

GHS Classification

ID20

CAS 106-44-5

Physical Hazards

p-Cresol

Date Classified: Apr. 20, 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	Not classified	-	-	-	Classified into Division 6.1 and Class 8 (UN Recommendations on the Transport of Dangerous Goods, UN#3455 Cresol (solid))
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 559degC (ICSC, 2000)
11 Self-heating substances and mixtures	Classification not possible	-	-	-	Test methods applicable to liquid substances are not available - melting point: 35degC (ICSC, 2000), 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	-	-	-	No data available. Corrosivity to metals remains uncertain, though classified as "corrosive substances" (as the classification based on UN Recommendations on the Transport of Dangerous Goods includes "skin corrosivity") (UN#3455 Cresol (solid)).

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 testing data of rat LD50 (oral route) of 207mg/kg (EHC 168 (1995)).
1 Acute toxicity (dermal)	Category 3	Skull and crossbones	Danger	Toxic in contact with skin	Based on the animal LD50 (dermal route) value of 300mg/kg representing the lower of the two testing data, 750mg/kg and 300 mg/kg (EHC 168 (1995)).
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 evidence of "irreversible destruction of skin tissues" (EHC 168 (1995)) from the rabbit skin irritation test, although the substance should be placed in Category 1A from the viewpoint of safety.
3 Serious eye damage / eye irritation	Category 1	Corrosion	Danger	Causes serious eye damage	Based on the description in the report on rabbit eye and skin irritation tests: "Severe irritation to the conjunctiva, cornea and iris is observed, which does not recover within 72 hours" (SIDS (2005)) and "Irreversible damage to the skin is observed" (EHC 168 (1995)).
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 (DFGOT Vol.14 (2000)) and data on human health effects (SIDS (2005)) - both negative.
5 Germ cell mutagenicity	Not classified	-	-	-	Based on the negative results in multi-generation mutagenicity (dominant lethal test), the absence of the data on germ cell mutagenicity tests in vivo and somatic cell mutagenicity tests in vivo, described in CERL Hazard Data 97-9 (iii) (1998), ATSDR (1992), SIDS (2005) and NTP DB (Access on October 2005).
6 Carcinogenicity	Not classified	-	-	-	Due to the fact that the substance is classified as Category C by EPA (1991).
7 Toxic to reproduction	Not classified	-	-	-	Based on the description in MOE Risk Assessment Vol. 1 (2002), CERL Hazard Data 97-9 (iii) (1998) and ATSDR (1992): The results of reproductive toxicity tests suggest no adverse effects on reproduction function and ability. It should be noted, however, some teratogenicity studies reported on minor skeletal defects in rat embryos.
8 Specific target organs/systemic toxicity following single exposure	Category 1 (central nervous system, kidneys) Category 3 (respiratory tract irritation)	Health hazard and Exclamation mark	Danger Warning	Causes damage to organs (central nervous system, kidneys) (Respiratory tract irritation) May cause respiratory irritation	Based on the evidence from animal studies including "a decrease in locomotor activity, tremor, lacrimation, lacrimation, dyspnea, cyanosis, hemorrhagic rhinitis, convulsions, physical collapse, irritation to the nasal cavity, nervous muscular excitement, hematuria" (SIDS (2005)). 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 2 (respiratory organs, central nervous system)	Health hazard	Warning	Causes damage to organs through prolonged or repeated exposure (respiratory organs, central nervous system)	Based on the evidence from animal studies including "hyperplasia of nasal respiratory epithelium, squamous epitheliummetaplasia" (CERI Hazard Data 97-9 (iii) (1998)), "salivation, tremor, abdominal contamination from urine, a decrease in locomotor activity, tachypnea, labored breathing, clonic spasm, hyperreaction" (SIDS (2005)). The effects on experimental animals were observed at dosing levels within the guidance value ranges for Category 2.
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 LC50=1.4mg/L of the crustacea (Daphnia magna) (EHC168 (1995) and others.).
11 Hazardous to the aquatic environment (chronic)	Not classified	-	-	-	Since there was rapidly degrading (40 days decomposition (the OECD testing guideline 301C): 80-95% (SIDS, 2005)), and bio-accumulation was low (log Kow=1.94(PHYSROP Database, 2005)), it was classified into Not classified.