GHS Classification

ID373 Chromium (III) hydroxide

CAS 1308-14-1 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	–	–	–	Containing no chemical groups with explosive properties
2	Flammable gases	Not applicable	–	–	–	Classified as "solid" according to GHS definition
3	Flammable aerosols	Not applicable	–	–	–	Not aerosol products
4	Oxidizing gases	Not applicable	–	–	–	Classified as "solid" according to GHS definition
5	Gases under pressure	Not applicable	–	–	–	Classified as "solid" according to GHS definition
6	Flammable liquids	Not applicable	–	–	–	Classified as "solid" according to GHS definition
7	Flammable solids	Not classified	–	–	–	Non-flammable (ICSC, 2003)
8	Self-reactive substances and mixtures	Not applicable	–	–	–	Containing no chemical groups with explosive or self-reactive properties
9	Pyrophoric liquids	Not applicable	–	–	–	Classified as "solid" according to GHS definition
10	Pyrophoric solids	Not classified	–	–	–	Non-combustible (ICSC, 2003)
11	Self-heating substances and mixtures	Not classified	–	–	–	Non-combustible (ICSC, 2003)
12	Substances and mixtures, which in contact with water, emit flammable gases	Not classified	–	–	–	Stable to water (insoluble, ICSC (2003))
13	Oxidizing liquids	Not applicable	–	–	–	Classified as "solid" according to GHS definition
14	Oxidizing solids	Classification not possible	–	–	–	Classification not possible due to the absence of data, though being inorganic compounds containing oxygen
15	Organic peroxides	Not applicable	–	–	–	Not organic compounds
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	–	–	–	Due to the fact that the substance is "solid" according to the GHS definition and inhalation of its gas is not expected.
1	Acute toxicity (inhalation:	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	–	–	–	Insufficient data available. Most of the epidemiological studies and tests with chromium (III) gave negative results (EHC 61 (1988), ATSDR (2000), PATTY (4th, 2000)), though no data are available on the evaluation of chromic hydroxide hydrate per se.
3	Serious eye damage / eye irritation	Classification not possible	–	–	–	No data available
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 allergic or asthmatic symptoms or breathing difficulties if inhaled (Skin sensitization) May cause allergic skin reaction	Respiratory sensitization: chromium is classified into "Respiratory Sensitizing Substance" by the ad hoc committee of the Japanese Society of Occupational Allergy, and "Respiratory Sensitizing Substance: Group 2"* by the Japan Society for Occupational Health. These classifications, though not specifying chromic hydroxide hydrate, seem to include chromium compounds. Chromic hydroxide hydrate, which is a chromium compound, should thus cause respiratory sensitization. Skin sensitization: chromium is classified into "Skin Sensitizing Substance" by the ad hoc committee of the Japanese Society of Occupational Allergy, and "Skin Sensitizing Substance: Group 1"* by the Japan Society for Occupational Health. These classifications, though not specifying chromic hydroxide hydrate, seem to include chromium compounds. Chromic hydroxide hydrate, which is a chromium compound, should thus cause skin sensitization. * There is a provision to the effect that "the category refers to the substance concerned and its compounds, but does not identify all substances
5	Germ cell mutagenicity	Classification not possible	–	–	–	No data available As for the germ cell mutagenicity of chromium (III), refer to "ID371, Chromium oxide, CAS:1308-38-9" and "ID372, Chromic chloride, CAS: 10025-
6	Carcinogenicity	Not classified	–	–	–	Due to the fact that the substance is classified as A4 (as Metal and CrIII compounds) by ACGIH (2001), Category D (as Chromium (III), insoluble salts) by EPA (1998) and Group 3 (as Chromium (III)) by IARC (1990).
7	Toxic to reproduction	Classification not possible	–	–	–	No data available As for the reproductive toxicity of chromium (III), refer to "ID371, Chromium oxide, CAS:1308-38-9" and "ID372, Chromic chloride, CAS: 10025-73-
8	Specific target organs/systemic toxicity following single exposure	Classification not possible	–	–	–	No data available
9	Specific target organs/systemic toxicity following repeated exposure	Classification not possible	–	–	–	No 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	-	-	-	No data available
11	Hazardous to the aquatic environment (chronic)	Classification not possible	-	-	-	No data available