



## Material Safety Data Sheet

Language: English

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### 1. Identification of the material and supplier

Product Name: **LavaPurple Buffer Pack 5mL**

Catalogue number: **BP-011005**

#### Company Details

Fluorotechnics

R257 Building E8C

Macquarie University, NSW 2109

Australia.

Emergency telephone number : call Local emergency services on 000 for Australia or (+612) 9850 6267

Email: [enquiries@fluorotechnics.com](mailto:enquiries@fluorotechnics.com)

Area of Application: Industrial applications.

Product Use: Analytical chemistry. Research use only.

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### 2. Hazard Identification

Hazard Symbol(s): C R-35

Xi: R37/38-41

Risk Phrases: R35 - Causes severe burns

R37/38-41 - Irritating to respiratory system and skin. Risk of serious damage to eyes.

Safety Phrases: 16-37/39-45 -Wear suitable protective clothing, gloves and eye/face protection. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Statement of hazardous/dangerous nature

HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS.

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### 3. Composition/information on ingredients

Mixture: Yes. Sodium hydroxide, boric acid and citric acid as separate solids.

Chemical name	CAS no.
Sodium hydroxide	1310-73-2
Boric Acid	10043-35-3
Citric Acid	5979-29-1

Additional Information: Not applicable

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### 4. First-aid measures

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration.

If breathing is difficult, give oxygen. Obtain medical attention.

Ingestion: If swallowed wash out mouth with water, provided person is conscious. Obtain medical attention immediately. Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and obtain medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact: In case of contact, immediately flush copiously with water for at least 15 minutes. Cold water may be used. Removing contaminated clothing and shoes. Wash clothes before reuse. Clean shoes thoroughly before reuse.

Obtain medical attention immediately.

Eye contact: Check for and remove any contact lenses. In case of contact, immediately flush the eyes with a copious amount of water for at least 15 minutes. Cold water may be used. Assure adequate flushing by separating the eyelids with fingers. Obtain medical attention.

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### 5. Fire-fighting measures

#### Explosion Data

Sensitivity to Mechanical Impact: Contact with aluminium, tin and zinc liberates hydrogen gas. Contact with nitromethane and other similar nitro compounds causes formation of shock-sensitive salts.

#### Extinguishing media

Suitable: Use an extinguishing agent suitable for the surrounding fire

Not suitable: Do not use water.

No specific hazard

#### Special Risks

Specific Hazard(s): Emits toxic fumes under fire conditions

Special protective equipment for fire fighters:

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA).

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## 6. Accidental release measures

### Personal precautions:

In case of leak or spill evacuate area. Immediately contact emergency personnel. Keep unnecessary personnel away. Use suitable protective equipment.

### Environmental precautions and cleanup methods:

Stop leak if without risk. Avoid dispersal of spilt material and runoff and contact with soil waterways drains and sewers.

### Methods for cleaning up:

If emergency personnel are unavailable, contain spilt material. For small spills, add absorbent such as dry-lime, sand or soda ash. Place in covered container and using non-sparking tools transport outside. Finish cleaning by ventilating area and spreading water on the contaminated surface after material has been removed.

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## 7. Handling and storage

**Handling:** Do not ingest. Avoid contact with eyes skin and clothing. Keep container closed. Use only with adequate ventilation. Avoid breathing dust, mist, vapor. Wash thoroughly after handling.

**Storage:** Keep container in a cool well-ventilated area. Keep container tightly closed and sealed until ready for use.

### Special Requirements:

Do not allow moisture inside container. Hygroscopic.

### Packaging materials recommended use:

Use original container.

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## 8. Exposure controls/personal protection

### Occupational Exposure Limits

<b>Ingredient name</b>	<b>Occupational Exposure limit</b>
Sodium hydroxide	TRGS900 (Germany 8/2004). 2 mg/m <sup>3</sup> .

### Recommended monitoring procedures:

If this product contains ingredients with exposure limits, personal workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to European Standard EN689 for methods for the assessment of exposure by inhalation to chemical agents and national guidance documents for methods for the determination of hazardous substances.

### Engineering measures:

Provide exhaust ventilation or other engineering controls to keep airborne concentrations below their respective occupational exposure limits. Ensure that eyewash stations and safety showers are close to the workstation location.

### Hygiene measures:

Wash hands, forearms, and face thoroughly after handling compounds and before eating, smoking, using lavatory, and at the end of the



working period. Appropriate techniques should be used to remove potentially contaminated clothing. Ensure that eyewash stations and safety showers are close to the workstation locations.

#### Personal protection

- Eyes:** Safety eyewear complying with approved standards should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts.
- Hands:** Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
- Respiratory:** Use a properly fitted, air purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirators must be based on known or anticipated exposure levels, the hazard of the product and safe working limits of the selected respirator.
- Skin:** Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
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### **9. Physical and chemical properties**

- Physical state:** Solid
- Colour:** White
- Boiling points:** 300°C (572 °F) (boric acid); 1390 °C (sodium hydroxide)
- Melting points:** 160°C (320 °F) (boric acid); 318 °C (sodium hydroxide)
- Vapour pressures:** 2.6 mmHg at 20 °C (boric acid); <18mm Hg at 20°C (sodium hydroxide)
- Density:** 1.44 g/cm<sup>3</sup> (boric acid); 2.13 g/cm<sup>3</sup> (sodium hydroxide)
- Flash point:** 173.9 °C (345°F) based on citric acid.
- Explosive properties:** N/A
- Flammable Limits:** N/A
- Vapour density:** 1.54 g/l (citric acid); > 1 g/l (sodium hydroxide)
- Viscosity:** N/A
- Autoignition temperature:** N/A
- Evaporation rate:** N/A
- Solubility:** Boric acid soluble in water.
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### **10. Stability and reactivity**

- Stability :** Materials are stable
- Conditions of instability:** For sodium hydroxide heat of solution is very high, and with limited amounts of water, violent boiling may occur. Absorbs carbon dioxide from air. Never add water to this material. Always add this material to water.
- Materials to avoid:** Reactive to moisture. Reactive with oxidizing agents, reducing agents, strong acids, acid anhydrides, strong alkali, nitrates, potassium.
- Hazardous decomposition products:** These products are carbon oxides (CO, CO<sub>2</sub>), boron oxides, sodium/sodium oxides.
- Hazardous Polymerisation:** Hazardous Polymerisation: will not occur
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## 11. Toxicological information

### Local effects

Skin irritation:	Hazardous in case of skin contact (irritant)
Skin absorption:	May be harmful if absorbed through the skin.
Eye irritation:	Hazardous in case of eye contact (irritant)
Inhalation:	May be harmful if inhaled.
Ingestion:	May be harmful if swallowed.

### Toxicity data

Ingredient	Test	Result	Route	Species
Boric Acid	LDLO	429 mg/kg	Oral	Man
	LDLO	200 mg/kg	Oral	Woman
	LDLO	934 mg/kg	Oral	Infant
	LDLO	2430 mg/kg	Dermal	Man
	LDLO	1500 mg/kg	Dermal	Child
	LDLO	1200 mg/kg	Dermal	Infant
	LD50	2660 mg/kg	Oral	Rat
	LD50	3450 mg/kg	Oral	Mouse

### Potential chronic health effects

Carcinogenic effects:	No known significant effects or critical hazards.
Teratogenic effects:	Known teratogen (boric acid)
Mutagenic effects:	Known mutagen (boric acid, sodium hydroxide)
Reproductive toxicity:	May cause reproductive disorders (boric acid)

### Over exposure signs/symptoms

Inhalation	May be harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.
Ingestion	May be harmful if swallowed.
Skin	Sodium hydroxide causes severe burns. May cause skin irritation and be harmful if adsorbed through skin.
Target organs	Contains material which causes damage to the following organs: upper respiratory tract, skin, eyes, testes.

## 12. Ecological information

### Ecotoxicity Data

Ingredient	Species	Period	Result
Boric acid	Daphnia magna (LC50)	48 hour/hours	133 mg/l
	Lepomis macrochirus (LC50)	96 hour/hours	>1021 mg/l

No ecological data available for citric acid and sodium hydroxide.

### Other adverse effects

No known significant effects or hazards.



### 13. Disposal considerations

Methods of disposal:

The generation of waste should be avoided or minimized wherever possible. Avoid dispersal of spilled material and runoff and contact with soil, water, drains and sewers. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional authority requirements.

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### 14. Transport information

International transport regulations

Not classified

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### 15. Regulatory information

Hazard(s): C, Xi. Corrosive. Irritant.

R-Phrases: 35; 37/38-41 - Causes severe burns. Irritating to respiratory system and skin. Risk of serious damage to eyes.

S-Phrases: 16-37/39-45 - Wear suitable protective clothing, gloves and eye/face protection. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

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### 16. Other information

Date of previous issue: No previous validation

*To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist. Enquiries regarding MSDS Content should be directed to: FLUORotechnics office.*

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