

**Safety Data Sheet**  
acc. to OSHA HCS

Printing date 04/21/2017

Reviewed on 04/21/2017

**1 Identification**

- **Product identifier**
- **Trade name:** Trans-Blot® Turbo™ Transfer Pack, 0.2 µ Midi Nitrocellulose Membrane
- **Catalog or product number:** 1704159, 1704159EDU
- **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**  
The product is not classified according to the Globally Harmonized System (GHS).

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- **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:**

64-17-5	ethanol	Flam. Liq. 2, H225 Carc. 1A, H350	10-20%
77-86-1	Tris(hydroxymethyl)aminomethane	Eye Irrit. 2A, H319	2.5-5%

- **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 eye contact** Rinse opened eye for several minutes under running water.
- **After swallowing** Induce vomiting and call for medical help.

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- **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:** 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.
- **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**

· **PAC-1:**

64-17-5	ethanol	1,800 ppm
77-86-1	Tris(hydroxymethyl)aminomethane	18 mg/m3
67-56-1	methanol	530 ppm
151-21-3	sodium dodecyl sulphate	3.9 mg/m3

· **PAC-2:**

64-17-5	ethanol	3300* ppm
77-86-1	Tris(hydroxymethyl)aminomethane	190 mg/m3
67-56-1	methanol	2,100 ppm
151-21-3	sodium dodecyl sulphate	43 mg/m3

· **PAC-3:**

64-17-5	ethanol	15000* ppm
77-86-1	Tris(hydroxymethyl)aminomethane	1,200 mg/m3
67-56-1	methanol	7200* ppm
151-21-3	sodium dodecyl sulphate	260 mg/m3

**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.

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- **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:**  
The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.  
At this time, the remaining constituent has no known exposure limits.

**64-17-5 ethanol**

PEL	Long-term value: 1900 mg/m <sup>3</sup> , 1000 ppm
REL	Long-term value: 1900 mg/m <sup>3</sup> , 1000 ppm
TLV	Short-term value: 1880 mg/m <sup>3</sup> , 1000 ppm

**67-56-1 methanol**

PEL	Long-term value: 260 mg/m <sup>3</sup> , 200 ppm
REL	Short-term value: 325 mg/m <sup>3</sup> , 250 ppm Long-term value: 260 mg/m <sup>3</sup> , 200 ppm
TLV	Short-term value: 328 mg/m <sup>3</sup> , 250 ppm Long-term value: 262 mg/m <sup>3</sup> , 200 ppm Skin; BEI

- **Ingredients with biological limit values:**

**67-56-1 methanol**

BEI	15 mg/L Medium: urine Time: end of shift Parameter: Methanol (background, nonspecific)
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- **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.

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· **Eye protection:** Safety glasses

**9 Physical and chemical properties**

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

· **Form:** Liquid on inert carrier material

· **Color:** White

· **Odor:** Alcohol-like

· **Odor threshold:** Not determined.

· **pH-value at 20 °C:** 8.9

· **Change in condition**

· **Melting point/Melting range:** undetermined

· **Boiling point/Boiling range:** 78 °C

· **Flash point:** Not applicable

· **Flammability (solid, gaseous)** Not applicable.

· **Ignition temperature:** 425 °C

· **Decomposition temperature:** Not determined.

· **Auto igniting:** Product is not selfigniting.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Explosion limits:**

· **Lower:** 3.5 Vol %

· **Upper:** 15.0 Vol %

· **Vapor pressure at 20 °C:** 59 hPa

· **Density at 20 °C:** 1.65 g/cm<sup>3</sup>

· **Relative density** Not determined.

· **Vapor density** Not determined.

· **Evaporation rate** Not determined.

· **Solubility in / Miscibility with**

· **Water:** Soluble

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

· **Viscosity:**

· **dynamic:** Not determined.

· **kinematic:** Not determined.

· **Solvent content:**

· **Organic solvents:** 15.2 %

· **Water:** 77.3 %

· **Solids content:** 7.4 %

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

**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
- **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:**

**64-17-5 ethanol**

Oral	LD50	7060 mg/kg (rat)
Inhalative	LC50/4 h	20000 mg/l (rat)

**77-86-1 Tris(hydroxymethyl)aminomethane**

Oral	LD50	5900 mg/kg (rat)
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**67-56-1 methanol**

Oral	LD50	5628 mg/kg (rat)
Dermal	LD50	20000 mg/kg (rat)

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

64-17-5 ethanol	1
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· **NTP (National Toxicology Program)**

None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

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· **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:** 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** 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**

- |   |                 |
|---|-----------------|
| · <b>UN-Number</b><br>· <b>DOT, ADR, ADN, IMDG, IATA</b>                                    | Void            |
| · <b>UN proper shipping name</b><br>· <b>DOT, ADR, ADN, IMDG, IATA</b>                      | Void            |
| · <b>Transport hazard class(es)</b><br>· <b>DOT, ADR, ADN, IMDG, IATA</b><br>· <b>Class</b> | Void            |
| · <b>Packing group</b><br>· <b>DOT, ADR, IMDG, IATA</b>                                     | Void            |
| · <b>Environmental hazards:</b>   | Not applicable. |
| · <b>Special precautions for user</b>   | Not applicable. |
| · <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>            | Not applicable. |

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· **UN "Model Regulation":** Void

**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):**

67-56-1 | methanol

· **TSCA (Toxic Substances Control Act):**

64-17-5 | ethanol

77-86-1 | Tris(hydroxymethyl)aminomethane

56-40-6 | Glycine

67-56-1 | methanol

151-21-3 | sodium dodecyl sulphate

7732-18-5 | water

· **California Proposition 65:**

· **Developmental Toxicity**

64-17-5 | ethanol

67-56-1 | methanol

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

64-17-5 | ethanol

A3

· **MAK (German Maximum Workplace Concentration)**

64-17-5 | ethanol

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· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **National regulations**

· **Technical instructions (air):**

Class	Share in %
I	0.1-1.0
NK	10-20

· **Water hazard class:** Generally not hazardous for water.

· **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** 04/21/2017 / -

· **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 & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

BEI: Biological Exposure Limit

Flam. Liq. 2: Flammable liquids – Category 2

Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A

Carc. 1A: Carcinogenicity – Category 1A

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