

## Safety Data Sheet

### 1. Chemical product and Company Information

Name of chemical	: Lateral Flow Membranes (IA)
Supplier's name, address and phone number	
Company	: Toyo Roshi Kaisha, Ltd.
Address	: Hibiya-Kokusai BLDG 5F, 2-2-3, Uchisaiwaicho, Chiyoda-ku, Tokyo, 100-0011 Japan
Section in charge	: Quality Assurance Division
Phone	: 81-(0)3-5521-2176
Fax	: 81-(0)3-5521-2177
Mail address	: trk-hinsho@advantec.co.jp
Recommended application	: Membrane for Immunochromatography
Use restrictions	: In case of other purpose of use, please contact us to discuss.

### 2. Hazard Summary

#### GHS classification of chemicals

##### Physical hazard

Flammable solids	: Category 1.
Human health hazard	: Not classified.
Environmental hazard	: Classification not possible.

#### GHS Label element

##### Pictograms or symbols



Signal words	: Danger.
Hazard statements	: Flammable solids.
Precautionary statements	
Safety measure	: Keep away from heat, high-temperature object, sparks, open flames and other ignition sources. No smoking.
First aid measures	: In case of fire, use appropriate fire extinguishing agent to extinguish.

### 3. Composition and Information on ingredients

Chemical substances/Mixtures	: Mixtures	
Chemical name or general name	: Membrane	
Ingredients and Concentration or concentration range		
	: Cellulose nitrate	17~22% (Membrane) (CAS No.9004-70-0)
	Cellulose acetate	(Membrane) (CAS No.9004-35-7)
	Polyethylene terephthalate	(Backing sheet) (CAS No.25038-59-9)
	Wetting agent	(Wetting agent)

#### Reference Number in Gazetted List in Japan

##### Law Concerning the Evaluation of Chemical Substances and Regulation of Their

Manufacture, etc.	: (8)-176	Cellulose nitrate
	(8)-165	Cellulose acetate
	(7)-1022	Polyethylene terephthalate

Japan's Industrial Safety and Health Law

UN Classification : Appendix No.9-424 (Nitrocellulose)  
 UN No. : Class 4.1 UN packing group II  
 : 3270 (NITROCELLULOSE MEMBRANE FILTERS,  
 with not more than 12.6% nitrogen, by dry mass.)

#### 4. First Aid Measures

Inhalation : Not applicable.  
 Skin contact : Not applicable.  
 Eye contact : Immediately wash thoroughly with clean running water.  
 In case of abnormality, consult with a physician.  
 Ingestion : Rinse mouth.  
 Do not force vomiting.  
 Get medical attention and diagnosis.

#### 5. Fire Fighting Measures

Appropriate extinguishing agent : A copious amount of water (spray), carbon dioxide, fire-extinguish powder, foam fire-extinguisher, sand, and soil, etc.  
 Unacceptable extinguishing media : No data available.  
 A particular harmful effect in case of fire: In the event of a combustion, harmful fumes or gases are generated. In the event of a fire black smoke is generated. Dense smoke will be generated if there is incomplete combustion.  
 Extinguishing procedure : Do not extinguish a fire when the fire starts to explode. Evacuate the section. If a fire breaks out around the area, please transfer to a transportable container in a safe place. If the container is exposed to heat, please do not transfer it. If it is impossible to transfer the container sprinkle the container and surroundings with water to cool them down. After extinguishing, cool down the container with a plenty of water. When extinguishing fire, wear complete protective clothing (heat resistant) together with air respirator.(Cellulose nitrate)

#### 6. Accidental Release Measures

Personal precautions, Protective equipment and emergency procedures : No data available.  
 Precautions for environment : No data available.  
 Containment and purification procedures and equipment : No data available.

#### 7. Handling and Storage

Handling : Easy to burn and fast burning speed.  
 The handling place shall be well-ventilated place, and fire is banned.  
 Keep away from materials that induce mixed explosion, such as oxidant, acid, base, and combustible agent.  
 Avoid ignition source for decomposition explosion, such as a blow, static electricity, shock, and heat.  
 Take appropriate measure for prevention of static electricity (earth, electrically-conducting material, inert gas, antistatic work clothes, etc.)

Storage : Direct sunlight and damp air stimulate spontaneous ignition.  
 Keep in airtight container. Keep in a cool and dry room.  
 Ideal to replace air in the container with inert gas.  
 Avoid long-term storage and strictly follow the expiration date.  
 If a total stored amount exceeds 100 kg, follow Fire Defense Law(hazardous).

#### 8. Exposure controls / Personal protection

##### Acceptable concentration

Japan Society for Occupational Health : No data available.

ACGIH : No data available.

Facility provision : Take as needed.

Protective equipment : Use appropriate protective tools if necessary.

#### 9. Physical and Chemical Properties

Physical state : Porous membrane laminated onto a Polyethylene terephthalate (PET) backing sheet.

Color : White.

Odor : None.

Melting point / Freezing point : No data available.

Boiling point or initial boiling point and Boiling range : No data available.

Flammability : Yes.

Lower limit and Upper limit of explosion/ Flammable limit : Not applicable.

Flash point : Not applicable.

Spontaneous firing point : Not applicable.

Decomposition temperature : No data available.

pH : No data available.

Kinematic viscosity : Not applicable.

Solubility : Insoluble to water (Wetting agent is soluble.)

n-octanol / water partition coefficient : No data available.

Steam pressure : No data available.

Density or relative density : No data available.

Relative gas density : Not applicable.

Particle characteristics : No data available.

#### 10. Stability and Reactivity

Reactivity : Stable under normal handling.

Chemical stability : Stable under normal handling.

Possibility of hazardous reactions : Easily ignite by catching a fire.  
 It may suddenly ignite or explode by coming in contact with oxidant, acid, base, or combustible agents.  
 It may suddenly ignite or explode by a blow, static electricity, shock, or heat.  
 Easy to oxidize under high temperature and high Humidity environment, which induces higher possibility for spontaneous ignition.

Conditions to avoid : Fire, high temperature, high humidity, blow, electrostatic, shock, and/or heat.

Incompatible materials : Coming in contact with to oxidant, acid, base, and/or combustible agent.



## 14. Transport Information

UN No.	: 3270
Product name (UN shipping name)	: NITROCELLULOSE MEMBRANE FILTERS, with not more than 12.6% nitrogen, by dry mass.
Class	: 4.1
UN packing group	: II
Regulatory information and local regulations	: Follow Fire Defense Law, Aviation Law, and Ships Safety Law

## 15. Regulatory Information

Japan Industrial Safety and Health Law	: Enforcement order separate table Article 1 Section 1, Hazardous and explosive material. 1 Nitrocellulose (Cellulose nitrate) Hazards and harmful substances should be displayed or notified.
The Fire Act	: Appendix No.9-424 Nitrocellulose (Cellulose nitrate) Article 9-4 (Standard for storage and handling of hazardous material with less than specified amount), Government ordinance regarding hazardous material regulations, Article 1-11, Attached table 3 and 5 (Class II self-reactive material, Fire Defense Law applicable for the material with 100 kg or more. If less than 100 kg, standards for storage and handling of the material are set by local authority.)  Cellulose nitrate as a single substance Appendix 3 and 5 (Class 1: Self-reactive substance. Over 10kg: The Fire Act should be applied. Less than 10kg: The technical standard of storage and handling should be determined by Municipal Ordinances. (Cellulose nitrate)
Ships Safety Law	: Regulations for the Carriage and Storage of Dangerous Goods in Ships Articles 2 Division 4.1 flammable material (4.1 packing group II) (Cellulose nitrate)
Port Regulations Law	: Article 12 hazardous material (flammable materials) (Cellulose nitrate)
Aviation Law	: Article 194 hazardous material-flammable material (H-2) (Cellulose nitrate)

## 16. Other information

## Handling of written contents

Contents of this data sheet are based on materials, information, and data acquirable at this point and are subject to revision due to new knowledge.

In addition, contents such as contained amount, physical and chemical properties, and hazards identification are not subject of any guarantee. These precautions are applied only during standard handling. If the material is used in a special way, take appropriate safety measures that correspond to actual applications and usages.

Each user is responsible to take appropriate measures with due consideration of contents in this sheet.

Please note that this Material Safety Data Sheet is created according to Japanese law.

List of references

- Classification method of chemicals based on GHS(JIS Z 7252: 2019)
  - Hazard communication of chemicals based on GHS - Labelling and Safety Data Sheet (SDS) (JIS Z 7253: 2019)
-