

## GHS Classification

**ID853**

**Triethanolamine**

**CAS 102-71-6**

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	-	-	-	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	Not classified	-	-	-	Flash point: >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 applicable	-	-	-	It is known not to ignite spontaneously from the experience in manufacturing or treatment, even if it contacts the normal temperature air.
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 oxygen (but not chlorine and fluorine) chemically bonded only to carbon and hydrogen (but not to other elements).
14 Oxidizing solids	Not applicable	-	-	-	Liquid (GHS definition)
15 Organic peroxides	Not applicable	-	-	-	Containing no -O-O- structure
16 Corrosive to metals	Classification not possible	-	-	-	No data available

## Health Hazards

Hazard class	Classification	symbol	signal word	hazard statement	Rational for the classification
1 Acute toxicity (oral)	Not classified	-	-	-	Calculated based on rat LD50 values: 8680mg/kg, 9110mg/kg (ACGIH 7th, 2001), 8000 to 9110 mg/kg (PATTY 4th, 1994), 8000 to 9000 mg/kg, and 4200 to 11300 mg/kg (NTP TR 518, 2004). Since the calculated value was 7269.3 mg/kg, it was set as the outside of Category.
1 Acute toxicity (dermal)	Not classified	-	-	-	Since death was not acknowledged in the test in which 2000mg/kg was dermally exposed for 24 hours to skin of rabbits (NTP TR 518 (2004)), it was set as the outside of Category.
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 set as Category 2 from description that skin irritation was acknowledged by high exposure levels or repeated exposure in the humans (ACGIH (7th, 2001), SIDS (2005), IARC 77 (2000), NTP TR 518 (2004)).
3 Serious eye damage / eye irritation	Category 2A	Exclamation mark	Warning	Causes serious eye irritation	There is the description that in the eye irritation tests using the rabbit, irritation was acknowledged and it recovered completely 14 days afterward (ACGIH (7th, 2001), PATTY (4th, 1994), and NTP TR 518 (2004)). So it was set as Category 2A.
4 Respiratory/skin sensitization	Respiratory sensitization: Classification not possible; Skin sensitization: Category 1	(Respiratory sensitization)-; (Skin sensitization)Exclamation mark	(Respiratory sensitization)-; (Skin sensitization)Warning	(Respiratory sensitization)-; (Skin sensitization)May cause allergic skin reaction	Respiratory organ: No data Skin: We classified it as Category 1 based on the description that there are reports of allergic contact dermatitis in human in ACGIH (7th, 2001), IARC 77 (2000), and NTP TR 518 (2004).
5 Germ cell mutagenicity	Not classified	-	-	-	Since there was a negative result with the micronucleus test on mice red corpuscles which is a in vivo mutagenicity test using somatic cells (IARC 77, 2000 and NTP TR 518, 2004), it was classified as out of Category.
6 Carcinogenicity	Not classified	-	-	-	Since it was classified into the group 3 in IARC 77 (2000), it considered as the outside of Category.

7	Toxic to reproduction	Not classified	-	-	-	It was considered as out of Category based on the description that effect was not observed on sperm and the female estrous cycle in the rat or mouse 13-weeks dermal administration test at dose of 2000mg/kg or more (IARC 77 (2000)), description that affect to a fetal/pup was not observed in the pregnant mouse oral administration test at dose of 1125mg/kg (NTP TR 518 (2004)), and the description that affect was not observed on fertile potential and to offsprings in the test which carried out dermal administration of the 500mg/kg to the rat and 2000mg/kg to mice from pre-mating to lactation periods ends (IARC 77 (2000) and NTP TR 518 (2004)).
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 was set as Category 3 (respiratory irritant) from description that vapor stimulates a nose as effect on the humans in NTP TR 518 (2004).
9	Specific target organs/systemic toxicity following repeated exposure	Not classified	-	-	-	Regarding the descriptions that major toxicity was not observed in dermal, oral, or an inhalation exposure test using rats, mice, or guinea pigs with the given dose of the guidance value range of Category 2, and it was set to out of Category (ACGIH (7th, 2001), PATTY (4th, 1994), in IARC 77 (2000) and NTP TR 518 (2004)).
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)	Not classified	-	-	-	It carried out the outside of Category from 96-hour ErC50=169mg/L of algae (Scenedesmus) (IUCLID, 2000).
11 Hazardous to the aquatic environment (chronic)	Not classified	-	-	-	Since not water-insoluble (water solubility=1.00*10 <sup>6</sup> mg/L(PHYSROP Database, 2005)) and acute toxicity is low.