

GHS Classification

ID195

1,2,4-Benzenetricarboxylic 1,2-anhydride

CAS 552-30-7

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	-	-	-	Containing no chemical groups with explosive properties
2 Flammable gases	Not applicable	-	-	-	Classified as "solid" according to GHS definition
3 Flammable aerosols	Not applicable	-	-	-	Not aerosol products
4 Oxidizing gases	Not applicable	-	-	-	Classified as "solid" according to GHS definition
5 Gases under pressure	Not applicable	-	-	-	Classified as "solid" according to GHS definition
6 Flammable liquids	Not applicable	-	-	-	Classified as "solid" according to GHS definition
7 Flammable solids	Classification not possible	-	-	-	Classification not possible due to lack of data, though classified as "flammable" by ICSC (1999).
8 Self-reactive substances and mixtures	Not applicable	-	-	-	Containing no chemical groups with explosive or self-reactive properties
9 Pyrophoric liquids	Not applicable	-	-	-	Classified as "solid" according to GHS definition
10 Pyrophoric solids	Classification not possible	-	-	-	No data available
11 Self-heating substances and mixtures	Classification not possible	-	-	-	No data available
12 Substances and mixtures, which in contact with water, emit flammable gases	Not applicable	-	-	-	Containing no metals or metalloids (B, Si, P, Ge, As, Se, Sn, Sb, Te, Bi, Po, At)
13 Oxidizing liquids	Not applicable	-	-	-	Classified as "solid" according to GHS definition
14 Oxidizing solids	Not applicable	-	-	-	Organic compounds containing oxygen (but not fluorine and chlorine), with the oxygen bound to carbon and hydrogen (but not to other elements)
15 Organic peroxides	Not applicable	-	-	-	Organic compounds containing no "-O-O-" structure
16 Corrosive to metals	Classification not possible	-	-	-	Test methods applicable to solid substances are not available

Health Hazards

Hazard class	Classification	symbol	signal word	hazard statement	Rational for the classification
1 Acute toxicity (oral)	Category 5	-	Warning	May be harmful if swallowed	Based on the results of rat LD50 (oral route) of 2,030mg/kg representing the lower of the testing data, 2,030mg/kg and 3,340mg/kg (SIDS (2003)), and based on "reliable evidence showing that the results are within the range of Category 5."
1 Acute toxicity (dermal)	Not classified	-	-	-	Based on the testing data of rat LD50 (dermal route) of 5,600mg/kg (SIDS (2003)).
1 Acute toxicity (inhalation: gas)	Not applicable	-	-	-	Due to the fact that the substance is "solid" according to the GHS definition and inhalation of its gas is not expected.
1 Acute toxicity (inhalation: dust, mist)	Classification not possible	-	-	-	No data available
1 Acute toxicity (inhalation: dust, mist)	Classification not possible	-	-	-	Insufficient data available
2 Skin corrosion / irritation	Category 3	-	Warning	Causes mild skin irritation	Based on the description in the report on rabbit skin irritation tests (4 hours): "mild irritation was observed" (SIDS (2003)), and "mild irritation" (CERI Hazard Data 2001-33 (2002)).
3 Serious eye damage / eye irritation	Category 1	Corrosion	Danger	Causes serious eye damage	Based on the evidence of "Severe eye irritation" (CERI Hazard Data 2001-33 (2002)), "the material should be considered severe eye irritants" (SIDS (2003)), and "TWN into rabbit eye produced irritation scores of 105.6/110.0 on day 2 and 97.0/110.0 on day 7, a positive indicator that TWAN can produce ocular burns" (ACGIH (7th, 2001)) from the rabbit eye irritation test.
4 Respiratory/skin sensitization	Respiratory sensitization: Category 1 Skin sensitization: Category 1	(Respiratory sensitization) Health hazard (Skin sensitization) Exclamation mark	(Respiratory sensitization) Danger (Skin sensitization) Warning	(Respiratory sensitization) May cause allergic or asthmatic symptoms or breathing difficulties if inhaled (Skin sensitization) May cause allergic skin reaction	Respiratory sensitization: based on the description in CERI Hazard Data 2001-33 (2002) of the human health effects: Allergic respiratory diseases were observed in 29% of the workers handling the substance, which is considered to cause respiratory sensitization. Skin sensitization: based on the description in the report on guinea pig skin sensitization tests (conducted in accordance with the maximization method and the murine lymph node assay) (CERI Hazard Data 2001-33 (2002)); Positive. The substance is considered to cause skin sensitization.
5 Germ cell mutagenicity	Classification not possible	-	-	-	Based on the absence of data on in vivo mutagenicity/genotoxicity tests and negative data on in vitro mutagenicity tests (chromosome aberration tests, mutation tests), described in SIDS (2003), NTP DB (Access on Feb. 2006).
6 Carcinogenicity	Classification not possible	-	-	-	No data available
7 Toxic to reproduction	Classification not possible	-	-	-	Insufficient data available (no data available on reproductive effects)
8 Specific target organs/systemic toxicity following single exposure	Category 1 (respiratory organs)	Health hazard	Danger	Causes damage to organs (respiratory organs)	Based on the human evidence including "irritation to the upper respiratory tract (observed in those exposed to the substance)" (CERI Hazard Data 2001-33 (2002)), and the evidence from animal studies including "irregular respiration and temporary respiratory arrest (due probably to direct stimulation of the peripheral vagus nerve in the depth of the lungs)" (CERI Hazard Data 2001-33 (2002)), "red lesions, spots and fluid accumulation in the lungs" (SIDS (2003)). The effects on experimental animals were observed at dosing levels within the guidance value ranges for Category 1.

9	Specific target organs/systemic toxicity following repeated exposure	Category 1 (respiratory organs, blood system)	Health hazard	Danger	Causes damage to organs through prolonged or repeated exposure (respiratory organs, blood system)	Based on the human evidence including "allergic asthma, rhinitis, irritable respiratory conditions, pulmonary diseases, anemic conditions, late asthma, sneezing caused by irritation, nasal hemorrhage, cough, dyspnea" (CERI Hazard Data 2001-33 (2002)), "TMA-related pulmonary impairment, immune system responses" (SIDS (2003)), and the evidence from animal studies including "pulmonary hemorrhage, bronchial pneumonia" (CERI Hazard Data 2001-33 (2002)). The effects on experimental animals were observed at dosing levels within the guidance value ranges for Category 1.
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)	Not classified	-	-	-	It was classified into Not classified from 48 hours EC50>792mg/L of the crustacea (Daphnia magna) (CERI/NITE Hazard Assessment Report (preliminary version), 2006).
11 Hazardous to the aquatic environment (chronic)	Not classified	-	-	-	Since it was not water-insolubility (the water-solubility =1036mg/L (PHYSPROP Database, 2005)), and acute toxicity was low, it was classified into Not classified.