

Emergency Phone Number (24 hours) CHEMTREC (800-424-9300)  
Outside US: 703-527-3887

**SECTION 1**

**CHEMICAL IDENTIFICATION OF THE SUBSTANCE/PREPARATION**

**NAME:** Borate Fusion Flux- Mixture containing 67% Lithium Tetraborate and 33% Lithium Metaborate.

**CHEMICAL FAMILY:** Chemical Compounds

**COMMON NAME OR SYNONYMS:** none

**SPEX CERTIPREP CATALOG NUMBER:** FF-0644, FF-0645

Manufacturer/Supplier

SPEX CERTIPREP

203 Norcross Avenue

Metuchen, NJ 08840

SPEX CERTIPREP LTD

2 Dalston Gardens

Stanmore, Middlesex HA7 1BQ

England

Tel: (0) 20 8204 6656

**SECTION 2**

**COMPOSITION/INFORMATION ON INGREDIENTS**

INGREDIENT	%	TLV UNITS	CAS #	EINECS
Li <sub>2</sub> B <sub>4</sub> O <sub>7</sub>	~67	Data not available	[12007-60-2]	
LiBO <sub>2</sub>	~33	Data not available	[13453-69-5]	

**SECTION 3**

**HAZARDS IDENTIFICATION**

Irritant.

**SECTION 4**

**FIRST AID MEASURES**

**General:** Remove contaminated clothing, wash thoroughly before reuse.

**Eyes:** Flush with water for at least 15 minutes occasionally lifting upper and lower eyelids.

**Skin:** Remove contaminated clothing and flush with water thoroughly. **Inhalation:** Move to fresh air. Consult doctor if symptoms persist. **Ingestion:** If large amounts were swallowed, get immediate medical help. If the patient is conscious, give large quantities of water.

**SECTION 5**

**FIRE FIGHTING MEASURES**

Flash Point: Not applicable.

Extinguishing media: Appropriate to surrounding fire conditions.

Special Hazards and Procedure: None identified.

Protective Equipment: Wear appropriate to surrounding fire conditions.

**SECTION 6**

**ACCIDENTAL RELEASE MEASURES**

Ventilate area. Wear appropriate protective equipment. Contain and recover when possible. Collect and put into a sealed container for proper disposal. Avoid raising dust. Wash spill site with water after material pick up is complete. Wear respirator, chemical resistant glasses, gloves and clothing.

**SECTION 7**

**HANDLING & STORAGE**

Ensure good ventilation/exhaustion at work place. Have an immediate availability of an eye wash in case of emergency. Store at room temperature. Keep the container tightly closed. Use good Laboratory Practice when working with any chemical whether it is considered hazardous or not. Refer to section 8.

**SECTION 8**

**EXPOSURE CONTROLS/PERSONAL PROTECTION**

Wear goggles, protective apron and chemical resistant gloves. Use respirator if dust is raised when using this.

**SECTION 9**

**PHYSICAL & CHEMICAL PROPERTIES**

Form: Powder  
Molecular Weight: MW of the mix is unknown  
Appearance & odor: White crystals  
Specific Gravity: Lithium Metaborate: 1.397  
pH: N/A  
Melting point: Lithium Metaborate: 845 C (lower of two)  
Boiling Point: N/A  
Solubility in water: Cold ~ 2.5 g/100 cc  
Danger of Explosion: Not explosive  
Self-ignitability: Not self igniting

**SECTION 10**

**STABILITY & REACTIVITY**

Stability: Stable under normal storage and use.

Hazardous Decomposition Products: None

Hazardous Polymerization: Will not occur

Incompatibility: No information.

Conditions to Avoid: No information.

FF-0644/FF-0645 cont'd

**SECTION 11**  
**TOXICOLOGICAL INFORMATION**

May irritate skin. Taken orally, Lithium salts can cause nausea, vomiting and abdominal pain. Central nervous system effects including slurred speech, blurred vision, dizziness, sensory loss, convulsions and stupor have been reported. Chronically, lithium effects the central nervous system, kidneys, gastrointestinal tract and causes dermatological reactions. May cause fatigue, weight loss and thyroid disturbance. Signs of lithium poisoning are anorexia, general weakness, dehydration and dryness of the mouth.

**TOXICITY DATA**

No Information available

**SECTION 12**  
**ECOLOGICAL INFORMATION**

No information is found on environmental toxicity for this.

**SECTION 13**  
**DISPOSAL CONSIDERATIONS**

Contact local Hazardous or Chemical waste disposal agency for regulations.

**SECTION 14**  
**TRANSPORT INFORMATION**

**Air & Ground: Not regulated**

**SECTION 15**  
**REGULATORY INFORMATION**

USA:

Listed in EPA TSCA Inventory  
WHMIS Classification (Canada): Not Regulated

EC Guidelines:

Safety Phrases:

- 36/37 - Wear suitable protective clothing, and gloves,
- 26 - in case of contact with eyes, rinse immediately with plenty of water and seek medical attention.
- 45 - in case of accident or if you feel unwell, seek medical advice immediately.

**SECTION 16**  
**OTHER INFORMATION**

SPEX CERTIPREP ASSUMES NO RESPONSIBILITY AND MAKES NO WARRANTIES, EXPRESS OR IMPLIED, AS TO THE ACCURACY OR COMPLETENESS OF THE DATA CONTAINED HEREIN. INDICATED SAFETY MEASURES MAY NOT REFLECT ALL APPROPRIATE SAFETY MEASURES. SPEX CERTIPREP ASSUMES THAT ONLY QUALIFIED INDIVIDUALS, TRAINED AND FAMILIAR WITH PROCEDURES SUITABLE TO THIS PRODUCT, WILL HANDLE THIS PRODUCT.

**SECTION 16**  
**OTHER INFORMATION**

References: NIOSH/OSHA, Occupational Health Guideline for Nitric Acid, (Sept.1978)  
The Sigma/Aldrich Library of Chemical Safety Data, Ed.I, (1985)  
Registry of Toxic Effects of Chemical Substances, 1981-82  
Patty's Industrial Hygiene and Toxicology, 3<sup>rd</sup> Revised Edition, Vol. 2A, 1981  
Threshold Limit Values and Biological Exposure Indices for 1988-89, ACGIH  
Dangerous properties of Industrial Materials by N.Irving Sax and Richard J. Lewis, Sr.(Ninth Edition) \*

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