

GHS Classification

ID1023

allylamine

CAS 107-11-9

Date Classified: Mar. 15, 2007 (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	-	-	-	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 2	Flame	Danger	Highly flammable liquid and vapour	Since the flash point was -29 degC (Closed Cup) and the initial boiling point was 55 - 58 degC (boiling point in this case) (ICSC, 1998), it was classified as Category 2.
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	-	-	-	UNRTDG is classified into 6.1 (3) and I according to the U.N. number (2334) peculiar to a substance. It carried out outside Category.
10 Pyrophoric solids	Not applicable	-	-	-	Liquid (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	-	-	-	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	-	-	-	Organic compounds containing no -O-O- structure
16 Corrosive to metals	Classification not possible	-	-	-	Although ICSC (J) (1998) have description "caustic is indicated to aluminum, tin and zinc," test data is not found and it cannot be classified.

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	Between rat LD50 values of 102mg/kg and 106mg/kg (all are PATTY (5th, 2001)), the higher toxic value (102mg/kg) was adopted, and it was classified as category 3.
1 Acute toxicity (dermal)	Category 1	Skull and crossbones	Danger	Fatal in contact with skin	It was set as Category 1 based on rabbit LD50 value = 35mg/kg (PATTY (5th, 2001)).
1 Acute toxicity (inhalation: gas)	Not applicable	-	-	-	Liquid (GHS definition)
1 Acute toxicity (inhalation: vapour)	Category 2	Skull and crossbones	Danger	Fatal if inhaled	The vapor pressures at 25degC is 242mmHg (after conversion: 323hPa), and 177ppm was thought to be in vapor state. Since rat inhalation LC50 value of 177ppm/8h (RTECS (2004)) is converted to LC50 = 0.583mg/L/4h, it was classified as Category 2.
1 Acute toxicity (inhalation: dust, mist)	Classification not possible	-	-	-	No data available
2 Skin corrosion / irritation	Category 2	Exclamation mark	Warning	Causes skin irritation	There is a notation that there is caustic to humans (SITTIG (4th, 2002)). But also there are "redness" (ICSC (J) (1998)), "irritation to the skin" (HSDB, 2003) (NFPA), and taking into consideration that the result of STANDARD DRAIZE TEST (Severe, RTECS (2004)) to a rabbit is a longer processing time (24hr) than usual, although it did not reach caustic, it was thought that there was strong irritation and it was set as Category 2.
3 Serious eye damage / eye irritation	Category 2A-2B	Exclamation mark	Warning	Causes serious eye irritation	There is the description of stimulating the human eye (ICSC (J) (1998), SITTIG (4th, 2002), HSDB (2003), or accident examples (PATTY (5th, 2001)), it has eye irritation. But it is insufficient of the data which judges subdivision, therefore, it was classified into Category 2A-2B. [Indication] 2A is recommended based on the safety, when the Category needs to subdivide.
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	-	-	-	Classification not possible due to lack of data

6	Carcinogenicity	Classification not possible	-	-	-	No data available
7	Toxic to reproduction	Classification not possible	-	-	-	No data available
8	Specific target organs/systemic toxicity following single exposure	Category 2 (inhalation:lung); Category 3 (respiratory tract irritation)	Health hazard	Warning	may cause damage to organs (inhalation:lung); May cause respiratory irritation or may cause drowsiness and dizziness (respiratory tract irritation)	The substance was classified as Category 2 (inhalation: lungs) based on the report, "inhalation of the fumes may cause pulmonary edema" in humans (SITTIG (4th, 2002), ICSC (J) (1998)), and as Category 3 (airway irritant) based on the report, "causes irritation to eyes and airways" (ICSC (J) (1998)), and on an accident case (PATTY (5th, 2001)).
9	Specific target organs/systemic toxicity following repeated exposure	Category 2 (heart)	Health hazard	Warning	may cause damage to organs (heart) through prolonged or repeated	Since we found the description that "the myocardial may be affected and tissue damage may be occurred" to human (ICSC (J) (1998)), we classified it into Category 2 (heart).
10	Aspiration hazard	Classification not possible	-	-	-	Since there is a description of the possibility of pulmonary edema by aspiration in human (SITTIG (4th, 2002)), however, we have no more information satisfying terms of the guidelines of the classification basis, we could not classify because of insufficient data.

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-hour LC50=6000microg/L of fishes (Goldfish) (AQUIRE, 2003).
11 Hazardous to the aquatic environment (chronic)	Category 2	Environment	-	Toxic to aquatic life with long lasting effects	Classified into Category 2, since acute toxicity was Category 2 . and not rapidly degrading (BOD: 41% (existing chemical safety inspections data)), though supposed less bio-accumulative (log Kow=0.03(PHYSROP Database, 2005)).