

GHS Classification

ID1253

Chromic acid (H₂Cr₂O₇)

CAS 13530-68-2

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	-	-	-	Liquid (GHS definition)
3 Flammable aerosols	Not applicable	-	-	-	Not aerosol products
4 Oxidizing gases	Not applicable	-	-	-	Liquid (GHS definition)
5 Gases under pressure	Not applicable	-	-	-	Liquid (GHS definition)
6 Flammable liquids	Not classified	-	-	-	Not classified because it is considered as non-combustible substances structurally
7 Flammable solids	Not applicable	-	-	-	Liquid (GHS definition)
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 classified	-	-	-	It was considered nonflammable in composition and carried out the outside of Category.
10 Pyrophoric solids	Not applicable	-	-	-	Liquid (GHS definition)
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. (It exists in the state of aqueous solutions.)
13 Oxidizing liquids	Classification not possible	-	-	-	Although it is a strong oxidizers (all data for the subject substance of Poisonous and Violent Substances Control LawMSDS, Chemical Daily, 2001) and 5.1 which indicates an oxidizability is attached in UNRTDG of Generic or N.O.S.entry, UN packing group is unknown. Therefore, it cannot be classified since data is insufficient. (All data for the subject substance of Poisonous and Violent Substances Control LawMSDS (Chemical Daily, 2001) has a statement that it is classified into class 5.1 and Division II according to IMDG and ICAO/IATA.)
14 Oxidizing solids	Not applicable	-	-	-	Liquid (GHS definition)
15 Organic peroxides	Not applicable	-	-	-	Inorganic compound
16 Corrosive to metals	Classification not possible	-	-	-	No data 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	-	-	-	Liquid (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	Category 1A-1C	Corrosion	Danger	Causes severe skin burns and eye damage	Since there is description that "irritation or caustics" is shown as the effect of chromate to the skin (IRIS (1998), DHP (13th, 2002)), and the dichromic acid potassium of the similar compound was classified into category 1(ID 262, Chemical Abstracts Service:7778-50-9), it was set as category 1A-1C. In addition, further categorizing from this data is difficult.
3 Serious eye damage / eye irritation	Category 1	Corrosion	Danger	Causes serious eye damage	From the description that highly-hydrosoluble hexavalent chrome compound damages a human eye (EU-RAR, 2002), and from skin corrosiveness (Category 1), it was set to Category 1
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	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 data of this product. In addition, the mutagenicity knowledge in vivo is indicated about many food solubility hexavalent chromium compounds (NTP RoC (11th, 2005), IARC49 (1990), EU-RAR (2005)), and it is classified into Category 2. In addition, potassium dichromate (ID 262, CAS: 7778-50-9) is categorized into Category 1B from a dominant fatality test positives. And sodium dichromates (ID 260, CAS: 10588-01-9, sodium dichromate) is categorized into Category 2 from positivities, such as an in vivo small core test.
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 a chromium compound of 6 values, it was classified into K (Chromium hexavalent(VI)compounds) by NTP (2005), group 1 (Chromium(VI)) according to IARC (1990), and A (Chromium(VI), Inhalation route) according to EPA (1986). Therefore, it was set as Category 1A.
7	Toxic to reproduction	Classification not possible	-	-	-	without Data. In addition, for the reproductive toxicity of hexavalent chromium compounds, refer to potassium dichromate (ID 262, CAS: 7778-50-9, and it is classified into Category1B)
8	Specific target organs/systemic toxicity following single exposure	Category 1 (respiratory, kidneys, liver)	Health hazard	Danger	Cause damage to organs (respiratory, kidneys, liver)	Although there was no data about this product, since the soluble hexavalent chromium compound affects liver, the kidney, and respiratory organs, it was considered as Category 1 (the respiratory system, kidney, liver) (ACGIH-TLV (2005)) in the document of Priority 1.
9	Specific target organs/systemic toxicity following repeated exposure	Category 1 (respiratory organs, kidneys, liver)	Health hazard	Danger	Causes damage to organs (respiratory organs, kidneys, liver) through prolonged or repeated exposure	Although there was no this product data, since the soluble hexavalent chromium compound may affect liver, the kidney, and respiratory organs (ACGIH-TLV (2005) the document of Priority 1), it was classified into Category 1 (the respiratory system, kidney, liver).
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