Material Safety Data Sheet
10x PCR Buffer B (contains no MgCl2)

Section 1 - Chemical Product and Company Identification

MSDS Name: 10x PCR Buffer B (contains no MgCl2)
Catalog Numbers: BP6113
Synonyms: None Known.
Company Identification:
    Fisher Scientific
    1 Reagent Lane
    Fair Lawn, NJ 07410
For information, call: 201-796-7100
Emergency Number: 201-796-7100
For CHEMTREC assistance, call: 800-424-9300
For International CHEMTREC assistance, call: 703-527-3887

Section 2 - Composition, Information on Ingredients

<table>
<thead>
<tr>
<th>CAS#</th>
<th>Chemical Name</th>
<th>Percent</th>
<th>EINECS/ELINCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>77-86-1</td>
<td>Tris (hydroxymethyl) aminomethane</td>
<td>1.0-3.0</td>
<td>201-064-4</td>
</tr>
<tr>
<td>7447-40-7</td>
<td>Potassium Chloride</td>
<td>1.0-3.0</td>
<td>231-211-8</td>
</tr>
<tr>
<td>7732-18-5</td>
<td>Water</td>
<td>Balance</td>
<td>231-791-2</td>
</tr>
</tbody>
</table>

Hazard Symbols: None listed.
Risk Phrases: None listed.

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: colorless liquid. Caution! May cause eye, skin, and respiratory tract irritation. This is expected to be a low hazard for usual industrial handling. Good laboratory procedures are recommended when handling this compound.
Target Organs: No data found.

Potential Health Effects
Eye: May cause eye irritation.
Skin: May cause skin irritation.
Ingestion: May cause irritation of the digestive tract. The toxicological properties of this substance have not been fully investigated.
Inhalation: May cause respiratory tract irritation. The toxicological properties of this substance
have not been fully investigated. 

**Chronic:** No information found.

### Section 4 - First Aid Measures

**Eyes:** In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid.

**Skin:** In case of contact, flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical aid if irritation develops and persists. Wash clothing before reuse.

**Ingestion:** If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical aid.

**Inhalation:** If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

**Notes to Physician:** Treat symptomatically and supportively.

### Section 5 - Fire Fighting Measures

**General Information:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

**Extinguishing Media:** Use extinguishing media most appropriate for the surrounding fire.

**Flash Point:** Not available.

**Autoignition Temperature:** Not available.

**Explosion Limits, Lower:** Not available.

**Upper:** Not available.

**NFPA Rating:** (estimated) Health: 1; Flammability: 0; Instability: 0

### Section 6 - Accidental Release Measures

**General Information:** Use proper personal protective equipment as indicated in Section 8.

**Spills/Leaks:** Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Provide ventilation.

### Section 7 - Handling and Storage

**Handling:** Wash thoroughly after handling. Use with adequate ventilation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation.

**Storage:** Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.
Section 8 - Exposure Controls, Personal Protection

**Engineering Controls:** Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

**Exposure Limits**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>NIOSH</th>
<th>OSHA - Final PELs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tris (hydroxymethyl) aminomethane</td>
<td>none listed</td>
<td>none listed</td>
<td>none listed</td>
</tr>
<tr>
<td>Potassium Chloride</td>
<td>none listed</td>
<td>none listed</td>
<td>none listed</td>
</tr>
<tr>
<td>Water</td>
<td>none listed</td>
<td>none listed</td>
<td>none listed</td>
</tr>
</tbody>
</table>

**OSHA Vacated PELs:** Tris (hydroxymethyl) aminomethane: No OSHA Vacated PELs are listed for this chemical. Potassium Chloride: No OSHA Vacated PELs are listed for this chemical. Water: No OSHA Vacated PELs are listed for this chemical.

**Personal Protective Equipment**

**Eyes:** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin:** Wear appropriate protective gloves to prevent skin exposure.

**Clothing:** Wear appropriate protective clothing to prevent skin exposure.

**Respirators:** A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant a respirator's use.

Section 9 - Physical and Chemical Properties

**Physical State:** Liquid

**Appearance:** colorless

**Odor:** Not available.

**pH:** 9.0 (1% soln water)

**Vapor Pressure:** Not available.

**Vapor Density:** Not available.

**Evaporation Rate:** Not available.

**Viscosity:** Not available.

**Boiling Point:** Not available.

**Freezing/Melting Point:** Not available.

** Decomposition Temperature:** Not available.

**Solubility:** Not available.

** Specific Gravity/Density:** Not available.

**Molecular Formula:** solution

**Molecular Weight:** Not available.

Section 10 - Stability and Reactivity
**Chemical Stability:** Stable at room temperature in closed containers under normal storage and handling conditions.

**Conditions to Avoid:** None reported.

**Incompatibilities with Other Materials:** Slightly reactive to oxidizing agents, metals, acids, alkalis, moisture.

**Hazardous Decomposition Products:** None.

**Hazardous Polymerization:** Has not been reported

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**Section 11 - Toxicological Information**

**RTECS#:**

- **CAS# 77-86-1:** TY2900000
- **CAS# 7447-40-7:** TS8050000
- **CAS# 7732-18-5:** ZC0110000

**LD50/LC50:**

- **CAS# 77-86-1:**
  - Oral, rat: LD50 = 5900 mg/kg;

- **CAS# 7447-40-7:**
  - Draize test, rabbit, eye: 500 mg/24H Mild;
  - Oral, mouse: LD50 = 1500 mg/kg;
  - Oral, rat: LD50 = 2600 mg/kg;

- **CAS# 7732-18-5:**
  - Oral, rat: LD50 = >90 mL/kg;

**Carcinogenicity:**

- **CAS# 77-86-1:** Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.
- **CAS# 7447-40-7:** Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.
- **CAS# 7732-18-5:** Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

**Epidemiology:** No information available.

**Teratogenicity:** No information available.

**Reproductive Effects:** No information available.

**Neurotoxicity:** No information available.

**Mutagenicity:** No information available.

**Other Studies:** No data available.

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**Section 12 - Ecological Information**

No information available.

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**Section 13 - Disposal Considerations**

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

**RCRA P-Series:** None listed.
**Section 14 - Transport Information**

<table>
<thead>
<tr>
<th></th>
<th>US DOT</th>
<th>IATA</th>
<th>RID/ADR</th>
<th>IMO</th>
<th>Canada TDG</th>
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<tbody>
<tr>
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<td>No information available.</td>
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<td><strong>Hazard Class:</strong></td>
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<tr>
<td><strong>UN Number:</strong></td>
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<tr>
<td><strong>Packing Group:</strong></td>
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</tbody>
</table>

**Section 15 - Regulatory Information**

**US FEDERAL**

**TSCA**
- CAS# 77-86-1 is listed on the TSCA inventory.
- CAS# 7447-40-7 is listed on the TSCA inventory.
- CAS# 7732-18-5 is listed on the TSCA inventory.

**Health & Safety Reporting List**
None of the chemicals are on the Health & Safety Reporting List.

**Chemical Test Rules**
None of the chemicals in this product are under a Chemical Test Rule.

**Section 12b**
None of the chemicals are listed under TSCA Section 12b.

**TSCA Significant New Use Rule**
None of the chemicals in this material have a SNUR under TSCA.

**SARA**

**CERCLA Hazardous Substances and corresponding RQs**
None of the chemicals in this material have an RQ.

**SARA Section 302 Extremely Hazardous Substances**
None of the chemicals in this product have a TPQ.

**SARA Codes**
- CAS # 77-86-1: acute. CAS # 7447-40-7: acute.

**Section 313**
No chemicals are reportable under Section 313.

**Clean Air Act:**
This material does not contain any hazardous air pollutants. This material does not contain any Class 1 Ozone depletors. This material does not contain any Class 2 Ozone depletors.

**Clean Water Act:**
None of the chemicals in this product are listed as Hazardous Substances under the CWA. None of the chemicals in this product are listed as Priority Pollutants under the CWA. None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

**OSHA:**
None of the chemicals in this product are considered highly hazardous by OSHA.
STATE
CAS# 77-86-1 is not present on state lists from CA, PA, MN, MA, FL, or NJ.
CAS# 7447-40-7 is not present on state lists from CA, PA, MN, MA, FL, or NJ.
CAS# 7732-18-5 is not present on state lists from CA, PA, MN, MA, FL, or NJ.
California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations
European Labeling in Accordance with EC Directives
Hazard Symbols:
Not available.
Risk Phrases:
Safety Phrases:
S 24/25 Avoid contact with skin and eyes.

WGK (Water Danger/Protection)
CAS# 77-86-1: 1
CAS# 7447-40-7: 1
CAS# 7732-18-5: No information available.

Canada - DSL/NDSL
CAS# 77-86-1 is listed on Canada's DSL List.
CAS# 7447-40-7 is listed on Canada's DSL List.
CAS# 7732-18-5 is listed on Canada's DSL List.

Canada - WHMIS
This product does not have a WHMIS classification.

Canadian Ingredient Disclosure List

Exposure Limits

Section 16 - Additional Information

MSDS Creation Date: 5/29/2003
Revision #2 Date: 6/06/2003

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, however arising, even if Fisher has been advised of the possibility of such damages.