

GHS Classification

ID1173

C.I. Pigment Red 104

CAS 12656-85-8

Date Classified: Aug. 22, 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 (BGIA, GESTIS-database on hazardous substances, Accessed in 2006)
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 (BGIA, GESTIS-database on hazardous substances, Accessed in 2006)
11 Self-heating substances and mixtures	Not classified	-	-	-	Non-combustible (GESTIS-database on hazardous substances, accessed in 2006)
12 Substances and mixtures, which in contact with water, emit flammable gases	Not classified	-	-	-	Stable to water (the water solubility is obtained)
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)	Not classified	-	-	-	SPECIES: Rat ENDPOINT: LD50 VALUE: > 5000 mg/kg REFERENCE SOURCE: IUCLID (2000)
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	-	-	-	There is the test using a rabbit that reports "there is no irritation" (IUCLID (2000)). But it cannot be classified since the detail were not understood and the data is insufficient.
3 Serious eye damage / eye irritation	Classification not possible	-	-	-	Although there is the description that "it has no irritation" in the test using rabbit (IUCLID (2000)), the details are insufficient. Hence it cannot be classified.
4 Respiratory/skin sensitization	Respiratory sensitization: Category 1; Skin sensitization: Category 1	(Respiratory sensitization)Health hazard; (Skin sensitization)Exclamation mark	(Respiratory sensitization)Danger; (Skin sensitization)Warning	(Respiratory sensitization)May cause allergy or asthma symptoms or 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. 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.

5	Germ cell mutagenicity	Classification not possible	-	-	-	No data. In addition, although this product is the insoluble hexavalent chromium compounds, the mutagenicity knowledge 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 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 unborn 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 "symptom that the acute influence of inorganic leads and chronic influence are almost the same is observed" about humans, as toxicity of the inorganic lead compounds (CERI Hazard Data 2001-9, 2002), in ACGIH-TLV (2005), it effects on the central nervous systems, blood, and renal as inorganic leads compound, it was considered as Category 1 (a central nervous system, blood, kidney). In addition, there is description that when oral 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)). Moreover, the influence on blood (anemia) (PATTY (5th, 2001)) and respiratory irritant (HSDB (2003)) are mentioned as toxicity of molybdenum.
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 kidneys, nasal septum perforation, ulcers, etc. as chronic toxicity of hexavalent chromium compounds (ACGIH (7th, 2001), IRIS (1998), DHP (13th, 2002)). Moreover, as toxicity of molybdenum, effects on blood (anemia) and lungs (pneumoconiosis) are mentioned (PATTY (5th, 2001), HSDB (2003)).
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	-	-	-	Insufficient data available.
11 Hazardous to the aquatic environment (chronic)	Category 4	-	-	May cause long lasting harmful effects to aquatic life	Classified into Category 4, since it is a metallic compound, and behavior in water is unknown, though no acute toxicity is reported within the saturated aqueous solution.