

GHS Classification

ID18

o-Cresol

CAS 95-48-7

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 "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 599degC (ICSC, 2000)
11 Self-heating substances and mixtures	Classification not possible	-	-	-	Test methods applicable to liquid substances are not available - melting point: 30degC (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 121 mg/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 620mg/kg representing the lower of the two testing data, 620mg/kg and 890mg/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: mist)	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 animal eye irritation tests (IUCLID (2000)): "Moderate to severe eye irritation" and "permanent corneal opacity and vascularization"
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: Insufficient data available, though the results of guinea pig skin sensitization tests based on the Maximization method are negative.
5 Germ cell mutagenicity	Not classified	-	-	-	The results of in vitro studies suggest induction of chromosome aberration (SIDS (1998)), while those of multi-generation mutagenicity studies (1), germ cell mutagenicity tests in vivo (2), somatic cell mutagenicity tests in vivo (3), germ cell genotoxicity tests in vivo (4,5) are all negative. The results of germ cell multi-generation mutagenicity tests in vivo (dominant lethal tests) are also negative (ATSDR (1992)).
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	Abnormal estrous cycle and lateral ventricle dilation are observed in offspring at dose levels toxic to parent animals.
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 "irritation to the larynx and nose, narrowing and dry nostrils" (MOE Risk Assessment Vol. 1 (2002)). The substance is thus considered "irritating" to the respiratory tract.

9	Specific target organs/systemic toxicity following repeated exposure	Category 1 (central nervous system, heart, liver, kidneys, respiratory organs)	Health hazard	Danger	Causes damage to organs through prolonged or repeated exposure (central nervous system, heart, liver, kidneys, respiratory	Based on the evidence from animal studies including "a decrease in locomotor activity, adverse effects on body weight gain, pulmonary edema and hemorrhage, degeneration of the myocardium, liver, kidneys and central nervous system (nerve cells and glia cells), upper respiratory tract inflammation, pulmonary edema, perivascular fibrosis" (CERI Hazard Data 97-9 (i) (1998)). 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)	Category 2	-	-	Toxic to aquatic life	It was classified into Category 2 from 48 hours LC50=5mg/L of the crustacea (Daphnia magna) (EHC168 (1995) and others.).
11 Hazardous to the aquatic environment (chronic)	Not classified	-	-	-	Since there was rapidly degrading (the 20 days decomposition rate: 86% (SIDS, 1998)) and the bio-accumulation was low (BCF=10.7 (SIDS, 1998)), it was classified into Not classified.