1. Identification

**Product identifier**

**Product name**  Alkaline Phosphatase, Calf Intestinal (CIP)

**Other means of identification**

**Product No**  M0290

**Synonyms**  None

**Recommended use of the chemical and restrictions on use**

**Recommended use**  This product is for research and development only

**Restrictions on use**  No information available

**Details of the supplier of the safety data sheet**

**Supplier Address**  New England BioLabs  
240 County Road  
Ipswich, MA 01938  
USA

**Emergency telephone number**

**Company Phone Number**  978-927-5054, 800-632-5227 (toll free)

**Telefax**  978-921-1350

**E-mail address**  info@neb.com

**24 Hour Emergency Phone Number**  Chemtrec +1 703-741-5970
2. Hazard(s) identification

**Classification**
This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

**Hazards not otherwise classified (HNOC)**
Not applicable

**Label elements**

**Hazard statements**
This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

3. Composition/information on ingredients

**Substance**
Not applicable.

**Mixture**

4. First-aid measures

**Description of first aid measures**

Inhalation  Remove to fresh air.
Eye contact Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin contact Wash skin with soap and water.
Ingestion Rinse mouth.

**Most important symptoms and effects, both acute and delayed**

Symptoms  No information available.
Effects of Exposure  No information available.

**Indication of any immediate medical attention and special treatment needed**

**Note to physicians**  Treat symptomatically.
5. Fire-fighting measures

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Large Fire

CAUTION: Use of water spray when fighting fire may be inefficient.

Unsuitable extinguishing media

Do not scatter spilled material with high pressure water streams.

Specific hazards arising from the chemical

No information available.

Explosion data

- Sensitivity to mechanical impact: None.
- Sensitivity to static discharge: None.

Special protective equipment and precautions for fire-fighters

Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions

Ensure adequate ventilation.

Methods and material for containment and cleaning up

Methods for containment

Prevent further leakage or spillage if safe to do so.

Methods for cleaning up

Pick up and transfer to properly labeled containers.

7. Handling and storage

Precautions for safe handling

Advice on safe handling

Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep container tightly closed in a dry and well-ventilated place.

8. Exposure controls/personal protection

Control parameters

Exposure Limits

Other information

Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962
Appropriate engineering controls

Engineering controls
- Showers
- Eyewash stations
- Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection
- No special protective equipment required.

Skin and body protection
- No special protective equipment required.

Respiratory protection
- No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations
- Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks • Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
<td></td>
</tr>
<tr>
<td>Appearance</td>
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<td></td>
</tr>
<tr>
<td>Color</td>
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<td></td>
</tr>
<tr>
<td>Odor</td>
<td>Mild</td>
<td></td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No information available</td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks • Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH</td>
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<td>None known</td>
</tr>
<tr>
<td>Melting point / freezing point</td>
<td>No data available</td>
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<tr>
<td>Initial boiling point and boiling range</td>
<td>No data available</td>
<td>None known</td>
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<tr>
<td>Flash point</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Evaporation rate</td>
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<td>None known</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Flammability Limit in Air</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Upper flammability or explosive limits</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Lower flammability or explosive limits</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Vapor density</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Relative density</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Water solubility</td>
<td>No data available</td>
<td>None known</td>
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<tr>
<td>Solubility(ies)</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Partition coefficient</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>None known</td>
<td></td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>None known</td>
<td></td>
</tr>
<tr>
<td>Kinematic viscosity</td>
<td>None known</td>
<td></td>
</tr>
<tr>
<td>Dynamic viscosity</td>
<td>None known</td>
<td></td>
</tr>
</tbody>
</table>

Other information

- Explosive properties: No information available
- Oxidizing properties: No information available
- Softening point: No information available
10. Stability and reactivity

Reactivity  
No information available.

Chemical stability  
Stable under normal conditions.

Possibility of hazardous reactions  
None under normal processing.

Conditions to avoid  
None known based on information supplied.

Incompatible materials  
None known based on information supplied.

Hazardous decomposition products  
None known based on information supplied.

11. Toxicological information

Information on likely routes of exposure

Inhalation  
Specific test data for the substance or mixture is not available.

Eye contact  
Specific test data for the substance or mixture is not available.

Skin contact  
Specific test data for the substance or mixture is not available.

Ingestion  
Specific test data for the substance or mixture is not available.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms  
No information available.

Acute toxicity

Numerical measures of toxicity

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)  
25,200.00 mg/kg

ATEmix (dermal)  
20,000.00 mg/kg

ATEmix (inhalation-gas)  
99,999.00 ppm

ATEmix (inhalation-dust/mist)  
99,999.0000 mg/l

ATEmix (inhalation-vapor)  
99,999.00 mg/l

Component Information

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation  
No information available.

Serious eye damage/eye irritation  
No information available.
Respiratory or skin sensitization  No information available.

Germ cell mutagenicity  No information available.

Carcinogenicity  No information available.

Reproductive toxicity  No information available.

STOT - single exposure  No information available.

STOT - repeated exposure  No information available.

Aspiration hazard  No information available.

Other adverse effects  No information available.

Interactive effects  No information available.

### 12. Ecological information

Ecotoxicity

Persistence and degradability  No information available.

Bioaccumulation

Component Information

Other adverse effects  No information available.

### 13. Disposal considerations

Waste treatment methods

Waste from residues/unused products  Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging  Do not reuse empty containers.

### 14. Transport information

DOT  Not regulated

Product name  Alkaline Phosphatase, Calf Intestinal (CIP)
TDG: Not regulated
MEX: Not regulated
ICAO (air): Not regulated
IATA: Not regulated
IMDG: Not regulated
RID: Not regulated
ADR: Not regulated
ADN: Not regulated

15. Regulatory information

International Inventories
TSCA: Contact supplier for inventory compliance status.

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS No</th>
<th>US TSCA Inventory listing</th>
<th>US TSCA inactive/active designation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerol</td>
<td>56-81-5</td>
<td>Present</td>
<td>Active</td>
</tr>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>Present</td>
<td>Active</td>
</tr>
<tr>
<td>Potassium Chloride</td>
<td>7447-40-7</td>
<td>Present</td>
<td>Active</td>
</tr>
<tr>
<td>Tris-HCl</td>
<td>1185-53-1</td>
<td>Present</td>
<td>Active</td>
</tr>
<tr>
<td>Magnesium Chloride</td>
<td>7786-30-3</td>
<td>Present</td>
<td>Active</td>
</tr>
<tr>
<td>Zinc Chloride</td>
<td>7646-85-7</td>
<td>Present</td>
<td>Active</td>
</tr>
</tbody>
</table>

DSL/NDSL: Contact supplier for inventory compliance status.
EINECS/ELINCS: Contact supplier for inventory compliance status.
ENCS: Contact supplier for inventory compliance status.
IECSC: Contact supplier for inventory compliance status.
KECL: Contact supplier for inventory compliance status.
PICCS: Contact supplier for inventory compliance status.
AIIC: Contact supplier for inventory compliance status.
NZIoC: Contact supplier for inventory compliance status.

Legend:
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances
NZIoC - New Zealand Inventory of Chemicals

US Federal Regulations
SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.
SARA 311/312 Hazard Categories
Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations
California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>New Jersey</th>
<th>Massachusetts</th>
<th>Pennsylvania</th>
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<tbody>
<tr>
<td>Zinc Chloride</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>7646-85-7</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

U.S. EPA Label Information
EPA Pesticide Registration Number Not applicable

16. Other information

NFPA Health hazards 0 Flammability 1 Instability 0 Special hazards -
HMIS Health hazards 0 Flammability 1 Physical hazards 0 Personal protection X

Key or legend to abbreviations and acronyms used in the safety data sheet
Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION
TWA TWA (time-weighted average) STEL STEL (Short Term Exposure Limit)
Ceiling Maximum limit value * Skin designation

Key literature references and sources for data used to compile the SDS
Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
EPA (Environmental Protection Agency)
Acute Exposure Guideline Level(s) (AEGL(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
National Institute of Technology and Evaluation (NITE)
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine's PubMed database (NLM PUBMED)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
World Health Organization

Product name Alkaline Phosphatase, Calf Intestinal (CIP)
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The information provided in this Safety Data Sheet is correct to the best of our knowledge and belief at the date of publication. This information is intended only as a guide for safe handling, use, processing, storage, transportation, disposal and release and should not be taken as a warranty or quality specification. The information relates only to the specific material and may not be valid for such material used in combination with any other materials or in any process unless expressly specified in the text. New England Biolabs will not be liable for any damages resulting from handling or contact with the product.

End of Safety Data Sheet