



## MATERIAL SAFETY DATA SHEET

CONTACT : **LEONID CHEMICALS**  
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### 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name:**

Restriction Endonucleases and Nicking Enzyme;  
Buffers for Restriction Endonucleases

**Catalog Numbers:**

G004

**Company Name & Address:**

LEONID CHEMICALS  
62/A-2 2nd Stage, Industrial Suburb  
Yeshwanthpur, Bangalore -22, INDIA  
Ph- +91-80-23378354

**Information Number:**

Please contact Fermentas distributor in your country.

### 2. COMPOSITION / INFORMATION ON INGREDIENTS

**Description**

Enzyme/protein in buffer solution, buffer. Volume of each product package varies: 0.02-1.2ml.

**Buffer's Components in Water**

**Reagent**

**CAS#**

**Concentration, %**

Tris-HCl

≤ 10

(mix of Trishydroxymethylaminomethane 77-86-1 and Hydrochloric acid)

7647-01-0

Potassium phosphate

0.057 (mix of Phosphoric acid 7664-38-2 and Potassium hydroxide

1310-58-3

Potassium chloride

7447-40-7

≤ 7.5

Sodium chloride

7647-14-5

≤ 8.75

Ethylendiamine tetraacetic acid, tetrasodium salt (EDTA)

6381-92-6

≤ 0.037

2-Mercapto-ethanol

60-24-2

≤ 0.078

Dithiothreitol (DTT)

3483-12-3

0.015



Glycerol  
56-81-5  
50  
BSA  
9048-46-8  
≤ 0.1  
Phenylmethylsulphonylfluoride  
329-98-6  
0.017  
Triton X-100  
9002-93-1  
≤ 0.2  
Magnesium chloride  
7791-18-6  
≤ 2.0  
Tris-acetate  
≤ 6.0  
(mix of Trishydroxymethylaminomethane  
77-86-1  
and Acetic acid)  
758-12-3  
Magnesium acetate  
16674-78-5  
≤ 7.0  
Potassium acetate  
127-08-2  
≤ 14.7  
Bis-Tris Propane-HCl  
2.8  
(mix of Bis-Tris propane  
64431-96-5  
and Hydrochloric acid)  
7647-01-0  
Sodium glutamate  
**6106-04-3**  
33.8  
Sodium dodecyl sulfate (SDS)  
151-21-3  
0.6  
Bromophenol blue, sodium salt  
62625-28-9  
0.05

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### 3. HAZARDS IDENTIFICATION

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#### Primary routes of entry

Skin or eye contact from splashes.  
Inhalation of the vapor at room temperature is unlikely.

#### Ingestion

No data available.

#### Skin contact

May cause irritation.

**Eye contact**

Irritating.

**Evidence for reproductive toxicity, carcinogenicity and mutagenicity**

No data available.

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**4. FIRST AID MEASURES**

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**After skin contact**

Wash skin with water and soap and rinse thoroughly. Remove contaminated clothing.

**After eye contact**

Rinse opened eyes for several minutes under running water. Get medical attention if eyes become irritating.

**After swallowing (ingestion)**

Rinse mouth. Drink plenty of water. Get medical attention if irritating or symptoms occur.

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**5. FIRE FIGHTING MEASURES**

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**Fire and explosion hazards**

Gives off irritating or toxic fumes in a fire.

**Suitable extinguishing media**

Water spray, carbon dioxide, extinguishing powder or foam.

**Protective equipment**

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

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**6. ACCIDENTAL RELEASE MEASURES**

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**Personal precautions**

Not required.

**Measures for cleaning / collecting**

Collect spilled liquid with liquid-binding material or inert absorbent and place it in container for disposal. Dispose of in accordance with federal, state and local environmental regulations. Wash spill site after material pickup is complete.

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**7. HANDLING AND STORAGE**

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**Handling**

No special measures necessary. Good laboratory technique should be used when handling.

**Storage**

No special measures necessary. Store at -20°C.

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**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

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**Exposure limits**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

**Eye protection**

Safety goggles (glasses) when risk of splashes.

**Skin protection**

Protective gloves, a lab coat.

#### Hygiene measures

Keep away from foodstuffs and beverages.

Avoid contact with the eyes and skin.

Do not eat, drink or smoke while working with products.

#### Breathing equipment

Not required.

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### 9. PHYSICAL AND CHEMICAL PROPERTIES

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#### Appearance

##### Flash point

Liquid.

No data available.

##### Color

##### Explosive properties

Colorless. Blue, when solution contains bromphenol blue.

No data available.

##### Odor

##### Vapor pressure

Odorless (or light specific odor

No data available.

when buffer contains 2-mercaptoethanol).

##### Boiling point

##### pH

No data available.

6.4 - 8.5.

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### 10. STABILITY AND REACTIVITY

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#### Stability

Stable, under normal handling and storage conditions.

#### Decomposition

No data available.

#### Conditions to avoid

Contact with strong oxidants, fire.

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### 11. TOXICOLOGICAL INFORMATION

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Irritating to skin.

Irritating to eyes.

Preparations may cause allergic reactions in certain sensitive individuals.

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**12. ECOLOGICAL INFORMATION**

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No data available.

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**13. DISPOSAL CONSIDERATIONS**

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Dispose of in accordance with federal, state and local environmental regulations.

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**14. TRANSPORT INFORMATION**

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Not regulated.

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**15. REGULATORY INFORMATION**

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Irritant

**R36**

Irritating to eyes.

**R38**

Irritating to skin.

**S36/37/39**

Wear suitable protective clothing, gloves and eye/face protection.

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**16. OTHER INFORMATION**

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This information is based on our present knowledge and shall be used only as a guide. However, this shall not constitute a guarantee for any specific product features. Fermentas is not held liable for any damage resulting from handling or from contact with the above products.

**MSDS** has been prepared in accordance with EU Directive 67/548/EEC, 91/155/EEC and other EU Community legislations in force