MSDS According to the REACH regulation 1907/2006/EC and CLP (GHS) regulation 1272/2008/EC.

1. IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY

∇**Trade Name / Substance Name:** STRONTIUM CHROMATE L203E (IUPAC : Strontium dioxido(dioxo)chromium)

☐**REACH registration Number:** 01-2119548391-39-0000

☐**Relevant identified uses of the substance and uses advised against:** anticorrosive pigment for paints (solid corrosion inhibitor). Pigment reserved for industrial use only (OEM): Coil-coating, aerospace and car refinishing.

Manufacturer : SOCIETE NOUVELLE DES COULEURS ZINCIQUES

Plant	**Sales department**
BP 59 59111 Bouchain FRANCE	45/49 Chaussée Jules César 95250 Beauchamp FRANCE
	Tel : INT + 33 (0)1 30 40 57 57 Fax : INT + 33 (0)1 39 60 78 34 E-mail : sncz@sncz.net MSDS contact : msds@sncz.net

Europe emergency contact :	INT + 33 (0)1 30 40 57 57 (SNCZ - France).
24-hour emergency number (USA) :	800 424 9300 (CHEMTREC - USA)
24-hour international emergency number :	INT + 1 703 527 3887 (CHEMTREC - USA)

2. HAZARDS IDENTIFICATION

2.1 Classification according to Regulation 1272/2008/EC [CLP/GHS Annex VI]

Hazard pictogram :

Signal word : **DANGER**

Hazard statements :	**H350**	May cause cancer
	H302	Harmful if swallowed
	H410	Very toxic to aquatic life with long lasting effects

Precautionary statements:

Prevention:	**P202**	Do not handle until all safety precautions have been read and understood
	P273	Avoid release to the environment
Response:	**P264**	Wash thoroughly after handling
	P308 P313	If exposed or concerned : get medical advice/attention.
	P391	Collect spillage
Disposal:	**P501**	Dispose of contents/ containers to be collected by a licensed contractor in accordance with national and local regulations.

2. HAZARDS IDENTIFICATION (Continued)

2.2 Classification according to Directive 67/548/EEC and 1999/45/EC
(Applicable up to 12/2010 for substances and 06/2015 for preparations):

Danger :  Toxic.  Dangerous for the environment.

T N

Labelling according to 67/548/EEC: R45,R20/22 R50/53

Inhalation risk : A hazardous concentration of particles in the air can be quickly achieved by dispersion.

Ingestion risk: Also harmful in case of ingestion.

Environmental Risk : This substance is very dangerous for the aquatic organisms. It is highly recommended not to let this product contaminate the Environment.

3. COMPOSITION / DATA ON COMPONENTS

Chemical composition : Substance, Strontium chromate $SrCrO_4$.

CAS N° : 7789-06-2 **EINECS N°** : 232-142-6 **EC index Number**: 024-009-00-4
☐ **REACH registration Number:** 01-2119548391-39-0000
Pigment : Yellow 32 pigment.
Color Index : 77389

Impurity, hazardous components: (1) regulation 1272/2008/EC Annex VI (2) directive 67/548/EEC

CAS N°	Annex VI Index N°	EINECS N°	Name	%	Symbol	Phrase
Substance;:						
7789-06-2	024-009-00-4	232-142-6	$SrCrO_4$ Strontium chromate	97	GHS08 GHS07 GHS09 Danger T, N	H350 H302 (1) H400 H410 R45-22-50/53 (2) S53-45-60-61
Impurity:						
10294-40-3	056-002-00-7	233-660-5	$BaCrO_4$ Barium chromate	3	GHS07 Warning Xn	H332 H302(1) R20/22(2) S28

☐ **Strontium Chromate M factor :** 1

4. FIRST AID MEASURES

☐ **Description of first aid measures : Get immediately medical attention**.

After inhaling : Immediately remove from exposure area to fresh air. If respiration has stopped, perform artificial respiration. Keep person warm and at rest. Treat symptomatically and supportively.

After skin contact : Immediately remove contaminated clothing and shoes. Wash contaminated area with soap or mild detergent and large amount of water until no evidence of chemicals remains. Lesions can be scrubbed with a 20 % solution of sodium hyposulfite or treated with a calcium-disodium EDTA ointment. Freshly prepared and promptly applied 10 % ascorbic acid solution may speed healing of ulcers (Gosselin Clinical Toxicology of Commercial Products , 5th Ed). As will 1 % solution of aluminium acetate (Arena, Poisoning 4th Ed.).

4. FIRST AID MEASURES (continued)

After eye contact : Wash eyes immediately with large amounts of water, occasionally lifting upper and lower lids, until no evidence of chemical remains (at least 15-20 minutes). Continue irrigating with normal saline until pH has returned to normal (30-60 minutes) cover with sterile bandages. Get immediately ophthalmologist attention.

After ingestion : If the person is conscious and not convulsing, induce vomiting by giving syrup of ipecac (keeping the head below the hips to prevent aspiration), followed by water. Repeat in 20 minutes if not effective initially. For patients with depressed respiration or if vomiting has not worked out, perform gastric lavage cautiously (Dreisbach, Handbook of Poisoning, 12th Ed.). Treat symptomatically and supportively. Gastric lavage should be performed by qualified medical personnel. Get immediately medical attention.

Most important symptoms and effects, both acute and delayed: see chapter 11

∇**Indication of any immediate medical attention and special treatment needed: NOTE TO PHYSICIAN**

ANTIDOTE : The following antidote has been recommended. However, the decision as to whether the severity of poisoning requires administration of any antidote and actual dose required should be made by qualified medical personnel.

CHROMIUM POISONING : use of dimercaprol has been suggested on the basis of findings on animals. Give 3 mg/kg (or 0.3 ml/10 kg) every 4 hours, intramuscularly for the first 2 days and then 2 mg/kg every 12 hours for a total of 10 days (Dreisbach Handbook of Poisoning, 12th Ed.). Antidote should be administered by qualified medical personnel.

5. FIRE FIGHTING MEASURES

∇**Suitable extinguishing media** : CO_2, dry chemical, regular foam. **Not recommended** : Water spray (chromate slightly soluble in water). Do not let this material and its solution contaminate the Environment.

∇**Special hazards arising from the substance :** Negligible hazard when exposed to flames. Keep away from dust. When heated this substance is decomposed and may release oxygen (temperature range 200-600°C depending of reducing condition). When excess of heating, after reduction of the Strontium chromate in trivalent chromium salts, these are converted in CrO_3 in oxidising conditions. In case of large fire, substance decomposition may release some oxides of chromium. Keep away from reducers (ex-hydrazine, wood, sulphur, paper, aluminium).

☐ **Advice for fire-fighters:**

Special personal protection equipment : Wear an air respirator beyond dust limits, gloves and appropriate clothing and equipment to prevent a prolonged skin contact with substance.

Conduct of fire fighting : Avoid dusting. Keep away unprotected people. Move container from fire area ; if possible do it without risk. Do not scatter spilled material with high-pressure water streams. . Dike and contain fire-control water for later disposal. Contaminated wastes have to be collected by a licensed contractor. Do not let contaminated water contaminate the environment.

Additional information : The fire water, waste contaminated containers and fire residues containing strontium chromate must be removed by licensed contractor for garbage.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Avoid dusting. Wear dust mask (FFP3 [EN 149]) or better appropriate respirator, glasses and gloves and appropriate clothing equipment to prevent from a prolonged skin contact with this substance. Keep unnecessary people away.

Environmental precautions: Do not get rid of waste waters, neither in discharge, nor in public sewers, but according to local regulations. To prevent dispersion on the floor and later in the environment, it is highly recommended to forbid walking on the product spillage. Avoid/minimise residues and waste production as possible.

☐ **Methods and material for containment and cleaning up:**

Occupational spill : Avoid dusting. Sweep up in suitable clean, dry container or absorb material avoiding dusting. Do not flush spilled materials into sewer. Keep unnecessary people away.

Soil spill : Dig a holding area such as pit, pond or lagoon to contain spilled material. Use protective cover such as plastic sheet to prevent dissolving in fire-fighting water or rain. Dusting is prohibited.

Water spill : For total elimination. Detoxication of Cr^{6+} is recommended (Cr^{6+} in waste water is prohibited according to local regulations). For this purpose add $FeSO_4$ for the chromium reduction and then proceed to Cr^{3+} flocculation by neutralisation (pH 8-9) with sodium carbonate, lime. Use mechanical dredges or lifts to extract immobilised masses of pollution and precipitates.

Air spill : A hazardous concentration of particles in suspension in the air can quickly be reached by dispersion. Keep unnecessary and unprotected people away. Let the particles suspension fall down and go into the place with appropriate individual protection equipment: respirator (or dust mask) and protective (impervious) clothing. Prevent any contact with food and animal feeding stuff.

7. HANDLING AND STORAGE

☐ **Precautions for safe handling:**

EC : The directive 90/394/EC dealing with the prevention of exposition risks to carcinogenic agents in workhouses applies to this substance (see Chapter 15). The directives 98/24/EC deals with the workers health and security protection against chemical risks in workhouses.

Handling : Avoid dust breathing and use adequate ventilation. Protection is required to keep exposure below permissible limit (see Chapter 8 and 15). Refer to Chapter 8 to know the protection means you have to wear.

∇ **Protection against fire and explosion** : The product is non-flammable. It may reduce the ignition temperature of flammable substances. Prevent static electric sparks.

☐ **Conditions for safe storage, including any incompatibilities:**

Storage : Store in roofed place at room temperature. Keep containers tightly sealed. Do not store with or close to food and animals feeding stuff (see Chapter 15). SEVESO II Directive applies if a total sum of 200 tons environmentally dangerous substances and preparations in production and storage is exceeded.

Material/chemical incompatibility : do not store close to reducers (ex-hydrazine, aluminium powder...) and acids (product soluble in acids).

Technical incompatibility : Chromate can be reduced (slight change of the strontium chromate colour which becomes greenish - reduction of Cr^{6+} in Cr^{3+} -). This colour change is more sensitive with alcohols from 50°C and up. This reaction does not occur at room temperature.

☐ **Specific end use(s):** Pigment reserved for industrial use only (OEM): Coil-coating, aerospace and car refinishing. See e-sds

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

CONTROL PARAMETERS

EXPOSITION LIMIT VALUE (Occupational Exposure Limits) :

$SrCrO_4$, Strontium Chromate (97%)
CAS N° : 7789-06-2 **EC N° Annex 1**: 024-009-00-4

European Union	Chromium VI compounds	0.05 mg Cr/m^3
Denmark	Chromates	0.005 mg Cr/m^3
France	Chromium VI compounds	0.05 mg Cr/m^3 ∇ ANSES Avis 07/10/2010 8 hour time weighted average TWA 0.001 mg Cr^{6+}/m^3
Germany	Chromium VI compounds Except insolubles Carc. Cat. 1B	0.05 mg Cr/m^3
Japan	Chromium VI compounds	0.05 mg Cr/m^3
South Africa	Chromium VI compounds	0.05 mg Cr/m^3
Sweden	Chromates VI	0.02 mg Cr/m^3
UK	Chromium VI compounds (MEL)	0.05 mg Cr/m^3 (Maximum Exposure Limit)
USA	**Cancer Class** : GHS Carcinogen Category 1B. Suspected human carcinogen A2.	

Threshold Limit Value (Permissible Exposure Limits – OSHA Feb. 2006) Chromates as Cr^{VI+} : 5 µg Cr^{VI+}/ m^3 as an 8-hour time weighted average TWA; 0,0025 mg/m^3 or 2.5 micrograms/m^3 Action Level.

Supplementary provision for aerospace painting: Working practice controls is 25 µg/m^3. OSHA requires the use of engineering controls to reduce exposures, and allows the supplemental use of respirators to be used to achieve PEL.

EXPOSURE CONTROLS:

Professional exposure.

This substance can be associated with the alkaline chromate's family for which biological exposure indices exist. These indices are a mean to assess the workers' exposure to chemical substances and can be complementary to the measurements of exposition threshold values in the air (table below).

CrO_3 concentration in the air without protection (µg/m^3)	Chromium content in erythrocytes (µl/l blood)	Chromium in urine (µg/l)
0.03	9	12
0.05	17	20
0.08	25	30
0.1	35	40

A direct relationship exists between the exposure on a workhouse of compounds belonging to the alkaline chromate's family and the chromium concentration in blood and urine. Results of such analyses allow assessing workers' health (table above).

OCCUPATIONAL EXPOSURE MANAGEMENT:

☐ Cr^{VI+} Risk management minimizing needs an 8 hours time weighted average exposure below the DMEL in occupational workplaces. In order to perform a real exposure on workplace, it is recommended to:

- Keep under control Cr^{VI+} nuisance dust exposure
- Determine the accurate working time per shift
- Choose appropriate Personal protective equipment (Respiratory Protective device…) with accurate safety factor

8. EXPOSURE CONTROLS / PERSONAL PROTECTION (Continued)

After calculation, Risk characterisation ratio must be below than 1 for safe operating conditions.
For more information see extended safety data sheet.

☐ **DMEL of 0.5 µg Cr(VI)/m^3 is suggested for strontium chromate (8 hour time weighted average) :**
The DMEL (Derived Minimum Effect Level dose) calculated for carcinogenicity is clearly lower than the acute inhalation DNEL. (Derived No Effect Level dose). The DNEL for acute inhalation would thus be 0.054 mg/m^3 = 54 µg strontium chromate/m^3.) Based on this, the acute inhalation effects are considered to be covered by the very low inhalation DMEL derived for carcinogenicity. No DNEL is therefore proposed for acute inhalation.

Additional notes for design of plant equipment : no further detail. See chapter 7

PERSONAL PROTECTION

Respiratory protection : Wear a specific respirator or dust mask (FFP3) adapted to contamination level found on site beyond dust exposure limits.

Hand protection : Employee must wear appropriate protective gloves to prevent from contact with this substance.

Eye protection : Employee must wear splash-proof or dust-resistant safety goggles and a face shield to prevent from contact with this substance (for example EN166).

Clothing : Employee must wear appropriate protective (impervious) clothing and equipment to prevent from any possibility of skin contact with this substance.

Skin protection : Wear appropriate clothing to avoid any contact with skin.

Other recommendations : Showering is recommended after work according to local regulations. Do not drink and eat on site.

ENVIRONMENT EXPOSITION CONTROL :

Avoid any dust generation. No data are available as to the environment exposure. However, emissions have to conform to the authorised limits (see Chapter 15).

Given the lack of data, this compound is considered as trivalent chromium in soils. Little quantities of hexavalent chromium are quickly converted into trivalent chromium in the soil.

Atmospheric emissions : Ventilation systems must be appropriated to get the performance level to control air emissions as required by national regulations. If necessary an appropriate treatment device must be installed according to regulations (Cr^{6+} compound).

Water emissions : Must be keep under control so they do not contaminated water drainage systems, sewers, streams surface water and groundwater as required by national regulations.

Soil emissions: Do not let this material to contaminate soils or ground.

☐ The **PNEC** (Predicted No Effect Concentration) values for the surface water compartment are 3.4 µg/l for chromium (VI) and 4.7 µg/l for chromium (III).

☐ The **PNEC** sediment can be estimated as follows: For chromium (III), PNEC sediment = 31 mg/kg wet weight for acid conditions and 307 mg/kg wet weight for other conditions.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties:

Physical state	: solid
Odour and appearance	: odourless yellow powder

Change in physical state

Decomposition	**Melting**
Around 500° C (air)	no melting

* Temperature may be reduced of 200°C by reducers

Flash-point	: NA	
Flammable properties	: not flammable, may enhance flammability of other materials	
Explosion risks	: NA	
Vapour pressure	: NA	
Specific gravity	: 3.9 g/cm^3	ISO 787/10
Solubility (water 20°C)	: 0.8-1.5 g/l	ISO 2040
☐**Solubility (water 100°C)**	: 0.6 g/l	ISO 2040
pH	: 6 - 9	ISO 787/9
Other information	: very soluble in acids and ammonia salts. Slightly soluble in alkali.	

Coef. n Octanol/water : not available

10. STABILITY AND REACTIVITY

☐ **Reactivity:**
Strontium Chromates is slightly soluble in water (1g/l). When heated this substance is decomposed and may release oxygen (temperature range 200-600°C depending of reducing condition). Based upon testing, according GHS/CLP 1272/2008/EC regulation, strontium chromate should not be considered to be an oxidising solid (oxidizer not strong enough to be classified).

☐ **Chemical stability:**
Stable under normal temperatures and pressures. When mixed with acid this substance may generate dichromate (pH: 5.5-3.5)/ chromic acid (pH <3.5) in mixture.

☐ **Possibility of hazardous reactions:** Stable under normal condition of uses. When excess of heating, after reduction of the Strontium chromate in trivalent chromium salts, these are converted in CrO_3 in oxidising conditions. In case of large fire, substance decomposition may release some oxides of chromium.

Conditions to avoid: Flammability. This product may burn, but does not ignite readily. ☐ Prevent static electric sparks.

Incompatible materials: Avoid contact with strong reducers (Al, hydrazine, combustible materials...), excessive heat, sparks or open flame.

Hazardous decomposition products: Stable under normal temperatures and pressures. At high temperature, may release Cr^{6+}. After reduction of the Strontium chromate in trivalent chromium salts, these are converted in CrO_3 in oxidising conditions.

11. TOXICOLOGICAL INFORMATION

Toxicological information:

Route	Organism	Dose
Oral	Rat	LD 50 3118 mg/kg
Intratracheal	Rat	LD 50 16,60 mg/kg
☐Inhalation	Rat (OECD 403)	0.27<LC_{50}<0.51 mg/l

Carcinogen status

- EC (CLP-GHS) classified as Carcinogen Category 1B, MAK2 (Germany), Cancer Class A2 (USA) : suspected to be carcinogenic for the human being (USA), by dust inhalation.
- Animal Sufficient Evidence (IARC Group 1 for hexavalent chromium compounds). An excess risk for lung and sino nasal cancer has been reported on workers in the chromate and chromate pigment production and chromium plating industries. Two samples of strontium were tested on rats by intrabraonchial implantation, producing a high incidence of bronchial carcinomas ; intrapleural and intramuscular injection of strontium chromate produced local sarcomas.

INHALATION

Acute Toxicity : 30 mg (Cr^{6+}/m^3 immediately dangerous to Life or Health). May cause sore throat, coughing, dispnea, laboured breathing. At high levels : depression, damage to deep lung tissue and delayed pulmonary oedema may occur. ☐$SrCrO_4$ LC_{50} inhalation rat: 0.27-0.51 mg/l (OECD 403, 4-Hour Acute Inhalation toxicity).

Chronic Toxicity : Repeated or prolonged exposure may cause nasal irritation from rhinitis to painless ulceration of the mouth and nose mucous membranes with bleeding and perforation of the nasal septum and a foul smelling nasal discharge. Hepatitis, with our without jaundice, gastritis, ulcers of the stomach and intestine, nausea, vomiting, anorexia fatigue, lassitude rheumatic pain, and liver and kidney damage are possible. Extended exposures to chromates have caused leucocytosis, leukopenia, monocytosis, eosinophilia, and other blood changes. An excess risk for lung and sinonasal cancer has been reported on workers in the chromate and chromate pigment production and chromium plating industries.

Long term : Suspected to be carcinogen for human beings EC : C2 class, CLP-GHS Category 1B.

Local effect : Corrosive by inhalation.

SKIN CONTACT

∇**Acute toxicity** : Substance not submitted to CLP/GHS classification according OECD 404. Direct contact on damaged skin with skin may cause irritation, corrosion, forming ulcers with hard edges which heal slowly.

Chronic Toxicity : Repeated or prolonged exposure may cause sensitisation dermatitis or severe eczematous dermatitis with oedema and slow healing ulcers.

Local effects : dermatitis.

EYE CONTACT

∇**Acute toxicity** : Substance not submitted to CLP/GHS classification according OECD 405. Direct contact may cause irritation. According literature, chromates direct contact may cause pain, blurred vision, severe burns, severe corneal injury with corneal opacity, and possible loss of vision.

Chronic toxicity : Repeated or prolonged exposure may cause chronic conjunctivitis, lacrimation and rarely, brown staining of the cornea.

11. TOXICOLOGICAL PROPERTIES (Continued)

INGESTION

Acute toxicity : High concentrations may cause dizziness, intense thirst, abdominal pain, vomiting, shock, oliguria, anuria, severe circulatory collapse and death due to uraemia. The approximate human lethal dose is 1-16g in one uptake.

Chronic toxicity : May cause kidney and liver damage with yellow jaunice, leukopenia, leucocytosis, oesinophilia and monocytosis.

12. ECOLOGICAL INFORMATION

☐ **Toxicity**: Strontium chromate is dangerous for the environment. Due to lack of data concerning strontium chromate, we refer to Potassium Dichromate (European Union Risk Assessment Report). Strontium Chromate M factor = 1.

Toxicity to algae

Endpoint	*mean value*	*range*
EC50(growth rate)	0.84 mg/l $K_2Cr_2O_7$	0.6-1.03 mg/l $K_2Cr_2O_7$
	≡ 0.30 mg/l Cr	≡ 0.21-0.36 mg/l Cr
EC50(biomass)	0.53 mg/l $K_2Cr_2O_7$	0.20-0.75 mg $K_2Cr_2O_7$
	≡ 0.19 mg/l Cr	≡ 0.071-0.26 mg/l Cr.

Toxicity to invertebrates

Potassium dichromate is recommended as a reference substance in the acute toxicity to Daphnia test (Method C.2; EEC, 1992). A ring test involving 129 EC50 determinations from 46 laboratories determined the mean 24h-EC50 value as 1.5 mg $K_2Cr_2O_7$/l (EEC, 1992). This is equivalent to an EC50 of 0.53 mg Cr/l, expressed on a concentration of chromium basis.

Toxicity to fish

The acute toxicity of chromium (VI) to fish appears to be dependent on the water hardness and also pH.

LC50 (96h), Fish in freshwater: 58.5 mg/l
LC50 (96h), Fish in saltwater: 84.8 mg/l

Toxicity to Micro-organisms

EC50 (24h), Bacteria: 3.5 mg/l

☐**Persistence and Degradability:** Substance slightly soluble in water (Cr^{6+}) See chapter 6. No specific data available for strontium chromate. This compound is considered as alkaline dichromate. Chromium (VI) may react with particulate matter or pollutants to form Cr (III). In general, chromium is removed from atmosphere by wet and dry depositions. The main form of chromium in seawater is Cr (VI). Hexavalent chromium may remain unchanged or change slowly in many natural waters at low concentrations of organic / reductive. The oxidizing capacity of hexavalent chromium in water increases at a lower pH. Most of chromium released into water is eventually deposited in sediments in hydrated form after being reduced to Cr (III). Cr^{6+} needs to be reduced for elimination. See chapter 6 & 9. Avoid infiltration into waste water draining or soils.

☐**Bioaccumulative potential:** The passage and bioaccumulation of chromium from the earth to the upper parts of plants above the ground is unlikely. Chromium is commonly found in freshwater organisms and accumulates in moderation.

☐**Mobility in soil:** Chromium VI is extensively converted to trivalent chromium in soils and sediments (favoured by anaerobic conditions and low pH). In sediment and soil, chromium III is adsorbed more than the chromium VI.

☐**Results of PBT and vPvB assessment :** The Annex XIII of the REACH Regulation No. 1907/2006 is not applicable to inorganic substances.

13. DISPOSAL CONSIDERATIONS

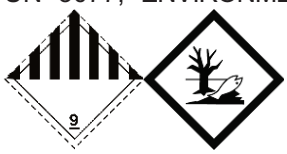
Waste treatment methods

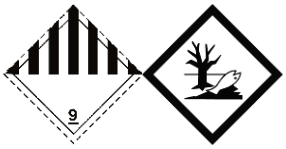
Product : Do not let contaminate the environment with this substance. Waste and spillage must be collected by a licensed contractor for treatment. Dispose in accordance with state or local regulations.

Contaminated package and containers : Empty bags can be either destroyed, or recycled according to the international norms that apply. Spoiled and unclean packagings are regulated by the ADR/IMDG/IATA.
This substance meets the definition of the hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA).

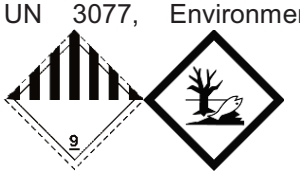
14. TRANSPORT INFORMATION

ADR : UN 3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (strontium chromate), 9, III



IMDG : UN 3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (strontium chromate),9, III, MARINE POLLUTANT.  FS: F-A, S-F

IATA : UN 3077, Environmentally hazardous substance, solid, n.o.s. (strontium chromate), 9, III



∇ Packing instruction : Y956 if gross weight < 30 kg(inner package <5kg), 956 if gross weight ≥ 30 kg.

☐ USA Additional information: Strontium Chromate is included in hazardous substances subjected to reportable quantities (49CFR appendix A to §172.101 RQ10 pounds (4.54 kg))

15. REGULATORY INFORMATION

15.1 Labelling according 1272/2008/EC (CLP - GHS):

Hazard pictogram :

Signal word : **DANGER**

Hazard statements :	**H350**	May cause cancer
	H302	Harmful if swallowed
	H410	Very toxic to aquatic life with long lasting effects
Precautionary statements:		
Prevention:	**P202**	Do not handle until all safety precautions have been read and understood.
	P273	Avoid release to the environment

15. REGULATORY INFORMATION (Continued)

Response:	**P264**	Wash thoroughly after handling.
	P308 P313	If exposed or concerned : get medical advice/attention.
	P391	Collect spillage
Disposal:	**P501**	Dispose of contents/ containers to be collected by a licensed contractor in accordance with national and local regulations.

15.2 Labelling according 67/548/EEC:

Labelling in accordance with EC regulations **67/548/EEC** and **1999/45/EC**.

Symbol of Danger :  Toxic.  Dangerous for the environment.

T N

Labelling according to 67/548/EEC: **R45 - R20/22** **R50/53**

EC : Strontium chromate storage is likely to be regulated by SEVESO II directive; it would be considered as a dangerous substance for the aquatic environment: ☐ Main SEVESO Category 9i

R phrases : **R45** : May cause cancer.
R20/22 : Also harmful by inhalation and if swallowed.
R52/53 : Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S phrases : **S45** : In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S53 : Avoid exposure - obtain special instructions before use.
S60 : This material and its container must be disposed off as hazardous waste.
S61 : Avoid release to the environment. Refer to special instructions / safety data sheets.

For industrial use only directive 97/56/EC and regulation 1907/2006/EC Annex XVII Appendix 2.

16. OTHER INFORMATION

☐**PROPOSED EU CLASSIFICATION, ACCORDING CLP/GHS 1278/2008/EC METHOD**

Hazard pictogram : 

Signal word : **DANGER**

Hazard statements :	**H330**	Fatal if inhaled.
	H350	May cause cancer by inhalation.
	H302	Harmful if swallowed.
	H335	May cause respiratory irritation..
	H317	May cause an allergic skin reaction.
	H361	Suspected of damaging fertility or the unborn child.
	H340	May cause genetic defects.
	H400	Very toxic to aquatic life.
	H410	Very toxic to aquatic life with long lasting effects.

16. OTHER INFORMATION (Continued)

Precautionary statements:

Prevention:	**P201**	Obtain special instructions before use.
	P260	Do not breathe dust/fume/gas/mist/vapours/spray.
	P262	Do not get in eyes, on skin, or on clothing.
	P263	Avoid contact during pregnancy/while nursing.
	P273	Avoid release to the environment.
	P281	Use personal protective equipment as required.

Detailed classification results (CLP/GHS)

for health hazards:

Acute toxicity - oral:	Acute Tox. 4 (Hazard statement: H302: Harmful if swallowed.)
Acute toxicity - dermal:	Reason for no classification: data lacking
Acute toxicity - inhalation:	Acute Tox. 2 (Hazard statement: H330: Fatal if inhaled.)
Skin corrosion/irritation:	Reason for no classification: conclusive but not sufficient for classification
Serious damage/eye irritation:	Reason for no classification: conclusive but not sufficient for classification
Respiration sensitization:	Reason for no classification: data lacking
Skin sensitization:	Skin Sens. 1 (Hazard statement: H317: May cause an allergic skin reaction.)
Aspiration hazard:	Reason for no classification: data lacking
Reproductive Toxicity:	Repr. 2 (Hazard statement: H361: Suspected of damaging fertility or the unborn child) Effects on or via lactation: Reason for no classification: data lacking
Germ cell mutagenicity:	Muta. 2 (Hazard statement: H340: May cause genetic defects
Carcinogenicity:	Carc. 1A (Hazard statement: H350: May cause cancer <via inhalation >.)
Specific target organ toxicity - single:	STOT Single Exp. 3 (Hazard statement: H335: May cause respiratory irritation.) Affected organs: Upper respiratory tract Route of exposure: Inhalation
Specific target organ toxicity - repeated:	Reason for no classification: conclusive but not sufficient for classification

for environmental hazards:

Hazards to the aquatic environment:	Aquatic acute 1 (H400: Very toxic to aquatic life). Aquatic chronic 1 (H410: Very toxic to aquatic life with long lasting effects).
Hazardous to the atmospheric environment:	Reason for no classification: data lacking

EC PREPARATION LABELLING: (Directive 1999/45/EC)

1 If the concentration of this substance exceeds 0.1%, the preparation is labelled «carcinogen» and sentences R45 and/or R49 are mandatory depending on the case.

2 If the concentration of this substance
- Exceeds 25% on a weight basis: " N/Dangerous for the environment", R50/53;
- Is between 2.5 and 25% on a weight basis : "N/Dangerous for the environment", R51/53
- Is between 0.25 and 2.5% on a weight basis : R52/53

GERMANY :

- Wassergefäfrdungsklasse WGK (VwVwS) : WGK 3

USA :

- RTECS number : GB 3240000 (Register of Toxical Effects of Chemical Substances)

- Substance included in the EPA TSCA inventory.

- **SARA** (Superfund Amendments and Reauthorization Act) : strontium chromate is listed under SARA 313.

- **CERCLA** RQ (Reportable quantity) = 10 lbs (4.54 kg). CFR 172.101.

16. OTHER INFORMATION (Continued)

- **Cercla Rating (scale 0-3)** : Health 3 - Fire 0 - Reactivity 0 - Persistence 3.

- **Proposition 65 Warning** : This product contains chemicals known to the State of California to cause cancer (hexavalent chromium Cr^{VI+}).

- **NFPA Rating (scale 0-4)** : Health 3 - Fire 0 - Reactivity 0.

- **Pennsylvania Department of Labor and Industry** : Hexavalent chromium compounds are on the Right to Know List as E (Environmental Hazard) and S (Special Hazardous Substance).

- **Substance labelled and classified HMIS third edition :** H = 3* - F = 0 - PH = 1.
  HMIS III : The HMIS III ratings are from the HMIS Third Edition. There have been significant changes made to the system. "PH" stands for "Physical Hazard" as defined in the OSHA Haz Com Standard and replaces the former code "R" for "Reactivity". For a more detailed explanation of the system and the ratings, please contact our Offices at INT = 33 1 30 40 57 57.

International status of product :

- **Europe (UE)** :

a) ∇REACH status: The substances is registered according regulation REACH 1907/2006/EC.

b) ☐ Listed in the Candidate list of **S**ubstances of **V**ery **H**igh **C**oncern for authorisation (06/2011).

c) ☐ Starting from 20 June 2011, producers and importers of articles shall notify ECHA within six months, after a substance has been included in the Candidate List, if the substance is present in those articles in quantities totalling over one tonne, per producer or importer per year, and if the substance is present in those articles above a concentration of 0.1 % weight by weight. This is required for producers and importers of articles when all conditions of Article 7(2) are met according REACH regulation 1907/2006/EC.
Exemption from obligation possible on the basis of: A notification is not required when:
  - The substance has already been registered for that use (see e-sds hereunder),
  - Exposure of humans and the environment can be excluded during the use and disposal of the article.

In such cases, the producer or importer shall however supply appropriate instructions to the recipient of the article.
Upon request of a consumer, the article supplier has to provide relevant safety information about SVHC (Article 33(2) 1907/2006/EC) when the concentration in article exceeds the 0.1% threshold.

d) EINECS registered substance.

e) **This product does not meet with:**
  - **RoHS** directive 2002/95/EC (***R**estriction of the use **o**f certain **H**azardous **S**ubstances in electrical and electronic equipment)* for Lead, Cadmium, hexavalent Chromium, Mercury, Diphenylethers Polybrominated and Polybrominated Biphenyls,
  - **ELV** (***E**nd **L**ife of **V**ehicles*) directive 2000/53/EC.

- **USA:** Substance TSCA registered.
- **Australia** : Listed in the AICS.
- **Canada** : Domestic Substance List (DSL).
- **Japan** : Listed in the MITI.
- **South Korea** : NCIS: KE-32217 Toxic (97-1-271).

End of safety data sheet

This information contained herein is based on the present state of our knowledge. The above data is given without liability.

Modifications compare to the former version : ☐ : Addition. ∇ : Text modification