

GHS Classification

ID1172

Chromium zinc oxide

CAS 50922-29-7

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	-	-	-	Not classified because it is considered as non-combustible substances structurally
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	-	-	-	Not classified because it is considered as Non-combustible substances structurally
11 Self-heating substances and mixtures	Not classified	-	-	-	Not classified because it is considered as non-combustible substances structurally
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)	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. There is the description that "caustics or irritation" as influence of chromate and its salts to the skin is seen (IRIS (1998), DFGOT vol.3 (1992), DHP (13th, 2002)).
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 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 DFGOT vol.15 (2001), the zinc chromate compound including this product is set to "Sh (risk of skin sensitization)" based on the report of the contact nature dermatitis to the worker dealing with zinc chromate. Furthermore, chromium and chromium compound are classified into "the 1st group (substance which has sensitizing clearly to human)" in Japan Society for Occupational Health. 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).

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	Classification not possible	-	-	-	There is no data. 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 (kidneys, digestive system)	Health hazard	Danger	Cause damage to organs (kidneys, digestive system)	Since although there is no data about this product, there was description of vomiting, diarrhea, a spasm, a hemorrhagic nephritis, etc., when oral or percutaneous absorption is carried out as acute toxicities of the hexavalent chromium compound (DFGOT vol.3 (1992), DHP (13th, 2002)), it was considered as Category 1 (the kidney, alimentary system).
9	Specific target organs/systemic toxicity following repeated exposure	Category 1 (kidneys, respiratory organs)	Health hazard	Danger	Causes damage to organs (kidneys, respiratory organs) through prolonged or repeated	Although there is no data of this product, because of descriptions 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)), it was classified into Category 1 (kidney, respiratory system).
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.