

GHS Classification

ID1037

lead dicyanide

CAS 592-05-2

Date Classified: Mar. 15, 2007 (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 (ERG, Guide151, 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 (ERG, Guide151, 2004)
11 Self-heating substances and mixtures	Not classified	-	-	-	Non-combustible (ERG, Guide151, 2004)
12 Substances and mixtures, which in contact with water, emit flammable gases	Not classified	-	-	-	Stable to water (soluble in water)
13 Oxidizing liquids	Not applicable	-	-	-	Solid (GHS definition)
14 Oxidizing solids	Not applicable	-	-	-	Inorganic compounds containing no oxygen and halogen.
15 Organic peroxides	Not applicable	-	-	-	Inorganic compound
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)	Classification not possible	-	-	-	Although there is the data of rat which LD ₅₀ > 1g/kg (RTECS (2004)), it is an estimate in LD. Since there is no other data, and data is insufficient, it cannot be classified.
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	-	-	-	No data available
2 Skin corrosion / irritation	Classification not possible	-	-	-	No data available
3 Serious eye damage / eye irritation	Classification not possible	-	-	-	No data available
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	Category 2	Health hazard	Warning	Suspected of causing genetic defects (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)	There is no this product data. But it is supposed that a lead (inorganic lead compound) induces human chromosome aberration in ATSDR (draft, 2005), and it is classified with 3A as inorganic lead compounds in MAK/BAT (2004). So it is set as Category 2.

6	Carcinogenicity	Category 1B	Health hazard	Danger	May cause cancer (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)	IARC87 (2004) is equivalent to Category 1B (Group 2A) as a lead compounds, NTP RoC (11th, 2005) is equivalent to Category 1B-2 (Reasonably anticipated to be human carcinogens), IRIS (1993), ACGIH-TLV (2004), and industrial hygiene academic recommendation (2004) were equivalent to Category 2 (respectively B-2, A3, 2B). In view of safety, it was considered as Category 1B according to Group 2A of IARC87 (2004).
7	Toxic to reproduction	Category 1A	Health hazard	Danger	May damage fertility or the unborn child	Although there is no data of this product, in ACGIH-TLV (2004) of Priority 1 document, ATSDR (draft, 2005), etc., it is supposed that reproductive toxicity is indicated to humans in the lead (inorganic lead compound). This product is water solubles, and blood levels might become high by exposure. And it was considered as Category 1A according to expert opinion.
8	Specific target organs/systemic toxicity following single exposure	Classification not possible	-	-	-	Although there are reports of effects on the central nervous system in HSFS (1999), there are no supporting data, so the substance cannot be classified due to insufficient data.
9	Specific target organs/systemic toxicity following repeated exposure	Category 1 (central nervous system, blood, kidneys)	Health hazard	Danger	causes damage to organs (central nervous system, blood, kidneys) through prolonged or repeated	In ACGIH-TLV (2004; Priority 1 document), it is supposed that it has effect on the central nervous system, blood, and the kidney in repeated exposure of lead and inorganic lead compounds. Since there was the similar description in HSFS (1999; Priority 2 document), we classified it into Category 1 (the central nervous system, blood, kidney).
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.