

GHS Classification

ID158

Terephthalic Acid

CAS 100-21-0

Date Classified: Jun. 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	—	—	—	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" according to ICSC (2004).
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	Not classified	—	—	—	Not pyrophoric when in contact with air at ordinary temperatures: the auto-ignition temperature is 496degC (ICSC, 2004)
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 4	Exclamation mark	Warning	Harmful if swallowed	Based on the rat LD50 (oral route) value of 1,960mg/kg, representing the lower of the two testing data, 1,960mg/kg and 18,800mg/kg (CERI Hazard Data 97-23 (1998)).
1 Acute toxicity (dermal)	Classification not possible	—	—	—	Insufficient data available
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	—	—	—	Insufficient data available
2 Skin corrosion / irritation	Category 3	—	Warning	Causes mild skin irritation	Based on the description in the report on skin irritation tests in rabbits and human volunteers (CERI Hazard Data 97-23 (1998), ACGIH (7th, 2001) and SIDS (2004)); "non-irritating" or "slightly irritating." The substance is thus considered to possess "mild skin irritation" (though it is unclear whether the results are those of 4-hour application).
3 Serious eye damage / eye irritation	Category 2B	—	Warning	Causes eye irritation	Based on the description in the report on rabbit eye irritation tests (CERI Hazard Data 97-23 (1998), ACGIH (7th, 2001) and SIDS (2004)); "non-irritating" or "slightly irritating." The substance is thus considered a "mild irritant."
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 available Skin sensitization: Based on the description in the report on guinea pig skin sensitization tests: "Negative." Also based on the description of the effects on human health (CERI Hazard Data 97-23 (1998)); "No sensitizing effects observed in humans."
5 Germ cell mutagenicity	Not classified	—	—	—	Based on the absence of data on multi-generation mutagenicity tests and germ cell mutagenicity tests in vivo, and negative data on somatic cell mutagenicity tests in vivo (micronucleus tests), described in NTP DB (Access on Feb., 2006), SIDS (2004).
6 Carcinogenicity	Classification not possible	—	—	—	Classification not possible based on expert judgment, given the absence of existing classification.
7 Toxic to reproduction	Category 2	Health hazard	Warning	Suspected of damaging fertility or the unborn child	Based on the evidence of decreased weight gain and reduced viability in pups at dosing levels toxic to parental animals or in the absence of data on parental toxicity, described in SIDS (2004), MOE Risk Assessment vol.3 (2004) and CERI Hazard Data 97-23 (1998).
8 Specific target organs/systemic toxicity following single exposure	Category 3 (respiratory tract irritation)	Exclamation mark	Warning	(Respiratory tract irritation) May cause respiratory irritation	Based on the human evidence including "mild irritation of the respiratory organs" (HSDB (2005)).

9	Specific target organs/systemic toxicity following repeated exposure	Category 1 (respiratory organs) Category 2 (bladder)	Health hazard	Danger Warning	Causes damage to organs through prolonged or repeated exposure (respiratory organs) May cause damage to organs through prolonged or repeated exposure (bladder)	Based on the evidence from animal studies including "degeneration of the bronchial mucosal epithelium," "bladder calculus" (CERI Hazard Data 97-23 (1998)). The effects on experimental animals were observed at dosing levels within the guidance value ranges for Category 1 (respiratory organs) and Category 2 (bladder).
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	—	—	—	Since it was suggested from 96-hour LC50>10mg/L of the fish (<i>Oryzias latipes</i>) (MOE Eco-Toxicity Tests of Chemicals, 2002) that relevant toxicity is not indicated in the water solubility (15mg/L (PHYSPROP Database, 2005)) of this substance, it was classified into Not classified.
11 Hazardous to the aquatic environment (chronic)	Not classified	—	—	—	Although acute toxicity was not reported within the aqueous solubility concentrations and there was rapidly degrading (the decomposition by BOD: 74.7% (Existing Chemical Safety Inspections Data)), since the bio-accumulation (log Kow=2 (PHYSPROP Database (2005))) was low, it was classified into Not classified.