

GHS Classification

ID607

m-Toluidine

CAS 108-44-1

Date Classified: Sep. 20, 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	-	-	-	Liquid (GHS definition)
3 Flammable aerosols	Not applicable	-	-	-	Not aerosol products
4 Oxidizing gases	Not applicable	-	-	-	Liquid (GHS definition)
5 Gases under pressure	Not applicable	-	-	-	Liquid (GHS definition)
6 Flammable liquids	Category 4	-	Warning	Combustible liquid	Flash point: >60degC and <=93degC
7 Flammable solids	Not applicable	-	-	-	Liquid (GHS definition)
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 classified	-	-	-	Flash point: 482degC (ICSC (J), 1995)
10 Pyrophoric solids	Not applicable	-	-	-	Liquid (GHS definition)
11 Self-heating substances and mixtures	Not classified	-	-	-	UNRTDG Class: 6.1
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	-	-	-	Organic compounds containing no oxygen, fluorine and chlorine.
14 Oxidizing solids	Not applicable	-	-	-	Liquid (GHS definition)
15 Organic peroxides	Not applicable	-	-	-	Containing no -O-O- structure
16 Corrosive to metals	Not classified	-	-	-	UNRTDG Class: 6.1

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	Calculated on rat LD50 values: 974mg/kg (SIDS, 2003, PATTY 4th, 1994), 1160mg/kg, 1430mg/kg (SIDS, 2003), and 450mg/kg (SIDS, 2003, ACGIH 7th, 2001). Since the calculated values was 734.6mg/kg, it was set as Category 4.
1 Acute toxicity (dermal)	Category 5	-	Warning	May be harmful in contact with skin	It was set as Category 5 based on rabbit LD50 value: 3250mg/kg (SIDS, 2003).
1 Acute toxicity (inhalation: gas)	Not applicable	-	-	-	Liquid (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 from description that the mild or moderate irritation was observed in the test on rabbits (SIDS (2003)).
3 Serious eye damage / eye irritation	Category 2A-2B	Exclamation mark	Warning	Causes serious eye irritation	It was set as Category 2A-2B from description that the moderate irritation was admitted by the test using the rabbit of SIDS (2003). Since repairable was unknown, subdivision was not carried out.
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	Classification not possible	-	-	-	The substance cannot be classified. Because there are no in vivo data, and the available data are from in vitro chromosome aberration tests using cultured cells and bacterial reverse mutation tests only.
6 Carcinogenicity	Not classified	-	-	-	Not classified because of "A4" (ACGIH, 7th, 2001)
7 Toxic to reproduction	Category 2	Health hazard	Warning	Suspected of damaging fertility or the unborn child	Since there is the description that there is the complete damage to the intrauterine survival ability of early embryo at the dose causing the general toxicity to parent animals in rat oral administration test, and there is the disorder to nursing function of maternal animals in the rat oral study (the Ministry of Health, Labour and Welfare report (2005), SIDS (2003)), it is classified into the Category 2.
8 Specific target organs/systemic toxicity following single exposure	Category 1 (blood system)	Health hazard	Danger	Cause damage to organs (blood system)	It was set as Category 1(blood), based on the description that severe methemoglobinemia was caused by the medication of guidance value range of Category 1 in a single oral administration or the dermal medication test using rats (SIDS (2003)).

9	Specific target organs/systemic toxicity following repeated exposure	Category 2 (blood)	Health hazard	Warning	may cause damage to organs (blood) through prolonged or repeated	It was classified to as Category 2 (blood) because of the description that the effect was acknowledged in blood with the given dose of the guidance value range of Category 2 in the repeated oral administration test using rats of the Health, Labor and Welfare Ministry reports (2005) and SIDS (2003).
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 1	Environment	Warning	Very toxic to aquatic life	It was classified into Category 1 from 48-hour LC50=0.73mg/L of Crustacea (Daphnia magna) (SIDS, 2003).
11 Hazardous to the aquatic environment (chronic)	Category 1	Environment	Warning	Very toxic to aquatic life with long lasting effects	Classified into Category 1, since acute toxicity was Category 1, not rapidly degrading (BOD: 0% (existing chemical safety inspections data)), though supposed less bioaccumulative (log Kow=1.4(PHYSPROP Database, 2005)).