Reference No.: ME-8003A-5 Lateral Flow Membranes (IA)

Toyo Roshi Kaisha, Ltd. 1/6 Issued: April 17, 2018 Revised: December 9, 2020

# **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

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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

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Japan's Industrial Safety and Health Law

: Appendix No.9-424 (Nitrocellulose)

UN Classification : Class 4.1 UN packing group II

UN No. : 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.

(Polyethylene terephthalate)

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.)

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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.

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Hazardous decomposition products : Nitrogen oxide.

Generates carbon monoxide and carbon dioxide

during burning.

#### 11. Toxicological Information

Acute toxicity

Oral : Not classified.

Dermal : Classification not possible due to lack of data.
Inhalation: gas : Classification not possible due to lack of data.
Inhalation: vapour : Classification not possible due to lack of data.
Inhalation: dust, mist : Classification not possible due to lack of data.
Skin corrosion / Irritation : Classification not possible due to lack of data.

Serious eye damage and eye irritation : Not classified.

Respiratory / Skin sensitization : Classification not possible due to lack of data.

Germ cell mutagenicity : Classification not possible due to lack of data.

Carcinogenicity : Classification not possible due to lack of data.

Reproductive toxicity : Classification not possible due to lack of data.

Specific target organ toxicity (Single exposure)

: Not classified. (As an ingredient)

Category 3 Respiratory tract irritation, risk of

Irritation to respiratory.

Possibility of irritable throat, vertigo,

breathing difficulties and loss of consciousness

in high densities. There are currently no

concrete reports. (Cellulose nitrate)

Specific target organ toxicity (Repeated exposure)

: Classification not possible due to lack of data.

Aspiration hazard : Classification not possible due to lack of data.

#### 12. Ecological Information

**Ecotoxicity** 

Hazardous to the aquatic environment (acute)

: Classification not possible due to lack of data.

Hazardous to the aquatic environment (chronic)

: Classification not possible due to lack of data.

Persistence and Degradability : No data available.
Bioaccumulative potential : No data available.
Mobility in soil : No data available.

Ozone layer hazard : Classification not possible due to lack of data.

#### 13. Disposal Considerations

For safety purposes have water at a close distance while incinerating small amounts at a time.

(Cellulose nitrate)

Dispose in accordance with federal, state and local regulations.

Just like disposal of general industrial waste, ask for industrial waste disposer accepted by prefectural governors or for a local public agency for disposal.

When incinerating the material, use the specific incineration facility. Take appropriate procedure that satisfies Clean Air Act, Waste Disposal and Public Cleaning Law, and Clean Water Law. (We recommend disposing the material as industrial waste.)

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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.

Appendix No.9-424 Nitrocellulose

(Cellulose nitrate)

The Fire Act

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

Appexdix 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 Division4.1 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.

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

### List of references

Reference No.: ME-8003A-5

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