

## Safety Data Sheet

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### 1. Chemical product and Company Information

Name of chemical : Hydrophilic PTFE type Membrane Filter  
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 : Liquid filtration  
Use restrictions : In case of other purpose of use, please  
contact us to discuss.

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### 2. Hazard Summary

GHS Classification  
Physical hazard : Not applicable.  
Human health hazard : Not classified.  
Environmental hazard : Not classified.  
Label element : None.

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### 3. Composition and Information on ingredients

Chemical substances/Mixtures : Mixtures  
Chemical name or general name : Membrane Filter  
Ingredients and Concentration or concentration range  
: Polytetrafluoroethylene (CAS No. 9002-84-0)  
Hydrophilic resin  
Law Concerning the Evaluation of Chemical Substances and Regulation of Their  
Manufacture, etc. : (6)-939 Polytetrafluoroethylene  
Japan's Industrial Safety and Health Law  
: Not applicable.

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### 4. First Aid Measures

Inhalation : If fumes are inhaled when burned, you might experience polymer fume fever with  
temporary symptoms such as fever, chills, and continuous cough for around 24  
hours.  
Skin contact : Not applicable.  
Eye contact : Immediately wash with clean water for 5 minutes.  
Contact physician if necessary.  
Ingestion : Immediately spit it out.  
Immediately consult with a physician if you drank a sufficient amount.

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#### 5. Fire Fighting Measures

Appropriate extinguishing media	: Plenty of water, dry chemicals, abc, carbon dioxide.
Unacceptable extinguishing media	: No data available.
Extinguishing procedure	: In the event of a fire, since harmful gas (HF, COF <sub>2</sub> , CO, CF <sub>2</sub> =CF <sub>2</sub> , CO <sub>2</sub> , etc.) could be generated, firefighters should wear chemical cartridge respirators (organic or acidic gas absorption) or air respirators in addition to the normal protective equipment.

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#### 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.

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#### 7. Handling and Storage

Handling	: As the material may generate harmful gas when it is exposed to high temperatures, avoid touching it or exposing it to a heat source. Keep away from metals such as alkali metals, aluminum and magnesium.
Storage	: Avoid direct sunlight, ultraviolet light, moisture, high and low temperatures, high humidity, open-air storage, ignition sources. As the material may react and decompose by coming in contact with alkaline metals, avoid contacting with those types of metals. If a total stored amount exceeds 3,000 kg, follow Fire Defense Law (specific combustible material: synthetic resins).

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#### 8. Exposure controls / Personal protection

Acceptable concentration	
Japan Society for Occupational Health	: No data available.
ACGIH	: No data available.
Facility provision	: If a person is exposed to decomposed gas generated by the heated unit at a temperature higher than 260 degree Celsius, provide a local exhaust ventilation.
Protective equipment	: Use appropriate protective tools if necessary.

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#### 9. Physical and Chemical Properties

Physical state	: Solid, porous film.
Color	: White.
Odor	: None.
Melting point / Freezing point	: 327°C. (melting point)
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	: No data available.
Decomposition temperature	: Above 260°C
pH	: No data available.
Kinematic viscosity	: Not applicable.
Solubility	: Insoluble to water, general purpose solvent.
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.

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#### 10. Stability and Reactivity

Reactivity	: Stable under normal handling.
Chemical stability	: Stable under normal handling.
Possibility of hazardous reactions	: High temperatures can result in decomposition of hazardous components.
Conditions to avoid	: The material will begin to decompose very slowly when the temperature is above 260 degrees Celsius. Above 400 degrees Celsius, the decomposition speed will increase.
Incompatible materials	: Metal powder such as aluminum and/or magnesium. Fluorinated compound such as F <sub>2</sub> and/or Cl <sub>3</sub> F.
Hazardous decomposition products	: Generates harmful Perfluoroisobutylene above 470 degrees. Others generates fluorinated compound (harmfulness is low).

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#### 11. Toxicological Information

Acute toxicity	
Oral	: Classification not possible due to lack of data.
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	: Classification not possible due to lack of data.
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)	: Classification not possible due to lack of data.
Specific target organ toxicity (Repeated exposure)	: Classification not possible due to lack of data.
Aspiration hazard	: Classification not possible due to lack of data.

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#### 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.

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#### 13. Disposal Considerations

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

Regulatory information and local regulations  
: Fire Defense Law under flammable objects.

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#### 15. Regulatory Information

Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture etc.  
Japanese Chemical Substances Control Act.

Fire Defense Law : Existing Chemical Substances (6)-939 Polytetrafluoroethylene  
: Article 9-4 (Standard for storage and handling of hazardous material with less  
than specified amounts) Article 1-12 on regulations of hazardous materials, and  
Group 4 specific flammable materials (synthetic resins. If a total amount is  
3,000 kg, follow Fire Defense Law. If a total amount is less than 3,000 kg,  
follow the regulations defined by municipal ordinance for storage and handling  
of the material.).

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#### 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)
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