1 Identification

- **Product identifier**
  - **Trade name:** Tris Electrophoresis Purity Reagent
  - **Catalog or product number:** 1610794, 1610723, 1610716, 1610719, 1610719EDU, 1610716EDU, 9702147
  - **CAS Number:** 77-86-1
  - **EC number:** 201-064-4

- **Relevant identified uses of the substance or mixture and uses advised against**
  No further relevant information available.

- **Application of the substance / the mixture** Laboratory chemicals

- **Details of the supplier of the safety data sheet**
  - **Manufacturer/Supplier:** Bio-Rad Laboratories, Life Science Group
    2000 Alfred Nobel Drive
    Hercules, California 94547
  - **Information department:** Technical services, customer support
    lsg_techserv_us@bio-rad.com
  - **Emergency telephone number:** 1(800)424-9300 Use only in the event of a CHEMICAL EMERGENCY involving a SPILL, LEAK, FIRE, EXPLOSION or ACCIDENT.
    510-741-1000

2 Hazard(s) identification

- **Classification of the substance or mixture**
  - **Eye Irrit. 2A H319** Causes serious eye irritation.

- **Label elements**
  - **GHS label elements** The substance is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms**
  - GHS07

- **Signal word** Warning
- **Hazard statements**
  - **H319** Causes serious eye irritation.

- **Precautionary statements**
  - **P280** Wear eye protection / face protection.
  - **P264** Wash thoroughly after handling.
  - **P305+P351+P338** If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  - **P337+P313** If eye irritation persists: Get medical advice/attention.

- **Additional information:** Contact with acids may cause release of toxic gases

- **Other hazards**

- **Results of PBT and vPvB assessment**
  - **PBT:** Not applicable.

(Contd. on page 2)
Trade name: Tris Electrophoresis Purity Reagent

· vPvB: Not applicable.

3 Composition/information on ingredients

· Chemical characterization: Substances
· CAS No. Description:
  77-86-1 Tris(hydroxymethyl)aminomethane
· Identification number(s):
  · EC number: 201-064-4
· Additional information: For the wording of the listed risk phrases refer to section 15.

4 First-aid measures

· Description of first aid measures
  · After inhalation Supply fresh air; consult doctor in case of complaints.
  · After skin contact Generally the product does not irritate the skin.
  · After eye contact Rinse opened eye for several minutes under running water.
  · After swallowing Induce vomiting and call for medical help.
· Information for doctor
  · Most important symptoms and effects, both acute and delayed No further relevant information available.
  · Indication of any immediate medical attention and special treatment needed No further relevant information available.

5 Fire-fighting measures

· Extinguishing media
· Suitable extinguishing agents
  CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
· Special hazards arising from the substance or mixture No further relevant information available.
· Advice for firefighters
· Protective equipment: No special measures required.

6 Accidental release measures

· Personal precautions, protective equipment and emergency procedures Wear protective clothing.
· Environmental precautions: No special measures required.
· Methods and material for containment and cleaning up: Pick up mechanically.
· Reference to other sections
  See Section 7 for information on safe handling
  See Section 8 for information on personal protection equipment.
  See Section 13 for disposal information.

7 Handling and storage

· Handling
  · Precautions for safe handling No special precautions are necessary if used correctly.
  · Information about protection against explosions and fires: No special measures required.
Safety Data Sheet
acc. to OSHA HCS

Printing date 06/15/2015
Reviewed on 06/15/2015

Trade name: Tris Electrophoresis Purity Reagent

• Conditions for safe storage, including any incompatibilities
  • Storage
    • Requirements to be met by storerooms and receptacles: According to product specification
    • Information about storage in one common storage facility: Not required.
    • Further information about storage conditions: None.
    • Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

• Additional information about design of technical systems: No further data; see item 7.

  • Control parameters
    • Components with limit values that require monitoring at the workplace: Not required.
    • Additional information: The lists that were valid during the creation were used as basis.

  • Exposure controls
    • Personal protective equipment
      • General protective and hygienic measures Wash hands before breaks and at the end of work.
      • Protection of hands: Protective gloves.
      • Material of gloves Synthetic gloves
      • Penetration time of glove material
        The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
      • Eye protection: Safety glasses

9 Physical and chemical properties

• Information on basic physical and chemical properties
  • General Information
    • Appearance:
      • Form: Crystalline
      • Color: Whitish
    • Odor: Odorless
    • Odour threshold: Not determined.
  • pH-value: Not applicable.

  • Change in condition
    • Melting point/Melting range: 171.2 °C
    • Boiling point/Boiling range: undetermined

  • Flash point: Not applicable

  • Flammability (solid, gaseous) Product is not flammable.

  • Ignition temperature:
    • Decomposition temperature: Not determined.
    • Auto igniting: Not determined.
    • Danger of explosion: Product does not present an explosion hazard.
### Trade name: Tris Electrophoresis Purity Reagent

(Contd. of page 3)

- **Explosion limits:**
  - Lower: Not determined.
  - Upper: Not determined.

- **Vapor pressure:** Not applicable.

- **Density at 20 °C:** 0.84 g/cm³
  - Relative density: Not determined.
  - Vapour density: Not applicable.
  - Evaporation rate: Not applicable.

- **Solubility in / Miscibility with Water:** Fully miscible

- **Partition coefficient (n-octanol/water):** Not determined.

- **Viscosity:**
  - dynamic: Not applicable.
  - kinematic: Not applicable.
  - Organic solvents: 0.0 %

- **Solids content:** 100.0 %

- **Other information**
  - No further relevant information available.

### 10 Stability and reactivity

- **Reactivity**
  - Chemical stability
  - **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
  - **Possibility of hazardous reactions** No dangerous reactions known
  - **Conditions to avoid** No further relevant information available.
  - **Incompatible materials:** No further relevant information available.
  - **Hazardous decomposition products:** No dangerous decomposition products known

### 11 Toxicological information

- **Information on toxicological effects**
  - Acute toxicity:

    - **LD/LC50 values for hazardous components per OSHA criteria:**
      - 77-86-1 Tris(hydroxymethyl)aminomethane
        - Oral LD50: 5900 mg/kg (rat)

    - **Primary irritant effect:**
      - on the eye: Irritant effect.
      - Sensitization: No sensitizing effects known.

    - **Additional toxicological information:**

    - **Carcinogenic categories**
      - IARC (International Agency for Research on Cancer)
        - Substance is not listed.

(Contd. on page 5)
Trade name: Tris Electrophoresis Purity Reagent

- NTP (National Toxicology Program)
  Substance is not listed.

- OSHA-Ca (Occupational Safety & Health Administration)
  Substance is not listed.

### 12 Ecological information

- **Toxicity**
  - Aquatic toxicity: No further relevant information available.
  - Persistence and degradability: No further relevant information available.

- **Behavior in environmental systems:**
  - Bioaccumulative potential: No further relevant information available.
  - Mobility in soil: No further relevant information available.

- **Additional ecological information:**
  - General notes: Generally not hazardous for water.

- **Results of PBT and vPvB assessment**
  - PBT: Not applicable.
  - vPvB: Not applicable.

- **Other adverse effects**: No further relevant information available.

### 13 Disposal considerations

- **Waste treatment methods**

- **Recommendation**
  Hand over to hazardous waste disposers.
  Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

- **Uncleaned packagings**
  - **Recommendation**: Disposal must be made according to official regulations.

### 14 Transport information

- **UN-Number**
  - DOT, ADR, ADN, IMDG, IATA: Void

- **UN proper shipping name**
  - DOT, ADR, ADN, IMDG, IATA: Void

- **Transport hazard class(es)**
  - DOT, ADR, ADN, IMDG, IATA: Void
  - Class: Void

- **Packing group**
  - DOT, ADR, IMDG, IATA: Void

- **Environmental hazards**
  - Marine pollutant: No
Trade name: Tris Electrophoresis Purity Reagent

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- SARA (Superfund Amendments and Reauthorization Act of 1986 - USA)
  - Section 302/304 (40CFR355.30 / 40CFR355.40):
    Substance not listed.
  - Section 313 (40CFR372.65):
    Substance is not listed.
  - TSCA (Toxic Substances Control Act):
    Substance is listed.

- Carcinogenic categories

- EPA (Environmental Protection Agency)
  Substance is not listed.

- TLV (Threshold Limit Value established by ACGIH)
  Substance is not listed.

- MAK (German Maximum Workplace Concentration)
  Substance is not listed.

- NIOSH-Ca (National Institute for Occupational Safety and Health)
  Substance is not listed.

- National regulations

- Water hazard class: Generally not hazardous for water.
- Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- Department issuing SDS: Environmental Health and Safety.
- Contact:
  Life Science Group, Environmental Health and Safety, 2000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 741-1000
  Diagnostic Group, Environmental Health and Safety, 4000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 724-7000
- Date of preparation / last revision 06/15/2015 / -
- Abbreviations and acronyms:
  ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
Trade name: Tris Electrophoresis Purity Reagent

IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A
* Data compared to the previous version altered.