

GHS Classification

ID714

4-chloro-o-toluidinium chloride

CAS 3165-93-3

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	Not applicable	-	-	-	There are no chemical groups associated with explosive or self-reactive properties present in the molecule.
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	-	-	-	No data 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 and hydrogen (but not to other elements).
15 Organic peroxides	Not applicable	-	-	-	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 4	Exclamation mark	Warning	Harmful if swallowed	Category 4 based on SPECIES: Rat; ENDPOINT: LD50:860mg/kg; REFERENCE SOURCE: DFGOT vol.6 (1994)
1 Acute toxicity (dermal)	Category 5	-	Warning	May be harmful in contact with skin	Since the rat percutaneous LD50: >2150mg/kg (DFGOT vol.6 (1994)), it was set as Category 5.
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	Not classified	-	-	-	It was classified as "out of Category" as rat skin did not show irritation after 24 hours of contact (DFGOT vol.6 (1994)).
3 Serious eye damage / eye irritation	Classification not possible	-	-	-	No data available
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)	For in vivo test, mutation was only seen in the next-generation by coat coloured spot test of the mouse (DFGOT vol.6 (1994)), and it gave negative in examinations of the germ cells, such as the translocation test and the dominant lethal test. Therefore we classified it as Category 2.

6	Carcinogenicity	Category 1B	Health hazard	Danger	May cause cancer (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)	Although EPA is considering it as B2 (corresponding to category 2) (HSDB (2003)), it was considered as Category 1B by adopting the classification which IARC is setting 2A (IARC 77 (2000)). A bladder cancer is reported.
7	Toxic to reproduction	Classification not possible	-	-	-	There is only the report of no effect on F1 in male mouse administration (DFGOT vol.6 (1994)), it was not able to find out that pregnancy female test report. Data is insufficient and it cannot be classified.
8	Specific target organs/systemic toxicity following single exposure	Category 1 (bladder)	Health hazard	Danger	Cause damage to organs (bladder)	It is classified into "Category 1" based on that the bladder disorders accompanied by hematuria etc. is reported in humans (IARC 48 (1990), DFGOT vol.6 (1994)). (update 1) From hematuria, there was indication of the specialist whether target organ should be made a urinary tracts. From description of the literature in 1933 quoted from IARC 48 (1991), it can take somehow so. From DFGOT vol.6 (1994), another document of 1980 years was added (what did not carry out first adoption since there was potential of mixtures exposure with pesticides). Here, diagnosis of the bladder effects is indicated clearly.
9	Specific target organs/systemic toxicity following repeated exposure	Category 1 (bladder, liver)	Health hazard	Danger	Causes damage to organs (bladder, liver) through prolonged or repeated exposure	It was classified to as "Category 1" since a bladder disorders is reported for humans and the effects on the liver is reported for the animal (IARC 48 (1991)).
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.