

1 Identification

- Product identifier
- Trade name: **Trans-Blot Turbo 0.2 micron PVDF Membrane**
- Catalog or product number: 1704156, 1704157
- 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
The product is not classified according to the Globally Harmonized System (GHS).
- Classification according to Directive 67/548/EEC or Directive 1999/45/EC not applicable
- Information concerning particular hazards for human and environment:
The product does not have to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
- Classification system:
The classification was made according to the latest editions of the EU-lists, and expanded upon from company and literature data.
- The classification was made according to OSHA 29CFR 1910.1200 and 1910.1030, and is expanded upon from company and/or literature information.
- 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.

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Listing of dangerous and non-hazardous components:

	F R 11	10-20%
64-17-5 ethanol	Xn R22	2.5-5%
77-86-1 Tris(hydroxymethyl)aminomethane	Xi R36	
56-40-6 glycine		1.0-2.5%
24937-79-9 Polyvinylidene fluoride		0.1-1.0%
7732-18-5 water		50-100%

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. Then consult a doctor.
- After swallowing Induce vomiting and call for medical help.
- 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

- 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:

64-17-5 ethanol
PEL 1900 mg/m ³ , 1000 ppm
REL 1900 mg/m ³ , 1000 ppm
TLV Short-term value: 1880 mg/m ³ , 1000 ppm
67-56-1 methanol
PEL 260 mg/m ³ , 200 ppm
REL Short-term value: 325 mg/m ³ , 250 ppm
REL Long-term value: 260 mg/m ³ , 200 ppm
Skin
TLV Short-term value: 328 mg/m ³ , 250 ppm
Long-term value: 262 mg/m ³ , 200 ppm
Skin; BEI

- **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:**
- **Form:** Liquid
- **Color:** Colorless
- **Odor:** Odorless
- **Odour threshold:** Not determined.

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· pH-value at 20 °C:	8.9
· Change in condition	undetermined
· Melting point/Melting range:	undetermined
· Boiling point/Boiling range:	Not applicable
· Flash point:	Not applicable.
· Flammability (solid, gaseous)	425 °C
· 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:	3.5 Vol %
· Upper:	15.0 Vol %
· Vapor pressure at 20 °C:	59 hPa
· Density:	Not determined
· 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:	14.6 %
· Water:	78.0 %
· Solids content:	7.4 %
· 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

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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.
- **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)**
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.
- **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.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
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.

14 Transport information

- **UN-Number**
· ADR, ADN, IMDG, IATA
Void
- **UN proper shipping name**
· ADR, ADN, IMDG, IATA
Void
- **Transport hazard class(es)**
· ADR, ADN, IMDG, IATA
Void
- **Class**
· ADR, ADN, IMDG, IATA
Void
- **Packing group**
· 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.

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):**
All ingredients are listed.
- **California Proposition 65:**
- **Developmental Toxicity**
64-17-5 | ethanol

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67-56-1 | methanol

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· 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 | 5

· 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: 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:** 02/11/2015 / -**· 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

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial 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.**

USA