



New England Biolabs
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MATERIAL SAFETY DATA SHEET

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Buffer
B0315

Revision Date: 3/09

SECTION 1—PRODUCT

Product Name: Terminal Transferase Reaction Buffer Pack

SECTION 2—CHEMICAL INFORMATION

| | | | |
|----------------------|------|------|-----------|
| 1. Tris-acetate | < 1% | Cas. | #None |
| 2. Potassium acetate | < 1% | Cas. | #127-08-2 |
| 3. Magnesium acetate | < 1% | Cas. | #142-72-3 |

SECTION 3—HAZARDOUS INFORMATION

Many NEB products are classified as mixtures which contain hazardous ingredients in concentrations (less than 1%). The quantity of hazardous chemical component does not exceed the permissible exposure limit or "Threshold Limit Value".

MSDS' are offered by NEB since The Hazards Communication Standard set by OSHA does not exempt these mixtures from disclosure.

SECTION 15—REGULATORY INFORMATION

UNITED STATES REGULATORY INFORMATION

SARA LISTED: No

CANADA REGULATORY INFORMATION

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

DSL: No

NDSL: No

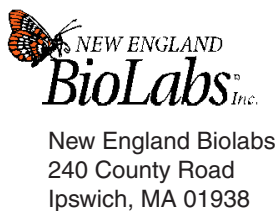
SECTION 16—OTHER INFORMATION

DISCLAIMER: For R&D use only. Not for drug, household or other uses.

WARRANTY: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. New England Biolabs, Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.

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**Cobalt Chloride
#B0252**

Revision Date: 3/09

SECTION 1—CHEMICAL INFORMATION

Product Name: Cobalt Chloride

SECTION 2—COMPOSITION/INFORMATION ON INGREDIENT

NAME OF CHEMICAL: Cobalt Chloride

CAS No.: 7646-79-9

SARA 313: No

SECTION 3—HAZARDOUS IDENTIFICATION

Emergency Overview:

Toxic (USA) Harmful (EU).

Harmful by inhalation, in contact with the skin and if swallowed.

HMIS Rating

Health: 3

Flammability: 0

Reactivity: 0

NFPA Rating

Health: 3

Flammability: 0

Reactivity:

SECTION 4—FIRST AID MEASURES

Oral Exposure: If swallowed, wash out mouth with water provided person is conscious. Call a physician.

Inhalation Exposure: If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult give oxygen. If breathing is difficult, give oxygen. Call a physician.

Dermal Exposure: In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call physician.

Eye Exposure: In case of contact with eyes, immediately flush eyes with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating eyelids with fingers. Call physician.

SECTION 5—FIRE FIGHTING MEASURES

Extinguishing Media: Suitable: Water spray. Carbon Dioxide, dry chemical powder or appropriate foam.

Special Fire fighting Procedures: Wear self contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

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

Flash point: N/A

Flammability: N/A

Autoignition Temp: N/A

SECTION 6—ACCIDENTAL RELEASE MEASURES

Procedure To Be Followed in Case Of Leak or Spill: Evacuate area.

Procedure(s) Of Personal Precaution(s): Wear self-contained breathing apparatus, rubber boots and heavy rubber gloves

Methods For Cleaning Up: Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete. **Procedure To Be Followed in Case Of Leak or Spill:** Evacuate area.

Procedure(s) Of Personal Precaution(s): Wear self-contained breathing apparatus, rubber boots and heavy rubber gloves and Chemical safety goggles.

Methods For Cleaning Up: Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

SECTION 7—HANDLING AND STORAGE

Handling

User Exposure: Do not breath dust. Avoid contact with eyes, skin and clothing. Avoid prolonged or repeated exposure.

Storage: Suitable: Keep tightly closed. Store at 2-8°C

SECTION 8—EXPOSURE CONTROLS/PPE

Engineering Controls: Safety shower and eye bath. Mechanical exhaust required.

Personal Protective Equipment: Government approved respirator.

Hand: Compatible chemical-resistant gloves.

Eye: Chemical safety goggles.

General Hygiene Measures: Wash hands thoroughly after handling.

EXPOSURE LIMITS, RETCS

| Country | Source | Type | Value |
|---------|-------------|------------|-------------------------------|
| USA USA | NIOSH NIOSH | Ceiling co | 0.05 MG/M3/15M 0.05 MG/M3/15M |

SECTION 9—PHYSICAL AND CHEMICAL PROPERTIES

Appearance:

Physical State: liquid

Property

Value

At temperature or Pressure

| | |
|--------------------------|----------------|
| Molecular Weight: | 183.91 AMU |
| pH: | N/A |
| BP/BP Range: | N/A |
| MP/MP Range: | 850.0-866.0 °C |
| Freezing Point: | N/A |
| Vapor Pressure: | N/A |
| Vapor Density: | N/A |

N/A = not available

SECTION 10—STABILITY AND REACTIVITY

Stability: Stable

Materials to Avoid: Strong oxidizing agents.

Hazardous Decomposition Products: Cobalt/cobalt oxides, Hydrogen chloride

Hazardous Polymerization: Will not occur.

SECTION 11- TOXICOLOGICAL INFORMATION

Route of Exposure:

Skin Absorption: May be harmful if absorbed.

Skin Contact: May cause skin irritation.

Eye Contact: May cause eye irritation.

Inhalation: Harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.

Ingestion: Harmful if swallowed.

Signs and symptoms of exposure: Vanadium compounds can cause metallic tastes and a greenish discoloration of the tongue. Exposure can cause coughing, wheezing, respiratory distress, and diarrhea. Gastrointestinal disturbances. Tremors. Headache.

SECTION 12-ECOLOGICAL INFORMATION

No data available.

SECTION 13-DISPOSAL CONSIDERATIONS

APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION

Contact a licensed professional waste disposal service to dispose of this material. Observe all federal, state, and local environmental regulations. (DN)Requires special label: "Contains a substance which is regulated by Danish work environmental law due to the risk of carcinogenic properties."

SECTION 14-TRANSPORT INFORMATION

DOT

Proper Shipping Name: None.

Non-Hazardous for Transport: This substance is considered to be non-hazardous for transport.

IATA

Non-Hazardous for Air Transport: non-hazardous for air transport.

SECTION 15-REGULATORY INFORMATION

EU ADDITIONAL CLASSIFICATION

Symbol of Danger: T

Indication of Danger: Toxic.

R: 49-42/43-52/53

Risk Statements: May cause cancer by inhalation. May cause sensitization by inhalation and skin contact. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S: 53-23-36/37-45-60

Safety Statements: Restricted to professional users. Attention - Avoid exposure - obtain special instructions before use. Do not breathe vapor. Wear suitable protective clothing and gloves. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). This material and its container must be disposed of as hazardous waste.

US CLASSIFICATION AND LABEL TEXT

Indication of Danger: Toxic. Dangerous for the environment. Risk Statements: Toxic if swallowed. Causes burns. May cause sensitization by inhalation and skin contact. May cause cancer by inhalation. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Safety Statements: Restricted to professional users. Attention - Avoid exposure - obtain special instructions before use. Do not breathe vapor spray. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing, gloves, and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). This material and its container must be disposed of as hazardous waste. US Statements: Probable Carcinogen (US). Target organ(s): Thyroid. Heart.

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