

**BIO-RAD**

09/19/2018

**Kit Components**

Product code	Description
1704270 1704271 1704270EDU 1704271EDU	Trans-Blot® Turbo™ RTA Transfer Kit
<b>Components:</b>	
10026938	Trans-Blot® Turbo™ 5x Transfer Buffer
10026931	Trans-Blot® Turbo™ Transfer Stacks
10026936	Trans-Blot® Turbo™ Nitrocellulose

**BIO-RAD****Safety Data Sheet**  
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Reviewed on 08/01/2018

**1 Identification**

- **Product identifier**
- **Trade name:** Trans-Blot® Turbo™ 5x Transfer Buffer
- **Catalog or product number:** 10026938
- **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 (510)741-1000
- **Information department:** 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 product 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**  
P264 Wash thoroughly after handling.  
P280 Wear eye protection / face protection.  
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.
- **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.

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**Listing of dangerous and non-hazardous components:**

	Proprietary Reagent K	Eye Irrit. 2A, H319	10-20%
	Proprietary Amino Acid I	Eye Irrit. 2A, H319	5-10%
151-21-3	sodium dodecyl sulphate	Flam. Sol. 2, H228 Acute Tox. 3, H311 Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2A, H319	1-2.5%

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

**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 eye contact** Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing** Rinse mouth with water. Seek medical attention and appropriate follow-up.
- **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** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.

**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**  
See Section 7 for information on safe handling  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**

<b>PAC-1:</b>	
sodium dodecyl sulphate	3.9 mg/m³
<b>PAC-2:</b>	
151-21-3 sodium dodecyl sulphate	43 mg/m³

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**PAC-3:**

151-21-3 sodium dodecyl sulphate	260 mg/m³
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**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.
- **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:** Keep receptacle tightly sealed.
- **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:**  
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**  
Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing  
Wash hands before breaks and at the end of work.  
Avoid contact with the eyes.
- **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  
Tightly sealed goggles.

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## 9 Physical and chemical properties

### Information on basic physical and chemical properties

#### General Information

#### Appearance:

Form:	Liquid
Color:	Colorless
Odor:	Odorless
Odor threshold:	Not determined.
pH-value:	Not determined.

#### Change in condition

Melting point/Melting range:	undetermined
Boiling point/Boiling range:	undetermined

#### Flash point:

Flash point:	Not applicable
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#### Flammability (solid, gaseous)

Flammability (solid, gaseous):	Not applicable.
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#### Decomposition temperature:

Decomposition temperature:	Not determined.
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#### Auto igniting:

Auto igniting:	Product is not selfigniting.
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#### Danger of explosion:

Danger of explosion:	Product does not present an explosion hazard.
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#### Explosion limits:

Lower:	Not determined.
Upper:	Not determined.

#### Vapor pressure at 20 °C:

Vapor pressure at 20 °C:	23 hPa
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#### Density at 20 °C:

Density at 20 °C:	0.96246 g/cm³
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#### Relative density

Relative density:	Not determined.
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#### Vapor density

Vapor density:	Not determined.
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#### Evaporation rate

Evaporation rate:	Not determined.
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#### Solubility in / Miscibility with

Water:	Fully miscible
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#### Partition coefficient (n-octanol/water):

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

dynamic:	Not determined.
kinematic:	Not determined.

#### Solvent content:

Water:	74.8 %
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#### Solids content:

Solids content:	25.2 %
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#### Other information

Other information:	No further relevant information available.
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## 10 Stability and reactivity

### Reactivity No further relevant information available.

### Chemical stability

### Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

### Possibility of hazardous reactions No dangerous reactions known

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- 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:

#### Proprietary Reagent K

Oral	LD50 5,900 mg/kg (rat)
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#### Proprietary Amino Acid I

Oral	LD50 7,930 mg/kg (rat)
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Dermal	LD50 5,200 mg/kg (rat)
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#### Primary irritant effect:

on the skin: Irritant to skin and mucous membranes.

on the eye: Irritant effect.

Sensitization: No sensitizing effects known.

#### Additional toxicological information:

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for

Preparations as issued in the latest version:

Irritant

#### 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: Eye.

## 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.

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Other adverse effects No further relevant information available.

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**13 Disposal considerations**

- Waste treatment methods
- Recommendation  
Must not be disposed of together with household garbage. Do not allow product to reach sewage system. Dispose of waste in accordance to applicable national, regional, or local regulations.
- Uncleaned packagings:
- Recommendation: Disposal must be made according to official regulations.
- Recommended cleansing agent: Water, if necessary with cleansing agents.

**14 Transport information**

- UN-Number
- DOT, ADR, ADN, IMDG, IATA
- UN proper shipping name
- DOT, ADR, ADN, IMDG, IATA
- Transport hazard class(es)
- DOT, ADR, ADN, IMDG, IATA
- Class
- Packing group
- DOT, ADR, IMDG, IATA
- Environmental hazards:
- Marine pollutant:
- Special precautions for user
- Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
- 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.

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TSCA new (21st Century Act)

151-21-3 sodium dodecyl sulphate

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ACTIVE/EXEMPT

California Proposition 65:

None of the ingredients is listed.

Chemicals known to cause cancer:

The product does not contain listed components.

Developmental Toxicity

None of the ingredients is 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.

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 09/19/2018 / -

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: US 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

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety &amp; Health

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TLV: Threshold Limit Value  
PEL: Permissible Exposure Limit  
REL: Recommended Exposure Limit  
Flam. Sol. 2: Flammable solids – Category 2  
Acute Tox. 4: Acute toxicity – Category 4  
Acute Tox. 3: Acute toxicity – Category 3  
Skin Irrit. 2: Skin corrosion/irritation – Category 2  
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A  
\* Data compared to the previous version altered.

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