

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

Printing date 01/15/2016

Reviewed on 01/15/2016

## 1 Identification

- **Product identifier**
- **Product Name:** Fusion Flux
- **Part Number:** FFB-5010-02
- **Application of the substance / the mixture** Certified Reference Material
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
SPEX CertiPrep, LLC.  
203 Norcross Ave, Metuchen,  
NJ 08840 USA
- **Information department:** product safety department
- **Emergency telephone number:**  
Emergency Phone Number (24 hours)  
CHEMTREC (800-424-9300)  
Outside US: 703-527-3887

## 2 Hazard(s) identification

- **Classification of the substance or mixture** The product is not classified according to the Globally Harmonized System (GHS).
- **Label elements**
- **GHS label elements** Not Regulated
- **Hazard pictograms** Not Regulated
- **Signal word** Not Regulated
- **Hazard statements** Not Regulated
- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



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

|            |   |                |
|------------|---|----------------|
| HEALTH     | 0 | Health = 0     |
| FIRE       | 0 | Fire = 0       |
| REACTIVITY | 0 | Reactivity = 0 |

- **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 the substances listed below with nonhazardous additions.

### · **Dangerous components:**

|   |                       |       |
|---|-----------------------|-------|
| 7550-35-8   | lithium bromide       | 1.0%  |
| <b>· Chemical identification of the substance/preparation</b> |                       |       |
| 12007-60-2  | dilithium tetraborate | 49.5% |
| 13453-69-5  | lithium metaborate    | 49.5% |

## 4 First-aid measures

- **Description of first aid measures**
- **General information:** No special measures required.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** If symptoms persist consult doctor.
- **Information for Doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.

(Contd. on page 2)

US

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

Printing date 01/15/2016

Reviewed on 01/15/2016

**Product Name: Fusion Flux**

(Contd. of page 1)

· **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** Not required.
- **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.

### 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**  
No special measures required.  
Follow good laboratory practices.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.
- **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 item 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**  
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:** The usual precautionary measures for handling chemicals should be followed.
- **Breathing equipment:** Not required.
- **Protection of hands:**  
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:** Not required.

US

(Contd. on page 3)

Product Name: Fusion Flux

(Contd. of page 2)

**9 Physical and chemical properties**

|   |   |
|---|---|
| · <b>Information on basic physical and chemical properties</b>    |   |
| · <b>General Information</b>                                      |   |
| · <b>Appearance:</b>  |   |
| <b>Form:</b>  | Solid   |
| <b>Color:</b>   | According to product specification            |
| · <b>Odor:</b>  | Characteristic                                |
| · <b>Odour Threshold:</b>   | Not applicable.                               |
| · <b>pH-value:</b>  | Not applicable.                               |
| · <b>Change in condition</b>                                      |   |
| <b>Melting point/Melting range:</b>                               | Undetermined.                                 |
| <b>Boiling point/Boiling range:</b>                               | Undetermined.                                 |
| · <b>Flash point:</b>   | Not applicable.                               |
| · <b>Flammability (solid, gaseous):</b>                           | Not determined.                               |
| · <b>Ignition temperature:</b>                                    |   |
| <b>Decomposition temperature:</b>                                 | Not applicable.                               |
| · <b>Auto igniting:</b>   | Product is not selfigniting.                  |
| · <b>Danger of explosion:</b>                                     | Product does not present an explosion hazard. |
| · <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 applicable.                               |
| · <b>Vapor density</b>  | Not applicable.                               |
| · <b>Evaporation rate</b>   | Not applicable.                               |
| · <b>Solubility in / Miscibility with</b>                         |   |
| <b>Water:</b>   | Insoluble.                                    |
| · <b>Partition coefficient (n-octanol/water):</b> Not applicable. |   |
| · <b>Viscosity:</b>   |   |
| <b>Dynamic:</b>   | Not applicable.                               |
| <b>Kinematic:</b>   | Not applicable.                               |
| · <b>Solvent content:</b>   |   |
| <b>Organic solvents:</b>  | 0.0 %   |
| <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.
- **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.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
- The product is not subject to classification according to internally approved calculation methods for preparations:

(Contd. on page 4)

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

Printing date 01/15/2016

Reviewed on 01/15/2016

**Product Name: Fusion Flux**

(Contd. of page 3)

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

· **Carcinogenic categories**

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

None of the ingredients is listed.

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

· **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:** Smaller quantities can be disposed of with household waste.

· **Uncleaned packagings:**

· **Recommendation:** Disposal must be made according to official regulations.

## 14 Transport information

· **UN-Number**

· **DOT, ADR, IMDG, IATA**

Not Regulated

· **UN proper shipping name**

· **DOT, ADR, IMDG, IATA**

Not Regulated

· **Transport hazard class(es)**

· **DOT, ADR, IMDG, IATA**

· **Class**

Not Regulated

· **Packing group**

· **DOT, ADR, IMDG, IATA**

Not Regulated

· **Environmental hazards:**

Not applicable.

· **Special precautions for user**

Not applicable.

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

**Code**

Not applicable.

· **UN "Model Regulation":**

Not Regulated

## 15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **Sara**

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

None of the ingredients is listed.

(Contd. on page 5)

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

Printing date 01/15/2016

Reviewed on 01/15/2016

**Product Name: Fusion Flux**

(Contd. of page 4)

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

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

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

|                             |
|-----------------------------|
| All ingredients are listed. |
|-----------------------------|

|                         |
|-------------------------|
| · <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> |
|--|

|            |                       |          |
|------------|-----------------------|----------|
| 12007-60-2 | dilithium tetraborate | I (oral) |
|------------|-----------------------|----------|

|            |                    |          |
|------------|--------------------|----------|
| 13453-69-5 | lithium metaborate | I (oral) |
|------------|--------------------|----------|

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

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

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

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

|   |
|---|
| · <b>GHS label elements</b> Not Regulated |
|---|

|  |
|--|
| · <b>Hazard pictograms</b> Not Regulated |
|--|

|                                    |
|------------------------------------|
| · <b>Signal word</b> Not Regulated |
|------------------------------------|

|  |
|--|
| · <b>Hazard statements</b> Not Regulated |
|--|

|   |
|---|
| · <b>Chemical safety assessment:</b> 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:** product safety department

· **Contact:**

SPEX CertiPrep, LLC.

1-732-549-7144

· **Date of preparation / last revision** 01/15/2016 / -

· **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

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMS: Hazardous Materials Identification System (USA)

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