

## 1 Identification

- **Product identifier**
- **Trade name:** RUBIDIUM CHROMATE
- **Article number:** 156559
- **CAS Number:**  
13446-72-5
- **EC number:**  
236-601-1
- **Molecular Formula**  $Rb_2 Cr O_4$
- **Molecular Weight** 286.9 g/mol
- **Application of the substance / the mixture** For Research Use Only
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
MP Biomedicals, LLC  
29525 Fountain Parkway  
Solon, OH 44139  
United States  
www.mpbio.com
- **Information department:** Quality Control Department
- **Emergency telephone number:** CHEMTREC: 1-800-424-9300 (1-703-527-3887)

## 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS03 Flame over circle

Ox. Sol. 2 H272 May intensify fire; oxidizer.



GHS08 Health hazard

Carc. 1B H350 May cause cancer.



GHS07

Skin Sens. 1 H317 May cause an allergic skin reaction.

- **Label elements**

· **GHS label elements** The substance is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms**



GHS03



GHS07



GHS08

- **Signal word** Danger

- **Hazard-determining components of labeling:**

Rubidium Chromate

(Contd. on page 2)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 11/04/2016

Reviewed on 11/04/2016

**Trade name: RUBIDIUM CHROMATE**

(Contd. of page 1)

- **Hazard statements**

May intensify fire; oxidizer.  
May cause an allergic skin reaction.  
May cause cancer.

- **Precautionary statements**

Take any precaution to avoid mixing with combustibles.  
Wear protective gloves / eye protection / face protection.  
Keep away from heat.  
Keep/Store away from clothing/combustible materials.  
Avoid breathing dust/fume/gas/mist/vapors/spray  
Contaminated work clothing must not be allowed out of the workplace.  
Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
Specific treatment (see on this label).  
Wash contaminated clothing before reuse.  
IF exposed or concerned: Get medical advice/attention.  
If skin irritation or rash occurs: Get medical advice/attention.  
In case of fire: Use for extinction: CO<sub>2</sub>, powder or water spray.  
IF ON SKIN: Wash with plenty of water.  
Store locked up.  
Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Classification system:**

- **NFPA ratings (scale 0 - 4)**



Health = 3  
Fire = 0  
Reactivity = 2

The substance possesses oxidizing properties.

- **HMIS-ratings (scale 0 - 4)**



Health = \*3  
Fire = 0  
Reactivity = 2

- **Other hazards**

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

## 3 Composition/information on ingredients

- **Chemical characterization: Substances**

- **CAS No. Description**

13446-72-5 Rubidium Chromate

- **Identification number(s)**

- **EC number:** 236-601-1

US

(Contd. on page 3)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 11/04/2016

Reviewed on 11/04/2016

Trade name: RUBIDIUM CHROMATE

(Contd. of page 2)

## 4 First-aid measures

- **Description of first aid measures**
- **After inhalation:**  
Supply fresh air and to be sure call for a doctor.  
If breathed in, supply fresh air. If not breathing, give artificial respiration. Consult a Doctor.
- **After skin contact:** Wash off with soap and plenty of water. Consult a Doctor.
- **After eye contact:** Flush eyes with running water as a precaution.
- **After swallowing:** If symptoms persist consult doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

## 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**  
CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

## 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.  
For personal protection see section 8.
- **Environmental precautions:** Do not allow to enter sewers/surface or ground water.
- **Methods and material for containment and cleaning up:**  
Pick up mechanically, dispose contaminated material as waste according to Section 13.  
Ensure adequate ventilation.
- **Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

## 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace. Avoid direct contact with skin and eyes.  
Open and handle receptacle with care.
- **Information about protection against explosions and fires:** Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:** 15-30 °C
- **Requirements to be met by storerooms and receptacles:** No special requirements.

(Contd. on page 4)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 11/04/2016

Reviewed on 11/04/2016

Trade name: RUBIDIUM CHROMATE

(Contd. of page 3)

· **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see Section 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:** Not required.
- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
 Keep away from foodstuffs, beverages and feed.  
 Immediately remove all soiled and contaminated clothing.  
 Wash hands before breaks and at the end of work.  
 Store protective clothing separately.
- **Breathing equipment:**  
 In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
 Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**  
 The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
- **Penetration time of glove material**  
 The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:**



Tightly sealed goggles

## 9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**

<b>Form:</b>	Crystalline powder
<b>Color:</b>	Light yellow
<b>Odor:</b>	Indeterminate
<b>Odor threshold:</b>	Not determined.

(Contd. on page 5)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 11/04/2016

Reviewed on 11/04/2016

Trade name: RUBIDIUM CHROMATE

(Contd. of page 4)

· <b>pH-value:</b>	Not applicable.
· <b>Change in condition</b> <b>Boiling point/Boiling range:</b>	Undetermined.
· <b>Flash point:</b>	Not applicable.
· <b>Flammability (solid, gaseous):</b>	Product is not flammable.
· <b>Ignition temperature:</b>	
<b>Decomposition temperature:</b>	Not determined.
· <b>Auto igniting:</b>	Not determined.
· <b>Danger of explosion:</b>	See section 10
· <b>Explosion limits:</b>	
<b>Lower:</b>	Not Applicable
<b>Upper:</b>	Not Applicable
· <b>Vapor pressure:</b>	Not applicable.
· <b>Density:</b>	Not Applicable
· <b>Relative density</b>	Not determined.
· <b>Vapor density</b>	Not applicable.
· <b>Evaporation rate</b>	Not applicable.
· <b>Solubility in / Miscibility with</b> <b>Water:</b>	Not Determined Soluble.
· <b>Partition coefficient (n-octanol/water):</b>	Not determined.
· <b>Viscosity:</b>	
<b>Dynamic:</b>	Not applicable.
<b>Kinematic:</b>	Not applicable.
· <b>Solvent content:</b>	
<b>Organic solvents:</b>	0.0 %
<b>VOC content:</b>	0.0 g/l / 0.00 lb/gl
· <b>Other information</b>	No further relevant information available.

## 10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** No irritant effect.

(Contd. on page 6)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 11/04/2016

Reviewed on 11/04/2016

Trade name: RUBIDIUM CHROMATE

(Contd. of page 5)

- **on the eye:** Irritant and potentially harmful
- **Sensitization:** Sensitization possible through skin contact.
- **Additional toxicological information:**

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

Substance is not listed.

- **NTP (National Toxicology Program)**

Substance is not listed.

- **OSHA-Ca (Occupational Safety & Health Administration)**

Substance is not listed.

## 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:** Generally not hazardous for water
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

## 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**  
Can not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Discard must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleaning agents.

## 14 Transport information

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>· <b>UN-Number</b></li> <li>· <b>DOT, ADR, IMDG, IATA</b></li> </ul>  | <p style="margin-left: 20px;">UN1479</p>  |
| <ul style="list-style-type: none"> <li>· <b>UN proper shipping name</b></li> <li>· <b>DOT</b></li> <li>· <b>ADR</b></li> <li>· <b>IMDG</b></li> <li>· <b>IATA</b></li> </ul> | <p style="margin-left: 20px;">Oxidizing solid, n.o.s. (Rubidium Chromate)<br/>1479 Oxidizing solid, n.o.s. (Rubidium Chromate),<br/>ENVIRONMENTALLY HAZARDOUS<br/>OXIDIZING SOLID, N.O.S. (Rubidium Chromate), MARINE<br/>POLLUTANT<br/>OXIDIZING SOLID, N.O.S. (Rubidium Chromate)</p> |

(Contd. on page 7)

US

# Safety Data Sheet

acc. to OSHA HCS

Printing date 11/04/2016

Reviewed on 11/04/2016

Trade name: RUBIDIUM CHROMATE

(Contd. of page 6)

· **Transport hazard class(es)**· **DOT**· **Class**

5.1 Oxidizing substances

· **Label**

5.1

· **ADR, IMDG**· **Class**

5.1 Oxidizing substances

· **Label**

5.1

· **IATA**· **Class**

5.1 Oxidizing substances

· **Label**

5.1

· **Packing group**· **DOT, ADR, IMDG, IATA**

II

· **Environmental hazards:**· **Marine pollutant:**

Yes (DOT)

Symbol (fish and tree)

· **Special marking (ADR):**

Symbol (fish and tree)

· **Special precautions for user**

Warning: Oxidizing substances

· **EMS Number:**

F-A,S-Q

· **Stowage Category**

B

· **Segregation Code**

SG38 Stow "separated from" ammonium compounds.

SG49 Stow "separated from" cyanides

SG60 Stow "separated from" peroxides

SG61 Stow "separated from" powdered metals

· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

Not applicable.

· **Transport/Additional information:**· **DOT**· **Quantity limitations**

On passenger aircraft/rail: 5 kg

On cargo aircraft only: 25 kg

· **Remarks:**

Special marking with the symbol (fish and tree).

· **ADR**· **Excepted quantities (EQ)**

Code: E2

Maximum net quantity per inner packaging: 30 g

Maximum net quantity per outer packaging: 500 g

(Contd. on page 8)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 11/04/2016

Reviewed on 11/04/2016

Trade name: RUBIDIUM CHROMATE

(Contd. of page 7)

· <b>IMDG</b>	
· <b>Limited quantities (LQ)</b>	1 kg
· <b>Excepted quantities (EQ)</b>	Code: E2
	Maximum net quantity per inner packaging: 30 g
	Maximum net quantity per outer packaging: 500 g
· <b>UN "Model Regulation":</b>	UN 1479 OXIDIZING SOLID, N.O.S. (RUBIDIUM CHROMATE), 5.1, II, ENVIRONMENTALLY HAZARDOUS

## 15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- Sara

· **Section 355 (extremely hazardous substances):**

Substance is not listed.

· **Section 313 (Specific toxic chemical listings):**

Substance is not listed.

· **TSCA (Toxic Substances Control Act):**

Substance is listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**

Substance is not listed.

· **Chemicals known to cause reproductive toxicity for females:**

Substance is not listed.

· **Chemicals known to cause reproductive toxicity for males:**

Substance is not listed.

· **Chemicals known to cause developmental toxicity:**

Substance is not listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

Substance is not listed.

· **TLV (Threshold Limit Value established by ACGIH)**

Substance is not listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

Substance is not listed.

- **GHS label elements** The substance is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS03    GHS07    GHS08

- **Signal word** Danger

· **Hazard-determining components of labeling:**

Rubidium Chromate

(Contd. on page 9)



# Safety Data Sheet

acc. to OSHA HCS

Printing date 11/04/2016

Reviewed on 11/04/2016

**Trade name: RUBIDIUM CHROMATE**

(Contd. of page 8)

· **Hazard statements**

May intensify fire; oxidizer.  
May cause an allergic skin reaction.  
May cause cancer.

· **Precautionary statements**

Take any precaution to avoid mixing with combustibles.  
Wear protective gloves / eye protection / face protection.  
Keep away from heat.  
Keep/Store away from clothing/combustible materials.  
Avoid breathing dust/fume/gas/mist/vapors/spray  
Contaminated work clothing must not be allowed out of the workplace.  
Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
Specific treatment (see on this label).  
Wash contaminated clothing before reuse.  
IF exposed or concerned: Get medical advice/attention.  
If skin irritation or rash occurs: Get medical advice/attention.  
In case of fire: Use for extinction: CO<sub>2</sub>, powder or water spray.  
IF ON SKIN: Wash with plenty of water.  
Store locked up.  
Dispose of contents/container in accordance with local/regional/national/international regulations.

· **National regulations:**

· **Additional classification according to Decree on Hazardous Materials:**

Carcinogenic hazardous material group I (extremely dangerous).  
Carcinogenic hazardous material group II (very dangerous).  
Carcinogenic hazardous material group III (dangerous).

· **Information about limitation of use:**

Workers are not allowed to be exposed to this hazardous material. Exceptions can be made by the authorities in certain cases.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing SDS:** Quality Control Dept.

· **Date of preparation / last revision** 11/04/2016 / -

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)  
IMDG: International Maritime Code for Dangerous Goods  
DOT: US Department of Transportation  
IATA: International Air Transport Association  
ACGIH: American Conference of Governmental Industrial Hygienists  
EINECS: European Inventory of Existing Commercial Chemical Substances  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
NFPA: National Fire Protection Association (USA)  
HMIS: Hazardous Materials Identification System (USA)  
VOC: Volatile Organic Compounds (USA, EU)  
PBT: Persistent, Bioaccumulative and Toxic  
vPvB: very Persistent and very Bioaccumulative  
NIOSH: National Institute for Occupational Safety  
OSHA: Occupational Safety & Health  
TLV: Threshold Limit Value  
PEL: Permissible Exposure Limit  
REL: Recommended Exposure Limit

(Contd. on page 10)

**Safety Data Sheet**  
**acc. to OSHA HCS**

Printing date 11/04/2016

Reviewed on 11/04/2016

**Trade name: RUBIDIUM CHROMATE**

*Ox. Sol. 2: Oxidizing solids – Category 2*  
*Skin Sens. 1: Skin sensitisation – Category 1*  
*Carc. 1B: Carcinogenicity – Category 1B*

(Contd. of page 9)

US