

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. |

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|----|--|---|---------------|--------|---|---|
| 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. |