GHS Classification

ID623 **iodine**

CAS 7553-56-2 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	–	–	–	Solid (GHS definition)
3	Flammable aerosols	Not applicable	–	–	–	Not aerosol products
4	Oxidizing gases	Not applicable	–	–	–	Solid (GHS definition)
5	Gases under pressure	Not applicable	–	–	–	Solid (GHS definition)
6	Flammable liquids	Not applicable	–	–	–	Solid (GHS definition)
7	Flammable solids	Not classified	–	–	–	Non-combustible (ICSC (J) (2004))
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	–	–	–	Solid (GHS definition)
10	Pyrophoric solids	Not classified	–	–	–	Non-combustible (ICSC (J), 2004)
11	Self-heating substances and mixtures	Not classified	–	–	–	Not combustible (ICSC(J) (2004))
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	Not applicable	–	–	–	Solid (GHS definition)
14	Oxidizing solids	Classification not possible	–	–	–	No data available by regulated examination methods, though it is a straong oxidizing agent (ICSC(J), 2004)
15	Organic peroxides	Not applicable	–	–	–	Containing no -0-0- structure
16	Corrosive to metals	Classification not possible	–	–	–	Test methods applicable to solid substances are not available.

Health Hazards

Hazard class		Classification	symbol	signal word	hazard statement	Rational for the classification
1	Acute toxicity (oral)	Not classified	–	–	–	SPECIES: Rat ENDPOINT: LD50 VALUE: 14000 mg/kg REFERENCE SOURCE: PATTY (4th, 1994),
1	Acute toxicity (dermal)	Classification not possible	–	–	–	No data available
1	Acute toxicity (inhalation: gas)	Not applicable	–	–	–	Solid (GHS definition)
1	Acute toxicity (inhalation: vapour)	Classification not possible	–	–	–	No data available
1	Acute toxicity (inhalation: dust, mist)	Classification not possible	–	–	–	There is a data with rat LCLo (1 hour) value: 0.8mg/L (4-hour equivalent 0.2 mg/L) (PATTY (4th, 1994)). But there is no data about LC50 value, and Category could not be specified. Therefore, it cannot be classifed since data is insufficient.
2	Skin corrosion / irritation	Category 2	Exclamation mark	Warning	Causes skin irritation	There was no concrete case report. But from description that the skin water vacuole caused as a local effects (industrial hygiene society advice (1993)), it was judged to have skin irritativeness and it was classified as Category 2.
3	Serious eye damage / eye irritation	Category 2A-2B	Exclamation mark	Warning	Causes serious eye irritation	There was no concrete case report. But from description that conjunctivitis was caused as a local effect on Occupational Health Recommendation of Occupational Exposure Limits (1993), it was judged that it was eye irritation. So it was set as Category 2A-2B.
4	Respiratory/skin sensitization	Respiratory sensitization: Classification not possible; Skin sensitization: Category1	(Respiratory sensitization)-; (Skin sensitization)Exclamation mark	(Respiratory sensitization)-; (Skin sensitization)Warning	(Respiratory sensitization)-; (Skin sensitization)May cause allergic skin reaction	Respirator: No data Derma: It is listed as the derma sensitization substance by the Japanese Society for Contact Dermatitis. Since it is listed in the 2nd skin group of the sensitization substance of The Japanese Industrial Hygene Academic Society's recommendation for acceptable density limit and as a skin sensitization substance by the Japanese Occupationl and Environmental Allergy Society, and case reports on separate contact dermatitis are found in the Japanese occupation and environmental allergology meeting's magazine 2004, ACGIH (7th, 2001) and PATTY (4th, 1994), it was referred to as Category 1.
5	Germ cell mutagenicity	Classification not possible	–	–	–	Since we only found data of an in vitro examination (the gene mutation examination using the cultured mammalian cells: negative), we could not classify it.
6	Carcinogenicity	Classification not possible	–	–	–	Classification not possible due to lack of data
7	Toxic to reproduction	Classification not possible	–	–	–	Classification not possible due to lack of data

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). Based on the description that airway irritation is identified in the inhaled steam and mist of the solution by humans (ACGIH (7th, 2001), PATTY (4th, 1994) and Japan Societ for Occupational Health Recommendation of Occupational Exposure Limits(1993)).
9	Specific target organs/systemic toxicity following repeated exposure	Category 1 (thyroid gland)	Health hazard	Danger	Causes damage to organs (thyroid gland) through prolonged or repeated exposure	It was classified to as Category 1 (thyroid) from the description that the thyroid desease (hypothyroidism, hyperfunction, or thyroiditis) is caused by oral ingestion in humans of ATSDR (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)	Category 1	Environment	Warning	Very toxic to aquatic life	It was classified into Category 1 from 48-hour LC50=0.16mg/L of Crustacea (Daphnia magna) (ECETOC TR91, 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, and behavior in water and bioaccumulative potential are unknown.