gases	Not classified	-	-	-	Water solubility, underwater pH measured value, etc. are performed, and it is stable to water (ICSC (2000), Merck (13th, 2001), etc.).
13 Oxidizing liquids	Not applicable	-	-	-	Solid (GHS definition)
14 Oxidizing solids	Not classified	-	-	-	Not classified because of UNRTDG Class: 8 though inorganic compounds containing oxygen.
15 Organic peroxides	Not applicable	-	-	-	Inorganic compound
16 Corrosive to metals	Classification not possible	-	-	-	Test methods applicable to solid substances are not available. UNRTDGClass: 8. Corrosive to Aluminum.(ICSC, 2000)

Health Hazards

Hazard class	Classification	symbol	signal word	hazard statement	Rational for the classification
1 Acute toxicity (oral)	Classification not possible	-	-	-	It cannot classify according to the guideline, since there is only data of rabbit LD50 value of 325mg/kg but no data of rodent(SIDS, 2002).
1 Acute toxicity (dermal)	Classification not possible	-	-	-	No data available
1 Acute toxicity (inhalation: gas)	Not applicable	-	-	-	Solid (GHS definition)
1 Acute toxicity (inhalation: vapour)	Classification not possible	-	-	-	No data available
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 at 0.5% or more of concentration, it is irritating to human skin (SIDS, 2002), and causes severe corrosion (DFGOT vol.12, 1999) and that at 8% or more of concentration, it caused corrosion on pig skin (SIDS, 2002) and severe necrosis on rabbit skin with 5% and 4 hour application (ACGIH, 7th, 2001-ATTY, 5th, 2001), it was classified as Category 1A-1C. In addition, sub-categorizing is difficult.
3 Serious eye damage / eye irritation	Category 1	Corrosion	Danger	Causes serious eye damage	It was set as Category 1 from description (ACGIH, 7th, 2001;DFGOT vol.12, 1999-ATTY, 5th, 2001) that severe and serious hazard were caused to human's eye, and from description (SIDS, 2002) that corrosive was caused at 1.2% or more to a rabbit eye.
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)-	Respiratory sensitization: No data Skin sensitization: It was put outside of the Category based on the description (SIDS, 2002;IUCILID) of no skin sensitisation by the sensitivity test on the human skin.
5 Germ cell mutagenicity	Not classified	-	-	-	The substance was regarded as outside the categories. Based on the negative results from the in vivo micronucleus test in mouse bone-marrow (SIDS, 2002) and the Ames tests, which are in vitro mutagenicity tests) (SIDS, 2002; DFGOT vol.12, 1999).
6 Carcinogenicity	Classification not possible	-	-	-	There was a report that carcinogenic is not acknowledged in the administration in drinking drink in water for 12 weeks once per week (DFGOT vol.12, 1999). But it presupposed that data is insufficient and it cannot taxonomic.
7 Toxic to reproduction	Classification not possible	-	-	-	Since there is the description that there is no useful data in Reproductive and developmental toxicity (SIDS, 2002;DFGOT vol.12, 1999), it is considered as not to be classified because of insufficient data.
8 Specific target organs/systemic toxicity following single exposure	Category 1 (respiratory)	Health hazard	Danger	Cause damage to organs (respiratory)	It was set as Category 1(respiratory systems) based on the descriptions that the human respirator and airway are stimulated and lung edemas is caused (SIDS, 2002; ACGIH, 7th, 2001; DFGOT vol.12, 1999; ATTY, 5th, 2001).

9	Specific target organs/systemic toxicity following repeated exposure	Classification not possible	-	-	-	Although there was description (ACGIH, 7th, 2001;DFGOT vol.12, 1999-ATTY, 5th, 2001) that it injures lungs in the repeated inhalation exposure of rats, it was presupposed not to be classified because of data deficiency.
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 3	-	-	Harmful to aquatic life	It was classified into Category 3 from 48-hour LC50=40.4mg/L of Crustacea (Ceriodaphnia) (SIDS, 2004).
11 Hazardous to the aquatic environment (chronic)	Not classified	-	-	-	Toxicity factor is considered to be strong base as aqueous solution, but toxic effect is eased by the buffer action in the environmental water.