GHS Classification

ID711 1-chloro-1-nitropropane

CAS 600-25-9 Date Classified: Apr. 20, 2006 (Environmental Hazards: Mar. 31, 2006)

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

Physical Hazards

	Hazard class	Classification	symbol	signal word	hazard statement	Rational for the classification
1	Explosives	Classification not possible	–	–	–	Classification not possible due to lack of data. The substance could be classified as explosives since it contains N-O bonds as chemical groups associated with explosive properties present and has oxygen balance calculated at -84.2, higher than -200 of the criteria.
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	It was classified as Category 4 (GHS standards: flash point being more than 60 degC and 93 degC or less) based on 62 degC of flash point. However, each of these flash point is obtained with open measurement, it needs data with closed cup for a strict judgment.
7	Flammable solids	Not applicable	–	–	–	Liquid (GHS definition)
8	Self-reactive substances and mixtures	Classification not possible	–	–	–	Classification not possible due to lack of data, though the substance contains N-O bonds (nitro groups) as chemical groups with explosive properties present
9	Pyrophoric liquids	Classification not possible	–	–	–	No data available
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 metaloids(B, Si, P, Ge, As, Se, Sn, Sb, Te, Bi, Po, At).
13	Oxidizing liquids	Classification not possible	–	–	–	Classification not possible due to lack of data, though containing oxygen bonded to other than carbon and hydrogen.
14	Oxidizing solids	Not applicable	–	–	–	Liquid (GHS definition)
15	Organic peroxides	Not applicable	–	–	–	Organic compounds containing no -0-0- 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)	Category 4	Exclamation mark	Warning	Harmful if swallowed	SPECIES: Mouse ENDPOINT: LD50 VALUE: 510 mg/g REFERENCE SOURCE: DFGOT vol.1 (1991)
1	Acute toxicity (dermal)	Classification not possible	–	–	–	No data available
1	Acute toxicity (inhalation: gas)	Not applicable	–	–	–	Liquid (GHS definition)
1	Acute toxicity (inhalation: vapour)	Classification not possible	–	–	–	Classification not possible due to lack of data
1	Acute toxicity (inhalation: dust, mist)	Not classified	–	–	–	It was set as the outside of Category based on mouse LC50 = 49mg/L (DFGOT vol.1 (1991)) of inhalation study done with mist.
2	Skin corrosion / irritation	Category 3	–	Warning	Causes mild skin irritation	Based on the report that slight erythema is observed on rabbits (DFGOT vol.1 (1991)), it was classified as Category 3.
3	Serious eye damage / eye irritation	Category 2A	Exclamation mark	Warning	Causes serious eye irritation	Based on the statement with significant eye irritations in humans (HSDB (2005), ICSC (J) (2001)), it was set as Category 2A.
4	Respiratory/skin sensitization	Respiratory sensitization: Classification not possible; Skin sensitization: Classification not	(Respiratory sensitization)-; (Skin sensitization)-	(Respiratory sensitization)-; (Skin sensitization)-	(Respiratory sensitization)-; (Skin sensitization)-	No data available
5	Germ cell mutagenicity	Classification not possible	–	–	–	There was no in vivo mutagenicity test results and the in vitro strong positive result was not acknowledged with multiple indices. Therefore we presupposed that we could not categorize it according to the technical guideline.

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 (respiratory)	Health hazard	Warning	May cause damage to organs (respiratory)	There is a report that pulmonary oedema is seen and that there is respiratory irritation in human (ICSC (J) (2001), HSDB (2005)). Although expressed dose is unknown also in an animal, pulmonary oedema (DFGOT vol.1 (1991)) and respiratory irritation (PATTY (5th, 2001)) are reported. It is classified into Category 2 (respiratory tract systems) based on these statements.
9	Specific target organs/systemic toxicity following repeated exposure	Classification not possible	–	–	–	No data available
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.