

## GHS Classification

**ID172**

**CAS 628-96-6**

**Physical Hazards**

**1,2-Ethanediol, dinitrate**

Date Classified: Mar. 23, 2006

Reference Manual: GHS Classification Manual (Feb. 10, 2006)

Hazard class	Classification	symbol	signal word	hazard statement	Rational for the classification
1 Explosives	Division 1.1	Exploding bomb	Danger	Explosive; mass explosion hazard	UNRTDG Class: 1.1D
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	-	-	-	UNRTDG Class: 1.1D
7 Flammable solids	Not applicable	-	-	-	Liquid (GHS definition)
8 Self-reactive substances and mixtures	Not applicable	-	-	-	Classified in explosives
9 Pyrophoric liquids	Not classified	-	-	-	UNRTDG Class: 1.1D
10 Pyrophoric solids	Not applicable	-	-	-	Liquid (GHS definition)
11 Self-heating substances and mixtures	Not classified	-	-	-	UNRTDG Class: 1.1D
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 classified	-	-	-	UNRTDG Class: 1.1D
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: 1.1D

**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	Based on rat oral LD50 value = 616mg/kg (CERI Hazard Data, 2001), it was set as Category 4.
1 Acute toxicity (dermal)	Not classified	-	-	-	Based on rat percutaneous LD50 value = 16000mg/kg (Japan Society for Occupational Health recommendation, 1986), it was set as the outside of Category.
1 Acute toxicity (inhalation: gas)	Classification not possible	-	-	-	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	Classification not possible	-	-	-	There is description which suggests the possibility of skin irritations (HSFS, 1999). But there is no other information. Therefore, it cannot be classified because of insufficient data.
3 Serious eye damage / eye irritation	Classification not possible	-	-	-	Although there is description (PATY, 1994) which indicates very slightly irritating to the eyes in human. But there is no information in others including concrete case reports, and data is insufficient, it cannot be classified.
4 Respiratory/skin sensitization	respiratory sensitization: Classification not possible; Skin sensitization: Classification not possible	-	-	-	No data available
5 Germ cell mutagenicity	Classification not possible	-	-	-	No data available
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 1 (cardiovascular system, blood system)	Health hazard	Danger	Cause damage to organs (cardiovascular system, blood system)	Due to the description that arrhythmia, hypotension, methaemoglobinaemia, and Heinz snug formation were observed in human exposures (in CERl Hazard Data (2001)), and that the blood-pressure decreased was observed in human exposure example (ACGIH (2001), PATTY (1994)). So it is considered that the target organs are cardiovascular systems and blood, therefore, it was classified into Category 1.
9	Specific target organs/systemic toxicity following repeated exposure	Category 1 (cardiovascular system); Category 2 (blood)	Health hazard	Danger	Causes damage to organs (cardiovascular system) through prolonged or repeated exposure; May cause damage to organs (blood) through prolonged or repeated	Due to the descriptions in ACGIH (2001), PATTY (1994), and industrial hygiene academic society advice (1986) (CERl Hazard Data(2001) that attack like angina pectoris, hypotension, or arrhythmia were observed in humans exposure example, and that the mortality rate according to heart disease at exposure example is high (from ACGIH (2001) and PATTY (1994)), it is considered that target organ is cardiovascular system, and it was classified into Category 1. Furthermore, due to the description (CERl Hazard Data (2001)) that the Heinz body was observed by the six-month inhalation study of rats and guinea pigs by moderate exposures, it is considered that blood was also target organ and it was classified into Category 2.
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.