

## Safety Data Sheet acc. to OSHA HCS

Printing date 12/17/2019

Reviewed on 12/17/2019

### 1 Identification

- **Product identifier**
- **Trade name:** Salt Mixture U.S.P. XIV
- **Article number:** 902850
- **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**



Skin Irrit. 2 H315 Causes skin irritation.  
Eye Irrit. 2A H319 Causes serious eye irritation.

- **Label elements**
- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



- **Signal word** Warning
- **Hazard statements**  
Causes skin irritation.  
Causes serious eye irritation.
- **Precautionary statements**  
Wash thoroughly after handling.  
Wear protective gloves / eye protection / face protection.  
If on skin: Wash with plenty of water.  
Specific treatment (see on this label).  
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
If skin irritation occurs: Get medical advice/attention.  
Take off contaminated clothing and wash it before reuse.  
If eye irritation persists: Get medical advice/attention.

(Contd. on page 2)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 12/17/2019

Reviewed on 12/17/2019

Trade name: Salt Mixture U.S.P. XIV

(Contd. of page 1)

- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



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



- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

### 3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:**  
Mixture of substances listed below with nonhazardous additions.  
Mixture: consisting of the following components.

- **Dangerous components:**

CAS: 7758-23-8 EINECS: 231-837-1 RTECS: TB8527000	Calcium Phosphate Monobasic	≥10-<20%
CAS: 471-34-1 EINECS: 207-439-9 RTECS: EV 9580000	Calcium Carbonate	2.5-10%
CAS: 598-62-9 EINECS: 209-942-9	Manganese Carbonate	2.5-10%

### 4 First-aid measures

- **Description of first aid measures**
- **General information:**  
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.  
Consult your Doctor. Show the safety data sheet to the Doctor. Away from the dangerous area.
- **After inhalation:** 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:**  
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **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.

US

(Contd. on page 3)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 12/17/2019

Reviewed on 12/17/2019

Trade name: Salt Mixture U.S.P. XIV

(Contd. of page 2)

## 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **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.
- **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.
- **Protective Action Criteria for Chemicals**

· **PAC-1:**

7758-11-4	Potassium Phosphate Dibasic Anhydrous	13 mg/m <sup>3</sup>
471-34-1	Calcium Carbonate	45 mg/m <sup>3</sup>
10034-99-8	Magnesium Sulfate Heptahydrate	33 mg/m <sup>3</sup>
598-62-9	Manganese Carbonate	6.3 mg/m <sup>3</sup>
7681-49-4	Sodium Fluoride	17 mg/m <sup>3</sup>
10034-96-5	Manganese Sulfate Monohydrate	9.2 mg/m <sup>3</sup>
7784-24-9	Aluminum Potassium Sulfate Dodecahydrate	110 mg/m <sup>3</sup>
7758-99-8	Cupric Sulfate Pentahydrate	12 mg/m <sup>3</sup>
7681-11-0	Potassium Iodide	1.3 mg/m <sup>3</sup>

· **PAC-2:**

7758-11-4	Potassium Phosphate Dibasic Anhydrous	140 mg/m <sup>3</sup>
471-34-1	Calcium Carbonate	210 mg/m <sup>3</sup>
10034-99-8	Magnesium Sulfate Heptahydrate	370 mg/m <sup>3</sup>
598-62-9	Manganese Carbonate	10 mg/m <sup>3</sup>
7681-49-4	Sodium Fluoride	90 mg/m <sup>3</sup>
10034-96-5	Manganese Sulfate Monohydrate	15 mg/m <sup>3</sup>
7784-24-9	Aluminum Potassium Sulfate Dodecahydrate	1,200 mg/m <sup>3</sup>
7758-99-8	Cupric Sulfate Pentahydrate	32 mg/m <sup>3</sup>
7681-11-0	Potassium Iodide	15 mg/m <sup>3</sup>

· **PAC-3:**

7758-11-4	Potassium Phosphate Dibasic Anhydrous	830 mg/m <sup>3</sup>
471-34-1	Calcium Carbonate	1,300 mg/m <sup>3</sup>
10034-99-8	Magnesium Sulfate Heptahydrate	2,300 mg/m <sup>3</sup>
598-62-9	Manganese Carbonate	60 mg/m <sup>3</sup>

(Contd. on page 4)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 12/17/2019

Reviewed on 12/17/2019

**Trade name: Salt Mixture U.S.P. XIV**

(Contd. of page 3)

7681-49-4	Sodium Fluoride	1,100 mg/m <sup>3</sup>
10034-96-5	Manganese Sulfate Monohydrate	90 mg/m <sup>3</sup>
7784-24-9	Aluminum Potassium Sulfate Dodecahydrate	6,900 mg/m <sup>3</sup>
7758-99-8	Cupric Sulfate Pentahydrate	190 mg/m <sup>3</sup>
7681-11-0	Potassium Iodide	87 mg/m <sup>3</sup>

## 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**  
Avoid direct contact with skin. Use protective clothing including gloves, lab coat, face/eye protection.
- **Information about protection against explosions and fires:** No special requirements.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:** 15-30°C
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Further information about storage conditions:** Keep container tightly sealed.
- **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:**  
The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.  
At this time, the remaining constituent has no known exposure limits.

### 471-34-1 Calcium Carbonate

PEL	Long-term value: 15* 5** mg/m <sup>3</sup> *total dust **respirable fraction
REL	Long-term value: 10* 5** mg/m <sup>3</sup> *total dust **respirable fraction
TLV	TLV withdrawn

### 598-62-9 Manganese Carbonate

PEL	Ceiling limit value: 5 mg/m <sup>3</sup> as Mn
REL	Short-term value: 3 mg/m <sup>3</sup> Long-term value: 1 mg/m <sup>3</sup> as Mn
TLV	Long-term value: 0.02* 0.1** mg/m <sup>3</sup> as Mn; *respirable **inhalable fraction

- **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.

(Contd. on page 5)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 12/17/2019

Reviewed on 12/17/2019

Trade name: Salt Mixture U.S.P. XIV

(Contd. of page 4)

Avoid contact with the eyes and skin.

- **Breathing equipment:** Not required.
- **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. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **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>	Powder
<b>Color:</b>	According to product specification
<b>Odor:</b>	Indeterminate
<b>Odor threshold:</b>	Not determined.

- **pH-value:** Not applicable.

- **Change in condition**

**Boiling point/Boiling range:** Undetermined.

- **Flash point:** Not applicable.

- **Flammability (solid, gaseous):** Not determined.

- **Decomposition temperature:** Not determined.

- **Auto igniting:** Product is not selfigniting.

- **Danger of explosion:** See section 10

- **Explosion limits:**

<b>Lower:</b>	Not Applicable
<b>Upper:</b>	Not Applicable

- **Vapor pressure:** Not applicable.

- **Density:** Not Applicable

(Contd. on page 6)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 12/17/2019

Reviewed on 12/17/2019

Trade name: Salt Mixture U.S.P. XIV

(Contd. of page 5)

· <b>Relative density</b>	Not determined.
· <b>Vapor density</b>	Not applicable.
· <b>Evaporation rate</b>	Not applicable.
· <b>Solubility in / Miscibility with Water:</b>	Not Determined Not determined. Insoluble.
· <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>VOC content:</b>	0.00 %
<b>Solids content:</b>	100.0 %
· <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.  
Avoid contact with acids. Contact liberates a toxic gas.
- **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:** Irritant to skin and mucous membranes.
- **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**  
The product shows the following dangers according to internally approved calculation methods for preparations:  
Irritant

- **Carcinogenic categories**

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

7681-49-4 Sodium Fluoride

3

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

(Contd. on page 7)

US

# Safety Data Sheet

acc. to OSHA HCS

Printing date 12/17/2019

Reviewed on 12/17/2019

Trade name: Salt Mixture U.S.P. XIV

(Contd. of page 6)

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

None of the ingredients is 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:**  
Water hazard class 1 (Self-assessment): slightly hazardous for water  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **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.

## 14 Transport information

- |  |                 |
|--|-----------------|
| · <b>UN-Number</b>   |                 |
| · <b>DOT, ADR, ADN, IMDG, IATA</b>   | Not regulated   |
| · <b>UN proper shipping name</b>   |                 |
| · <b>DOT, ADR, ADN, IMDG, IATA</b>   | Not regulated   |
| · <b>Transport hazard class(es)</b>  |                 |
| · <b>DOT, ADR, ADN, IMDG, IATA</b>   |                 |
| · <b>Class</b>   | Not regulated   |
| · <b>Packing group</b>   |                 |
| · <b>DOT, ADR, IMDG, IATA</b>  | Not regulated   |
| · <b>Environmental hazards:</b>  | Not applicable. |
| · <b>Special precautions for user</b>  | Not applicable. |
| · <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b> | Not applicable. |

(Contd. on page 8)

US

# Safety Data Sheet

acc. to OSHA HCS

Printing date 12/17/2019

Reviewed on 12/17/2019

Trade name: Salt Mixture U.S.P. XIV

(Contd. of page 7)

<b>· UN "Model Regulation":</b>	Not regulated
---------------------------------	---------------

## 15 Regulatory information

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

<b>· Section 355 (extremely hazardous substances):</b>
--

None of the ingredients is listed.
------------------------------------

<b>· Section 313 (Specific toxic chemical listings):</b>
--

598-62-9	Manganese Carbonate
----------	---------------------

10034-96-5	Manganese Sulfate Monohydrate
------------	-------------------------------

<b>· TSCA (Toxic Substances Control Act):</b>
---

7693-13-2	Calcium Citrate		ACTIVE
-----------	-----------------	--	--------

7758-11-4	Potassium Phosphate Dibasic Anhydrous		ACTIVE
-----------	---------------------------------------	--	--------

7447-40-7	Potassium Chloride		ACTIVE
-----------	--------------------	--	--------

7758-23-8	Calcium Phosphate Monobasic		ACTIVE
-----------	-----------------------------	--	--------

7647-14-5	Sodium Chloride		ACTIVE
-----------	-----------------	--	--------

471-34-1	Calcium Carbonate		ACTIVE
----------	-------------------	--	--------

598-62-9	Manganese Carbonate		ACTIVE
----------	---------------------	--	--------

2338-05-8	Ferric Citrate Purified Powder		ACTIVE
-----------	--------------------------------	--	--------

7681-49-4	Sodium Fluoride		ACTIVE
-----------	-----------------	--	--------

7681-11-0	Potassium Iodide		ACTIVE
-----------	------------------	--	--------

<b>· Hazardous Air Pollutants</b>
-----------------------------------

598-62-9	Manganese Carbonate
----------	---------------------

10034-96-5	Manganese Sulfate Monohydrate
------------	-------------------------------

<b>· Proposition 65</b>
-------------------------

<b>· Chemicals known to cause cancer:</b>
---

None of the ingredients is listed.
------------------------------------

<b>· Chemicals known to cause reproductive toxicity for females:</b>
--

None of the ingredients is listed.
------------------------------------

<b>· Chemicals known to cause reproductive toxicity for males:</b>
--

None of the ingredients is listed.
------------------------------------

<b>· Chemicals known to cause developmental toxicity:</b>
---

None of the ingredients is listed.
------------------------------------

<b>· Carcinogenic categories</b>
----------------------------------

<b>· EPA (Environmental Protection Agency)</b>
--

598-62-9	Manganese Carbonate		D
----------	---------------------	--	---

10034-96-5	Manganese Sulfate Monohydrate		D
------------	-------------------------------	--	---

<b>· TLV (Threshold Limit Value established by ACGIH)</b>
---

7681-49-4	Sodium Fluoride		A4
-----------	-----------------	--	----

<b>· NIOSH-Ca (National Institute for Occupational Safety and Health)</b>
---

None of the ingredients is listed.
------------------------------------

(Contd. on page 9)



# Safety Data Sheet

acc. to OSHA HCS

Printing date 12/17/2019

Reviewed on 12/17/2019

**Trade name: Salt Mixture U.S.P. XIV**

(Contd. of page 8)

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



GHS07

- **Signal word** Warning
- **Hazard statements**
  - Causes skin irritation.
  - Causes serious eye irritation.
- **Precautionary statements**
  - Wash thoroughly after handling.
  - Wear protective gloves / eye protection / face protection.
  - If on skin: Wash with plenty of water.
  - Specific treatment (see on this label).
  - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  - If skin irritation occurs: Get medical advice/attention.
  - Take off contaminated clothing and wash it before reuse.
  - If eye irritation persists: Get medical advice/attention.
- **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** 12/17/2019 / -
- **Abbreviations and acronyms:**
  - Skin Irrit. 2: Skin corrosion/irritation – Category 2
  - Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A

US