

GHS Classification

ID179

CAS 120-80-9

Physical Hazards

Pyrocatechol

Date Classified: Jul. 24, 2006 (Environmental Hazards: Mar. 31, 2006)

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 (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 510degC (ICSC, 2004)
11 Self-heating substances and mixtures	Classification not possible	—	—	—	Test methods applicable to liquid substances are not available (melting point: 105degC (ICSC, 2004), test temperature: 140degC).
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 3	Skull and crossbones	Danger	Toxic if swallowed	Based on the rat LD50 (oral route) value of 260mg/kg, representing the lower of the two testing data, 260mg/kg (CERI Hazard Data 2000-22 (2001)) and 300mg/kg (ACGIH (7th, 2001)).
1 Acute toxicity (dermal)	Category 3	Skull and crossbones	Danger	Toxic in contact with skin	Based on the rabbit LD50 (dermal route) value of 800mg/kg (CERI Hazard Data 2000-22 (2001)).
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
2 Skin corrosion / irritation	Category 1A-1C	Corrosion	Danger	Causes severe skin burns and eye damage	Based on the description in the report on 24-hour skin irritation tests in rabbits (ACGIH (7th, 2001)): "The substance produced mild to moderate erythema and mild edema when applied to intact skin, while necrosis when applied to abraded skin." The substance should be placed in Category 1A from the viewpoint of safety if further subclassification is needed.
3 Serious eye damage / eye irritation	Category 1	Corrosion	Danger	Causes serious eye damage	Based on the description in the report on rabbit eye irritation tests (ACGIH (7th, 2001)): "rabbits exhibited discharge, moderate conjunctivitis and corneal opacity after exposure. At 72 hours, severe conjunctivitis, iritis and diffuse corneal opacity were found. Conical cornea due to angiogenesis was observed on day 14." Also based on the description in MOE Risk Assessment vol. 2 (2003) of the human health effects: "corrosive to the eye." The substance is thus considered "corrosive."
4 Respiratory/skin sensitization	Respiratory sensitization: Classification not possible Skin sensitization: Classification not possible	(Respiratory sensitization) — (Skin sensitization) —	(Respiratory sensitization) — (Skin sensitization) —	(Respiratory sensitization) — (Skin sensitization) —	Respiratory sensitization: No data available Skin sensitization: No data available
5 Germ cell mutagenicity	Category 2	Health hazard	Warning	Suspected of causing genetic defects	Based on the absence of data on multi-generation mutagenicity tests, germ cell mutagenicity tests in vivo and germ cell genotoxicity tests in vivo, and positive data on somatic cell mutagenicity tests in vivo (micronucleus tests), described in CERI Hazard Data 2000-22 (2001), NTP DB (Access on March 2006) and IARC 71 (1999).
6 Carcinogenicity	Category 2	Health hazard	Warning	Suspected of causing cancer	Due to the fact that the substance is classified as Category A3 by ACGIH (2001) and Group 2B by IARC (1999).
7 Toxic to reproduction	Category 2	Health hazard	Warning	Suspected of damaging fertility or the unborn child	Based on the evidence of adverse effects on the ovary and the development of the filial generation, described in MOE Risk Assessment vol. 2 (2003) (though no data are available on parental toxicity).
8 Specific target organs/systemic toxicity following single exposure	Category 1 (central nervous system) Category 3 (respiratory tract irritation)	Health hazard and Exclamation mark	Danger Warning	Causes damage to organs (central nervous system) (Respiratory tract irritation) May cause respiratory irritation	Based on the human evidence including "irritation of the skin/respiratory tract/gastrointestinal tract," "the substance adversely affects the central nervous system, causing suppression, spasm, respiratory failure and elevated blood pressure" (MOE Risk Assessment vol. 2 (2003)), and the evidence from animal studies including "irritation, toxicosis manifested as tremor" (PATTY (4th,1999)). The effects on experimental animals were observed at dosing levels within the guidance value ranges for Category 2.

9	Specific target organs/systemic toxicity following repeated exposure	Category 1 (kidneys) Category 2 (hematopoietic system, liver)	Health hazard	Danger Warning	Causes damage to organs through prolonged or repeated exposure (kidneys) May cause damage to organs through prolonged or repeated exposure (hematopoietic system, liver)	Based on the human evidence including "degenerative lesion of the renal tubules" (PATTY (4th, 1999)), "hypofunction of the hematopoietic system/liver/kidneys" (IUCLID (2000)).
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 hours EC50=1.66mg/L of the crustacea (Daphnia magna) (CERI Hazard Data, 2002).
11 Hazardous to the aquatic environment (chronic)	Not classified	—	—	—	Since there was rapidly degrading (the decomposition by BOD: 83% (Existing Chemical Safety Inspections Data)) and the bio-accumulation was low (log Kow=0.88 (PHYSPROP Database, 2005)), it was classified into Not classified.