# GHS Classification

## ID1171 dilead chromate oxide

**CAS 18454-12-1** 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 | – | – | – | Since its melting point is high (920 degC), and it was considered to be nonflammable also from its composition, it was classified as out of Category. |
| 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 | – | – | – | The melting point was high (920 degC) and it was considered to be nonflammable also in composition, and was defined as "outside of Category". |
| 11 | Self-heating substances and mixtures | Not classified | – | – | – | Since the melting point is high (920 degC) and also was considered to be nonflammable in composition, it is set to the outside of category. |
| 12 | Substances and mixtures, which in contact with water, emit flammable gases | Not classified | – | – | – | Stable to water (insoluble in water) |
| 13 | Oxidizing liquids | Not applicable | – | – | – | Solid (GHS definition) |
| 14 | Oxidizing solids | Classification not possible | – | – | – | No data available |
| 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 | – | – | – | No data available |
| 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 | – | – | – | Data without.<br>In addition, there is the description that "caustics or irritation" as an influence of chromate and its salts to the skin is seen (IRIS (1998), DHP (13th, 2002), DFGOT vol.3 (1992)). Moreover, also refer to the information on lead chromate (VI) (ID 21, Chemical Abstracts Service:7758-97-6). |
| 3 | Serious eye damage / eye irritation | Classification not possible | – | – | – | No data available |
| 4 | Respiratory/skin sensitization | Respiratory sensitization: Category1; Skin sensitization: Category1 | (Respiratory sensitization)Health hazard; (Skin sensitization)Exclamation mark | (Respiratory sensitization)Danger; (Skin sensitization)Warning | (Respiratory sensitization)May cause allegy or asthma symptoms pr breathing difficulties if inhaled; (Skin sensitization)May cause allergic skin reaction | Respiratory sensitization : although there is no report of this material itself, chromium and chromium compound were classified into "the 2nd group (material considered that there is probably sensitizing to human)" in Japan Association of Industrial Health, and chromium was classified into the material with respiratory sensitization in Japanese Society of Occupational Allergy Special Committee, this product thought that it had respiratory sensitization and was set to Category 1.<br><br>Skin sensitization: in Japan Society for Occupational Health, although there was no report of this material itself, since chromium and chromium compound were classified into "the 1st group (material which has sensitizing clearly to human)", this product thought that it had skin sensitization, and was set to Category 1. |

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| 5 | Germ cell mutagenicity | Classification not possible | – | – | – | No data.<br>In addition, although this product is the insoluble hexavalent chromium compounds, the mutagenicity knowledge in in vivo is indicated about many flood solubility hexavalent chromium compounds (NTP RoC (11th, 2005), IARC49 (1990), EU-RAR (2005)). Refer to potassium dichromate (ID 262, Chemical Abstracts Service:7778-50-9). Moreover, inorganic lead compounds describes that a chromosome aberration is induced to humans in ATSDR (draft, 2005), and is classified into the germ cell mutagenicities 3A (equivalent to GHS Category 1B-2) in MAK/BAT (2005). |
| 6 | Carcinogenicity | Category 1A | Health hazard | Danger | May cause cancer (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard) | As hexavalent chromium compounds, since it was was classified K (Chromium hexavalent (VI) compounds) in NTP (2005), group 1 (Chromium(VI)) in IARC (1990), and A (Chromium(VI), Inhalation route) in EPA (1986), respectively. So it was classified into Category 1A. |
| 7 | Toxic to reproduction | Category 1A | Health hazard | Danger | May damage fertility or the undorn child | Although there is no this product data, there is the description that a lead (inorganic lead compound) shows humans reproductive toxicity (ATSDR (draft, 2005), Chemically Induced Birth Defects (3rd ed, 2000)), and it was set as Category 1A due to the category of reproductive toxicity has been done also by ACGIH (ACGIH-TLV (2005)). In addition, also refer to potassium dichromate (ID 262, CAS: 7778-50-9) as reproductive toxicity of hexavalent chromium compounds. |
| 8 | Specific target organs/systemic toxicity following single exposure | Category 1 (central nervous system, blood system, kidneys) | Health hazard | Danger | Cause damage to organs (central nervous system, blood system, kidneys) | Although there is no data about this product, since about humans, as toxicity of the inorganic lead compounds "symptom that the acute influence of inorganic leads and chronic influence are almost the same is observed" (CERI Hazard Data 2001-9, 2002), in ACGIH-TLV (2005), it effects on the central nervous systems, blood, renal as inorganic leads compound, it was considered as Category 1 (a central nervous system, blood, kidney). In addition, there is description that when orally or percutaneous absorption is carried out as acute toxicities of the hexavalent chromium compound, vomiting, diarrhea, a spasm, a hemorrhagic nephritis, etc. are caused (DFGOT vol.3 (1992), DHP (13th, 2002)). |
| 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 | Although there was no data of this product, as an inorganic lead compound, it effects on central nervous systems, blood, and kidney (ACGIH-TLV (2005) in Priority 1 document). It was classified into Category 1 (central nervous system, blood, kidney). In addition, there is a description of effects on a kidney, nasal septum perforation, ulcers, etc. as chronic toxicity of hexavalent chromium compounds (ACGIH (7th, 2001), IRIS (1998), DHP (13th, 2002)). |
| 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. |