

GHS Classification

ID260

Sodium dichromate

CAS 10588-01-9

Date Classified: Mar. 23, 2006 (Environmental Hazards: Feb. 10, 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 (Weiss, 2nd, 1985; ICSC(J), 2005)
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 (Weiss, 2nd, 1985; ICSC(J), 2005)
11 Self-heating substances and mixtures	Not classified	-	-	-	Non-combustible (Weiss(2nd, 1985), ICSC(J) (2005))
12 Substances and mixtures, which in contact with water, emit flammable gases	Not classified	-	-	-	Not react with water. (Weiss, 2nd, 1985)
13 Oxidizing liquids	Not applicable	-	-	-	Solid (GHS definition)
14 Oxidizing solids	Classification not possible	-	-	-	Classification not possible due to lack of data, though well-known as a strong oxidizing agent (ICSC(J), 2005)
15 Organic peroxides	Not applicable	-	-	-	Inorganic substance
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)	Category 2	Skull and crossbones	Danger	Fatal if swallowed	SPECIES: Rat ENDPOINT: LD50 VALUE: 46 mg/kg REFERENCE SOURCE: EU-RAR (2005)
1 Acute toxicity (dermal)	Category 3	Skull and crossbones	Danger	Toxic in contact with skin	It was set as Category 3 based on the rabbit LD50= 960mg/kg (EU-RAR (2005)).
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)	Category 2	Skull and crossbones	Danger	Fatal if inhaled	It was set as category 2 based on rat LC50 = 0.2mg/L (EU-RAR (2005)).
2 Skin corrosion / irritation	Category 1	Corrosion	Danger	Causes severe skin burns and eye damage	It was classified as Category 1 based on the erythema, edema and corrosion seen on rabbits (EU-RAR (2005), IUCLID (2000)) and the ulcer and the burn seen on humans (EHC 61 (1988)).
3 Serious eye damage / eye irritation	Category 1	Corrosion	Danger	Causes serious eye damage	It was set as category 1 based on what the necrosis was looked at by the human conjunctiva, erosion was looked at by the corneal (EU-RAR (2005)), and severe irritation was seen for with the rabbit (IUCLID (2000)).
4 Respiratory/skin sensitization	Respiratory sensitization: Category1; Skin sensitization: Category1	Health hazard	Danger	(Respiratory sensitization)May cause allergy or asthma symptoms or breathing difficulties if inhaled; (Skin sensitization)May cause allergic skin reaction	Respiratory sensitization: Based on the fact that asthma can be identified in humans (EHC 61 (1988)EU-RAR (2005)), it was referred to as Ctegory 1 . Skin sensitization: Guinea pigs indicated skin sensitization (EU-RAR (2005), DFGOT (1996)), and, based on what is also seen for skin sensitization by humans (EHC 61 (1988)), it was referred to as 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)	The substance was classified as Category 2 by the guidelines. Based on the positive results from the in vivo chromosome aberration test, micronucleus test and DNA damage test (alkaline elution test) (IARC 49(1999), EU-RAR (2005)).
6	Carcinogenicity	Category 1B	Health hazard	Danger	May cause cancer (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)	It is classified into 1 according to IARC (1987), and is classified into 2 (2005) in EU. And it was set as Category 1B based on newer European Union category.
7	Toxic to reproduction	Not classified	-	-	-	Based on that there is no bad reproductive effect, and bad developmental effect of this material (EU-RAR (2005), IRIS (1998), IUCLID (2000)), it was considered as on the outside of Category.
8	Specific target organs/systemic toxicity following single exposure	Category 1 (liver, kidneys); Category 3 (respiratory tract irritation)	Health hazard	Danger	Cause damage to organs (liver, kidneys); May cause respiratory irritation or may cause drowsiness and dizziness (respiratory tract)	Due to the descriptions that the effects to the liver, kidney, and the hematopoietic organ were observed in humans (EU-RAR (2005)), and that respiratory irritation was observed (EU-RAR (2005)), it was classified into Category 1 (liver, the kidney, hematogenous machine) and into Category 3 (respiratory irritant).
9	Specific target organs/systemic toxicity following repeated exposure	Category 1 (respiratory organs, kidneys)	Health hazard	Danger	Causes damage to organs (respiratory organs, kidneys) through prolonged or repeated	In a rat, in the range of guidance value of Category , respiratory distress is seen (IRIS (1998)), and an harmful effects is seen in airways and lungs (IUCLID (2000)). It was classified in Category 1 (respiratory system, kidney) based on a nasal ulcers (IRIS (1998)), a lung dysfunction (EHC 61 (1998)), ulceration of the nasal septum (EHC 61 (1998)), bronchitis (EHC 61 (1998)), and kidney disorders (IRIS (1998)) in humans being reported.
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)	Category 1	Environment	Warning	Very toxic to aquatic life	It was classified into Category 1 from 48-hour EC50=0.112mg/L of Crustacea (Daphnia magna) (EU-RAR, 2003).
11 Hazardous to the aquatic environment (chronic)	Category 1	Environment	Warning	Very toxic to aquatic life with long lasting effects	Classified into Category 1, since acute toxicity was Category 1, and it is a metallic compound, behavior in water is unknown., though less bioaccumulative (BCF<36 (existing chemical safety inspections data)).