

GHS Classification

ID19

m-Cresol

CAS 108-39-4

Date Classified: Apr. 20, 2006 (Environmental Hazards: May 24, 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 "liquid" according to GHS definition
3 Flammable aerosols	Not applicable	-	-	-	Not aerosol products
4 Oxidizing gases	Not applicable	-	-	-	Classified as "liquid" according to GHS definition
5 Gases under pressure	Not applicable	-	-	-	Classified as "liquid" according to GHS definition
6 Flammable liquids	Category 4	-	Warning	Flammable liquid	The flash point is 86degC (c.c.) (ICSC, 1999) which is classified into Category 4. Classified into Division 6.1 and Class 8 (UN Recommendations on the Transport of Dangerous Goods, UN#2076 Cresol (liquid))
7 Flammable solids	Not applicable	-	-	-	Classified as "liquid" according to GHS definition
8 Self-reactive substances and mixtures	Not applicable	-	-	-	Containing no chemical groups with explosive or self-reactive properties
9 Pyrophoric liquids	Not classified	-	-	-	Not pyrophoric when in contact with air at ordinary temperatures; the auto-ignition temperature is 626degC (ICSC, 1999)
10 Pyrophoric solids	Not applicable	-	-	-	Classified as "liquid" according to GHS definition
11 Self-heating substances and mixtures	Classification not possible	-	-	-	Test methods applicable to liquid substances are not 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	-	-	-	Organic compounds containing oxygen (but not fluorine and chlorine), with the oxygen bound to carbon and hydrogen (but not to other elements)
14 Oxidizing solids	Not applicable	-	-	-	Classified as "liquid" according to GHS definition
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#2076 Cresol (liquid)).

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 242mg/kg (EHC 168 (1995)).
1 Acute toxicity (dermal)	Category 4	Exclamation mark	Warning	Harmful in contact with skin	Based on the animal LD50 (dermal route) value of 1,100mg/kg representing the lower of the two testing data, 1,100mg/kg and 2,830 mg/kg (EHC 168 (1995)).
1 Acute toxicity (inhalation: gas)	Not applicable	-	-	-	Due to the fact that the substance is "liquid" according to the GHS definition and inhalation of its gas is not expected.
1 Acute toxicity (inhalation: aerosol)	Classification not possible	-	-	-	Insufficient data available
1 Acute toxicity (inhalation: dust, mist)	Classification not possible	-	-	-	Insufficient 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: 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	Not classified	-	-	-	Based on the absence of data on multi-generation mutagenicity and germ cell mutagenicity tests in vivo, and negative data on somatic cell mutagenicity tests in vivo (chromosome aberration tests), described in CERI Hazard Data 97-9 (ii), (1998), SIDS (2005), ATSDR (1992) 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	Category 2	Health hazard	Warning	Suspected of damaging fertility or the unborn child	Based on the description in CERI Hazard Data 97-9 (ii) (1998), SIDS (2005) and ATSDR (1992): The results of rat 2-generation reproduction studies suggest a decrease in the survival rate of baby rats during nursing at a dosage of 450 mg/kg/day. While it is difficult to determine the cause of this finding (i.e., prenatal, postnatal or maternal effects), the probability of prenatal effects cannot be eliminated.

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, salivation, physical collapse, irritation to the nasal cavity, muscular excitement, convulsions, 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 (central nervous system)	Health hazard	Warning	May cause damage to organs through prolonged or repeated exposure (central nervous system)	Based on the evidence from animal studies including "salivation, 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 96 hours LC50=7.6mg/L of the fish (Brook Trout) (CERI Hazard Data, 1998).
11 Hazardous to the aquatic environment (chronic)	Not classified	-	-	-	Since there was rapidly degrading (28 days decomposition (the OECD testing guideline 301D): 65-90% (SIDS, 2005)), and bio-accumulation was low (BCF=20(SIDS (2005))), it was classified into Not classified.