

1 Identification

- **Product identifier**
- **Trade name:** 10X Tris/Glycine/SDS Buffer
- **Catalog or product number:** 1610732, 9701906, 1610772, 1610772EDU, 1610772EDU, 10021723
- **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
lsq_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**
The product is not classified according to the Globally Harmonized System (GHS).

Label elements

- **GHS label elements** Void
- **Hazard pictograms** Void
- **Signal word** Void
- **Hazard statements** Void
- **Additional information:** Contact with acids may cause release of toxic gases
- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with non-hazardous additions.
- **Listing of dangerous and non-hazardous components:**

56-40-6 Glycine	10-20%
77-86-1 Tris(hydroxymethyl)aminomethane	2.5-5%
7732-18-5 water	50-100%

- **Additional information** For the wording of the listed risk phrases refer to section 15.

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4 First-aid measures

- **Description of first aid measures**
- **General information** No special measures required.
- **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:**
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **Reference to other sections**
No dangerous substances are released.
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 measures required.
- **Information about protection against explosions and fires:** No special measures required.
- **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.

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· Specific end use(s) No further relevant information available.

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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:
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- Additional information: The lists that were valid during the creation were used as basis.
- Exposure controls
- Personal protective equipment
- General protective and hygienic measures The usual precautionary measures for handling chemicals should be followed.
- Breathing equipment: Not required.
- 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: Liquid
- Form: Light yellow
- Color: Odorless
- Odor: Not determined.
- Odour threshold: 8.3
- pH-value at 20 °C:
- Change in condition
- Melting point/Melting range: undetermined
- Boiling point/Boiling range: undetermined
- Flash point: Not applicable
- Flammability (solid, gaseous) Not applicable.
- Ignition temperature: Not determined.
- Decomposition temperature: Product is not selfigniting.
- Auto igniting: Product does not present an explosion hazard.
- Danger of explosion:
- Explosion limits:
Lower: Not determined.
Upper: Not determined.

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- Vapor pressure at 20 °C: 23 hPa
- Density at 20 °C: 0.989 g/cm³
- Relative density: Not determined.
- Vapour density: Not determined.
- Evaporation rate: Not determined.
- Solubility in / Miscibility with
Water: Fully miscible
- Partition coefficient (n-octanol/water): Not determined.
- Viscosity:
dynamic: Not determined.
kinematic: Not determined.
- Solvent content:
Organic solvents: 0.0 %
Water: 81.4 %
- Solids content: 18.6 %
- 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:
- 56-40-5 Glycine
- Oral LD50 7930 mg/kg (rat)
- Dermal LD50 5200 mg/kg (rat)
- 77-86-1 Tris(hydroxymethyl)aminomethane
- Oral LD50 5900 mg/kg (rat)
- Primary irritant effect:
- on the skin: No irritant effect.
- Sensitization: No sensitizing effects known.

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Additional toxicological information:
The product is not subject to classification according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

- **Carcinogenic categories**
- IARC (International Agency for Research on Cancer)
None of the ingredients is listed.
- NTP (National Toxicology Program)
None of the ingredients is listed.
- OSHA-Ca (Occupational Safety & Health Administration)
None of the ingredients is listed.
- Target organs: Not applicable.

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:**
Water hazard class 1 (German Regulation) (Self-assessment); slightly hazardous for water.
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **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.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

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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
· Class
Void
- **Packing group**
· DOT, ADR, IMDG, IATA
Void
- **Environmental hazards:**
· Marine pollutant: No
- **Special precautions for user**
Not applicable.
- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**
Not applicable.
- **Transport/Additional information:**
Not dangerous according to the above specifications.
- **UN "Model Regulation":**
-

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):**
None of the ingredients is listed.
- **Section 313 (40CFR372.65):**
None of the ingredients is listed.
- **TSCA (Toxic Substances Control Act):**
All ingredients are listed.
- **Carcinogenic categories**
- **EPA (Environmental Protection Agency)**
None of the ingredients is listed.
- **TLV (Threshold Limit Value established by ACGIH)**
None of the ingredients is listed.
- **MAK (German Maximum Workplace Concentration)**
None of the ingredients is listed.
- **NIOSH-Ca (National Institute for Occupational Safety and Health)**
None of the ingredients is listed.
- **National regulations**
- **Water hazard class:** Water hazard class 1 (Self-assessment); slightly hazardous for water.

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Reviewed on 06/12/2015

Trade name: 10X Tris/Glycine/SDS Buffer**Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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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)

IMDG: International Maritime Code for Dangerous Goods

DOT: U.S. Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

*** Data compared to the previous version altered.**

US