



09/02/2020

Kit Components

Product code	Description
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10021600	Trans-Blot® Turbo™ PVDF/Nitrocellulose Starter Kit
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Components:

1620172	Trans-Blot Transfer Pack, 0.2 µ PVDF Membrane
1704158	Trans-Blot Transfer Pack, 0.2 µ Mini Nitrocellulose Membrane
1704159	Trans-Blot Turbo Transfer Pack, 0.2 µ Midi Nitrocellulose Membrane

Safety Data Sheet

according to HPR, Schedule 1

Printing date 09/02/2020

Reviewed on 07/29/2020

1 Identification

- **Product identifier**
- **Trade name:** *Trans-Blot Transfer Pack, 0.2 µ PVDF Membrane*
- **Catalog or product number:**
1620172, 1620173, 1620174, 1620175, 1620176, 1620177, 1620255, 1704153, 1704154, 4307573, 10017732, 10017731
- **CAS Number:**
24937-79-9
- **Application of the substance / the mixture** *Laboratory chemicals*
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
*Bio-Rad Laboratories (Canada) Ltd.
1329 Meyerside Drive
Mississauga, Ontario
L5T 1C9
Canada*
phone: 1-800-268-0213 Fax: 1-888-913-9779
- **Information department:** *sales_canada@bio-rad.com*
- **Emergency telephone number:** *1-800-424-6723 option 2*

2 Hazard identification

- **Classification of the substance or mixture**
The substance is not classified, according to the Globally Harmonized System (GHS).
- **Label elements**
- **GHS label elements** *Not Applicable*
- **Hazard pictograms** *Not Applicable*
- **Signal word** *Not Applicable*
- **Hazard statements** *Not Applicable*

3 Composition/Information on ingredients

- **Chemical characterization:** *Substances*
- **CAS No. Description:**
24937-79-9 Polyvinylidene fluoride
- **Additional information:** *For the wording of the listed risk phrases refer to section 16.*

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** *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.*

(Contd. on page 2)

Safety Data Sheet

according to HPR, Schedule 1

Printing date 09/02/2020

Reviewed on 07/29/2020

Trade name: Trans-Blot Transfer Pack, 0.2 µ PVDF Membrane

(Contd. of page 1)

· **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:** No special measures required.
- **Methods and material for containment and cleaning up:** Pick up mechanically.
- **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.
- **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** The usual precautionary measures for handling chemicals should be followed.
- **Protection of hands:** Protective gloves.
- **Material of gloves** Synthetic gloves

(Contd. on page 3)

Safety Data Sheet

according to HPR, Schedule 1

Printing date 09/02/2020

Reviewed on 07/29/2020

Trade name: Trans-Blot Transfer Pack, 0.2 µ PVDF Membrane

(Contd. of page 2)

· 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: Solid

Color: White

· Odor: Odorless

· Odor threshold: Not determined.

· pH-value: Not applicable.

· Change in condition

Melting point/Melting range: 230 °C

Boiling point/Boiling range: undetermined

· Flash point: Not applicable
Not determined.

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

· Decomposition temperature: Not determined.

· Auto igniting: Not determined.

· Danger of explosion: Not determined.

· Explosion limits:

Lower: Not determined.

Upper: Not determined.

· Vapor pressure: Not applicable.

· Density: Not determined

· Relative density Not determined.

· Vapor 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.

Solids content: 100.0 %

(Contd. on page 4)

Safety Data Sheet

according to HPR, Schedule 1

Printing date 09/02/2020

Reviewed on 07/29/2020

Trade name: Trans-Blot Transfer Pack, 0.2 µ PVDF Membrane

(Contd. of page 3)

· **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:**
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritant effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
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.
The substance is not subject to classification according to the latest version of the EU lists.
- **Carcinogenic categories**
- **IARC (International Agency for Research on Cancer)**
Substance is not listed.
- **NTP (National Toxicology Program)**
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.

(Contd. on page 5)

Safety Data Sheet

according to HPR, Schedule 1

Printing date 09/02/2020

Reviewed on 07/29/2020

Trade name: Trans-Blot Transfer Pack, 0.2 µ PVDF Membrane

(Contd. of page 4)

· **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.

Dispose of waste in accordance to applicable national, regional, or local regulations.

· **Uncleaned packagings:**

· **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· **UN-Number**

· **DOT/TDG, ADR, ADN, IMDG, IATA**

Not Regulated

· **UN proper shipping name**

· **DOT/TDG, ADN, IMDG, IATA**

Not Regulated

· **ADR**

Not Regulated

Not Regulated

· **Transport hazard class(es)**

· **DOT, ADR, ADN, IMDG, IATA**

· **Class**

Not Regulated

· **Packing group**

· **DOT/TDG, ADR, IMDG, IATA**

Not Regulated

· **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":**

Not Regulated

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.

(Contd. on page 6)

Safety Data Sheet

according to HPR, Schedule 1

Printing date 09/02/2020

Reviewed on 07/29/2020

Trade name: Trans-Blot Transfer Pack, 0.2 µ PVDF Membrane

(Contd. of page 5)

· Section 313 (40CFR372.65):
Substance is not listed.
· TSCA (Toxic Substances Control Act):

ACTIVE

· MAK (German Maximum Workplace Concentration)
Substance is not listed.
· National regulations

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those 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 the latest revision of the safety data sheet 09/02/2020 / -

· Abbreviations and acronyms:

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

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

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

· * Data compared to the previous version altered.

Safety Data Sheet

according to HPR, Schedule 1

Printing date 09/02/2020

Reviewed on 07/28/2020

1 Identification

- **Product identifier**
- **Trade name:** *Trans-Blot Transfer Pack, 0.2 µ Mini Nitrocellulose Membrane*
- **Catalog or product number:** 1704158, 10017733
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Bio-Rad Laboratories (Canada) Ltd.
1329 Meyerside Drive
Mississauga, Ontario
L5T 1C9
Canada
- **Information department:** sales_canada@bio-rad.com
- **Emergency telephone number:** 1-800-424-6723 option 2

phone: 1-800-268-0213 Fax: 1-888-913-9779

2 Hazard identification

- **Classification of the substance or mixture**
The product is not classified, according to the Globally Harmonized System (GHS).
- **Label elements**
- **GHS label elements** Not Applicable
- **Hazard pictograms** Not Applicable
- **Signal word** Not Applicable
- **Hazard statements** 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	10-30% w/w *
	Flammable Liquids - Category 2, H225	

* Actual concentration ranges are withheld as a trade secret.

- **Additional information** For the wording of the listed hazard phrases refer to section 16.

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.
- **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.

(Contd. on page 2)

Safety Data Sheet

according to HPR, Schedule 1

Printing date 09/02/2020

Reviewed on 07/28/2020

Trade name: Trans-Blot Transfer Pack, 0.2 µ Mini Nitrocellulose Membrane

(Contd. of page 1)

· **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:**
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.

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:** 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

EL STEL: 1000 ppm

EV TWA: 1,900 mg/m³, 1,000 ppm

- **Additional information:** The lists that were valid during the creation were used as basis.

(Contd. on page 3)

Safety Data Sheet

according to HPR, Schedule 1

Printing date 09/02/2020

Reviewed on 07/28/2020

Trade name: Trans-Blot Transfer Pack, 0.2 µ Mini Nitrocellulose Membrane

(Contd. of page 2)

- **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 on inert carrier material

Color: White

· **Odor:** Odorless

· **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:** 23 - 60 °C

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

· **Ignition temperature:** 425 °C

· **Decomposition temperature:** Not determined.

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

· **Danger of explosion:** Not determined.

· Explosion limits:

Lower: 3.5 Vol %

Upper: 15 Vol %

· **Vapor pressure at 20 °C:** 59 hPa

· **Density at 20 °C:** 1.65 g/cm³

· **Relative density** Not determined.

· **Vapor density** Not determined.

· **Evaporation rate** Not determined.

· Solubility in / Miscibility with

Water: Not determined.

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

(Contd. on page 4)

Safety Data Sheet

according to HPR, Schedule 1

Printing date 09/02/2020

Reviewed on 07/28/2020

Trade name: Trans-Blot Transfer Pack, 0.2 µ Mini Nitrocellulose Membrane

(Contd. of page 3)

· Viscosity:	
dynamic:	Not determined.
kinematic:	Not determined.
· Solvent content:	
Organic solvents:	15.3 %
Water:	77.3 %
Solids content:	7.4 %
· 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	7,060 mg/kg (rat)
Inhalative	LC50/4 h	20,000 mg/l (rat)

77-86-1 Tris(hydroxymethyl)aminomethane

Oral	LD50	5,900 mg/kg (Rat)
Dermal	LD50	>5,000 mg/kg (Rat)

67-56-1 methanol

Oral	LD50	5,628 mg/kg (rat)
Dermal	LD50	20,000 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:**

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.

(Contd. on page 5)

Safety Data Sheet

according to HPR, Schedule 1

Printing date 09/02/2020

Reviewed on 07/28/2020

Trade name: Trans-Blot Transfer Pack, 0.2 µ Mini Nitrocellulose Membrane

(Contd. of page 4)

· Carcinogenic categories
· IARC (International Agency for Research on Cancer)

64-17-5 ethanol

1

· NTP (National Toxicology Program)

None of the ingredients is 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 Dispose of waste in accordance to applicable national, regional, or local regulations.

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

14 Transport information

· UN-Number
· DOT/TDG, ADR, ADN, IMDG, IATA

Not Regulated

· UN proper shipping name
· DOT/TDG, ADN, IMDG, IATA

Not Regulated

· ADR

Not Regulated

Not Regulated

· Transport hazard class(es)
· DOT, ADR, ADN, IMDG, IATA
· Class

Not Regulated

· Packing group
· DOT/TDG, ADR, IMDG, IATA

Not Regulated

(Contd. on page 6)

CA

Safety Data Sheet

according to HPR, Schedule 1

Printing date 09/02/2020

Reviewed on 07/28/2020

Trade name: Trans-Blot Transfer Pack, 0.2 µ Mini Nitrocellulose Membrane

(Contd. of page 5)

- | | |
|----------------------------------------------------------------------------------|-----------------|
| · Environmental hazards: | Not applicable. |
| · Special precautions for user | Not applicable. |
| · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |
| · UN "Model Regulation": | Not Regulated |

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):**

7732-18-5	water	ACTIVE
64-17-5	ethanol	ACTIVE
77-86-1	Tris(hydroxymethyl)aminomethane	ACTIVE
56-40-6	glycine	ACTIVE
67-56-1	methanol	ACTIVE
151-21-3	sodium dodecyl sulphate	ACTIVE

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

64-17-5	ethanol	5
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- **National regulations**

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations

- **Technical instructions (air):**

Class	Share in %
I	0.1-1
NK	10-<20

- **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.

(Contd. on page 7)

Safety Data Sheet

according to HPR, Schedule 1

Printing date 09/02/2020

Reviewed on 07/28/2020

Trade name: Trans-Blot Transfer Pack, 0.2 μ Mini Nitrocellulose Membrane

(Contd. of page 6)

· 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 the latest revision of the safety data sheet 09/02/2020 / -**· Abbreviations and acronyms:**

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

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

· * Data compared to the previous version altered.

CA

Safety Data Sheet

according to HPR, Schedule 1

Printing date 09/02/2020

Reviewed on 07/29/2020

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 (Canada) Ltd.
1329 Meyerside Drive
Mississauga, Ontario
L5T 1C9
Canada
- **Information department:** sales_canada@bio-rad.com
- **Emergency telephone number:** 1-800-424-6723 option 2

phone: 1-800-268-0213 Fax: 1-888-913-9779

2 Hazard identification

- **Classification of the substance or mixture**
The product is not classified, according to the Globally Harmonized System (GHS).
- **Label elements**
- **GHS label elements** Not Applicable
- **Hazard pictograms** Not Applicable
- **Signal word** Not Applicable
- **Hazard statements** 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	10-30% w/w *
	Flammable Liquids - Category 2, H225	
	Nitrocellulose membrane	1-5% w/w *
	Flammable Solids - Category 1, H228	

* Actual concentration ranges are withheld as a trade secret.

- **Additional information** For the wording of the listed hazard phrases refer to section 16.

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.
- **After swallowing** Rinse mouth with water. Seek medical attention and appropriate follow-up.

(Contd. on page 2)

Safety Data Sheet

according to HPR, Schedule 1

Printing date 09/02/2020

Reviewed on 07/29/2020

Trade name: Trans-Blot Turbo Transfer Pack, 0.2 µ Midi Nitrocellulose Membrane

(Contd. of page 1)

- **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.

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:** 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

EL STEL: 1000 ppm

EV TWA: 1,900 mg/m³, 1,000 ppm

(Contd. on page 3)

Safety Data Sheet

according to HPR, Schedule 1

Printing date 09/02/2020

Reviewed on 07/29/2020

Trade name: Trans-Blot Turbo Transfer Pack, 0.2 µ Midi Nitrocellulose Membrane

(Contd. of page 2)

- **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 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
Not determined.

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

· **Ignition temperature:** 425 °C

· **Decomposition temperature:** Not determined.

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

· **Danger of explosion:** Not determined.

· Explosion limits:

Lower: 3.5 Vol %

Upper: 15 Vol %

· **Vapor pressure at 20 °C:** 59 hPa

· **Density at 20 °C:** 1.65 g/cm³

· **Relative density** Not determined.

· **Vapor density** Not determined.

· **Evaporation rate** Not determined.

(Contd. on page 4)

Safety Data Sheet

according to HPR, Schedule 1

Printing date 09/02/2020

Reviewed on 07/29/2020

Trade name: Trans-Blot Turbo Transfer Pack, 0.2 µ Midi Nitrocellulose Membrane

(Contd. of page 3)

- | | |
|---------------------------------------------------|--------------------------------------------|
| · Solubility in / Miscibility with Water: | Not miscible or difficult to mix |
| · Partition coefficient (n-octanol/water): | Not determined. |
| · Viscosity: | |
| dynamic: | Not determined. |
| kinematic: | Not determined. |
| · Solvent content: | |
| Organic solvents: | 15.3 % |
| Water: | 77.3 % |
| · Solids content: | 7.4 % |
| · 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	7,060 mg/kg (rat)
Inhalative	LC50/4 h	20,000 mg/l (rat)

77-86-1 Tris(hydroxymethyl)aminomethane

Oral	LD50	5,900 mg/kg (Rat)
Dermal	LD50	>5,000 mg/kg (Rat)

Nitrocellulose membrane

Oral	LD50	>5,000 mg/kg (rat)
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67-56-1 methanol

Oral	LD50	5,628 mg/kg (rat)
Dermal	LD50	20,000 mg/kg (rat)

- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritant effect.

(Contd. on page 5)

Safety Data Sheet

according to HPR, Schedule 1

Printing date 09/02/2020

Reviewed on 07/29/2020

Trade name: Trans-Blot Turbo Transfer Pack, 0.2 µ Midi Nitrocellulose Membrane

(Contd. of page 4)

- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
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

- **NTP (National Toxicology Program)**

None of the ingredients is 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** 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

- | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|
| <ul style="list-style-type: none"> · UN-Number · DOT/TDG, ADR, ADN, IMDG, IATA | Not Regulated |
| <ul style="list-style-type: none"> · UN proper shipping name · DOT/TDG, ADN, IMDG, IATA · ADR | Not Regulated
Not Regulated
Not Regulated |

(Contd. on page 6)

Safety Data Sheet

according to HPR, Schedule 1

Printing date 09/02/2020

Reviewed on 07/29/2020

Trade name: Trans-Blot Turbo Transfer Pack, 0.2 µ Midi Nitrocellulose Membrane

(Contd. of page 5)

· Transport hazard class(es)	
· DOT, ADR, ADN, IMDG, IATA	
· Class	Not Regulated
· Packing group	
· DOT/TDG, ADR, IMDG, IATA	Not Regulated
· Environmental hazards:	Not applicable.
· Special precautions for user	Not applicable.
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· UN "Model Regulation":	Not Regulated

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):**

7732-18-5	water	ACTIVE
64-17-5	ethanol	ACTIVE
77-86-1	Tris(hydroxymethyl)aminomethane	ACTIVE
56-40-6	glycine	ACTIVE
67-56-1	methanol	ACTIVE
151-21-3	sodium dodecyl sulphate	ACTIVE

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

64-17-5	ethanol	5
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- **National regulations**

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations

- **Technical instructions (air):**

Class	Share in %
I	0.1-1
NK	10-<20

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

(Contd. on page 7)

Safety Data Sheet

according to HPR, Schedule 1

Printing date 09/02/2020

Reviewed on 07/29/2020

Trade name: Trans-Blot Turbo Transfer Pack, 0.2 µ Midi Nitrocellulose Membrane

(Contd. of page 6)

· **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 the latest revision of the safety data sheet** 09/02/2020 / -

· **Abbreviations and acronyms:**

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

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

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