

GHS Classification

ID708

4-chloro-o-phenylenediamine

CAS 95-83-0

Date Classified: Jul. 24, 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	-	-	-	There are no chemical groups associated with explosive properties present in the molecules.
2 Flammable gases	Not applicable	-	-	-	Solid (GHS definition)
3 Flammable aerosols	Not applicable	-	-	-	Not aerosol products
4 Oxidizing gases	Not applicable	-	-	-	Solid (GHS definition)
5 Gases under pressure	Not applicable	-	-	-	Solid (GHS definition)
6 Flammable liquids	Not applicable	-	-	-	Solid (GHS definition)
7 Flammable solids	Classification not possible	-	-	-	No data available
8 Self-reactive substances and mixtures	Classification not possible	-	-	-	Classification not possible due to lack of data, though the substance corresponds to Halo aniline groups
9 Pyrophoric liquids	Not applicable	-	-	-	Solid (GHS definition)
10 Pyrophoric solids	Classification not possible	-	-	-	No data available
11 Self-heating substances and mixtures	Classification not possible	-	-	-	Test methods applicable to solid (melting point <= 140degC) substances are not available.
12 Substances and mixtures, which in contact with water, emit flammable gases	Not applicable	-	-	-	The chemical structure of the substance does not contain metals or metalloids(B, Si, P, Ge, As, Se, Sn, Sb, Te, Bi, Po, At).
13 Oxidizing liquids	Not applicable	-	-	-	Solid (GHS definition)
14 Oxidizing solids	Not applicable	-	-	-	Organic compounds containing chlorine (but not oxygen and fluorine) and the chlorine is chemically bonded only to carbon (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. Melting point: >55degC

Health Hazards

Hazard class	Classification	symbol	signal word	hazard statement	Rational for the classification
1 Acute toxicity (oral)	Classification not possible	-	-	-	No data available
1 Acute toxicity (dermal)	Classification not possible	-	-	-	No data available
1 Acute toxicity (inhalation: gas)	Not applicable	-	-	-	Solid (GHS definition)
1 Acute toxicity (inhalation: vapour)	Classification not possible	-	-	-	No data available
1 Acute toxicity (inhalation: dust, mist)	Classification not possible	-	-	-	No data available
2 Skin corrosion / irritation	Category 2	Exclamation mark	Warning	Causes skin irritation	It was classified as Category 2 based on the statement that there is skin irritation on humans (SITTIG (47th, 2002)).
3 Serious eye damage / eye irritation	Category 2A-2B	Exclamation mark	Warning	Causes serious eye irritation	It was set as Category 2A-2B based on the statement (SITTIG (47th, 2002)) that there is eye irritation in humans.
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)-	No data available

5	Germ cell mutagenicity	Category 2	Health hazard	Warning	Suspected of causing genetic defects (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)	We found no information on human over generation epidemiology, an over generation mutagenicity test, and a productive cell in vivo mutagenicity test, and we found a positive report by the micronucleus examination (intraperitoneal administration) in mouse marrow cells (Morita T et al: Evaluation of the rodent micronucleus assay to screen IARC carcinogens (Group 1, 2A, and 2B), The summary report of the 6th collaborative study by CSGMT/JFMS.MMS, Mutation Res., 389, 1-122, and 1997), and we found the positive in vivo reports for the gene mutation examination in the mouse hepatic cells, chromosomal aberration test in mouse marrow cells, and a small core examination (4-Chloro-o-phenylenediamine, Health-based calculated occupational cancer risk values. Dutch Expert Committee on Occupational Standards a committee of the Health Council of the Netherlands. to:the Minister and State Secretary of Social Affairs and Employment, No.2005/04OSH, The Hague, 19 April 2005: Internet search result (Mar.2006)). And there was no report of the positive finding in the in vivo genotoxicity study by the productive cells. Therefore we classified it as Category 2.
6	Carcinogenicity	Category 2	Health hazard	Warning	Suspected of causing cancer (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)	It was set as category 2. Based on being classified into 2B by IARC (PATTY (5th, 2001), HSDB (2003)), into 2B by Japan Society for Occupational Health (Occupational Health Society advice (2005)), and into R according to NTP (PATTY (5th, 2001)).
7	Toxic to reproduction	Classification not possible	-	-	-	No data available
8	Specific target organs/systemic toxicity following single exposure	Category 3 (respiratory tract irritation)	Exclamation mark	Warning	may cause respiratory irritation or may cause drowsiness and dizziness (respiratory tract irritation)	It is classified into Category 3 (respiratory irritation) based on the description that there is irritation over a nasal and mucosa in humans (SITTIG (47th, 2002)).
9	Specific target organs/systemic toxicity following repeated exposure	Not classified	-	-	-	Based on the statement that damage to organ was not seen in rats and mice in oral administration study with dosage far higher than the upper limit of the guidance value range of Category 2, (IARC and (1982), PATTY (5th, 2001)), it was classified to as outside of Category.
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)	Classification not possible	-	-	-	No data available
11 Hazardous to the aquatic environment (chronic)	Classification not possible	-	-	-	No data available.