

GHS Classification

ID108

Chromium

CAS 7440-47-3

Date Classified: May 24, 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-flammable (IUCILID (2000))
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-flammable (IUCILID, 2000) and Flash point: 580 degC for fine dust (cloud), 400 degC for fine dust (layer) (IUCILID, 2000)
11 Self-heating substances and mixtures	Not classified	-	-	-	Non-flammable (IUCILID, 2000)
12 Substances and mixtures, which in contact with water, emit flammable gases	Classification not possible	-	-	-	No data available
13 Oxidizing liquids	Not applicable	-	-	-	Solid (GHS definition)
14 Oxidizing solids	Not applicable	-	-	-	Containing no oxygen , chlorine and fluorine.
15 Organic peroxides	Not applicable	-	-	-	Inorganic substance. There are no chemical groups associated with peroxide present in the molecule.
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	-	-	-	No data available
3 Serious eye damage / eye irritation	Category 2B	-	Warning	Causes eye irritation	It was classified into Category 2B based on the statement which powdered might cause irritation (mechanical) (SITTIG (47th, 2002), HSDB (2005), ICSC (2004)).
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: Classified into Category 1 on the basis that this is listed by the Japanese Occupational and Environmental Allergology Society . In addition, the Japan Society for Occupational Health classified this as a "substance considered to probably have sensitization to humans." Skin sensitization : No sensitization is found in the forms of chromium metal, chromium alloy and chrome plating. However we classified this into Category 1 based on the description that this may dissolve with moisture to cause skin sensitization exposed by chromium ion (ECETOC Technical Report 45 (1992)). In addition, the Japan Society for Occupational Health classified this as a "substance considered to clearly have sensitization to humans."

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)	The substance was classified as Category 2 based on the positive result of the in vivo mutagenicity test using somatic cells (the chromosome aberration test using rat peripheral blood lymphocytes) (IARC 49 (1999)).
6	Carcinogenicity	Not classified	-	-	-	Based on being classified into a group 3 according to IARC (1999), and being classified into A4 according to ACGIH (1994), it was classified as out of Category.
7	Toxic to reproduction	Classification not possible	-	-	-	No data available
8	Specific target organs/systemic toxicity following single exposure	Category 2 (systemic toxicity); Category 3 (respiratory tract irritation)	Health hazard; Exclamation mark	Warning	may cause damage to organs (systemic toxicity); May cause respiratory irritation or may cause drowsiness and dizziness (respiratory tract irritation)	The substance was classified as Category 2 (systemic toxicity). Based on the statement that it may cause metal fume fever (SITTIG (47th, 2002), HSFS (2000)). The substance was classified as Category 3 (airway irritant). Based on the report of airway irritation in humans (HSDB (2005)).
9	Specific target organs/systemic toxicity following repeated exposure	Classification not possible	-	-	-	Insufficient data available
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)	Classification not possible	-	-	-	Classification not possible due to lack of data