



Material Safety Data Sheet according to EEC-Regulation 91/155/EEC

Product: **TPP SYRINGE FILTER**

Issue Date: September 1st, 2013

1. Identification of the substance / preparation and of the company / undertaking

Name of product: Filter device for sterilization of aqueous solutions
Material use: Polyether sulfone (PES) membrane material in a modified acrylic housing

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2. Composition / information on ingredients

Chemical name: Polyether sulfone polymer (PES), modified acrylic resin

Contains no substance classified as hazardous in concentrations, which should be taken into account according to EC directives

3. Hazard identification

Under normal operating temperature and pressure conditions, the device does not present a health or physical hazard.

4. First-aid measures

Route of exposure:

Ingestion: The device does not present an ingestion hazard.
Inhalation: The device does not present an inhalation hazard because of the non-volatile nature of the polymeric component materials.
Skin contact: Allergic skin reaction to the structural components of the device has not been reported..
Eye contact: Because of the size and solid nature of the device it is not expected to present an eye injury hazard.
Note to physician: Treat according to symptoms (decontamination, vital functions), no known specific antidote.



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5. Fire-fighting measures

Suitable extinguishing media: Water, dry extinguishing media, foam

Specific hazards: The plastic components of the device will melt and or decompose under fire conditions. Once ignited, the plastic materials will add to the intensity of the fire, and can be expected to emit hazardous and toxic gases, vapors, fumes and smoke particles.

Special protective equipment: For firefighters: wear suitable breathing equipment, in case of risk of exposure to vapor or fumes.

Further information: Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

6. Accidental release measures

Because of the integral nature of the device it does not release materials to the environment when used within recommended operating temperature and pressure conditions. Liquids being processed through the device may be released to the surroundings should the device fail due to temperature and pressure conditions outside of the recommended operating ranges. These releases should be dealt with according to the nature of the process fluids.

Dispose waste in accordance with local or national regulations.

7. Handling and storage

Storage: Store in a cool dry location. Keep away from strong oxidizers and organic solvents.

8. Exposure controls and personal protection

Ventilation, Personal protection and respirator use: The ventilation, personal protection and respirator requirements will be dictated by the nature of the fluids being processed.



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9. Physical and chemical properties

The polymeric material components of the device are essentially chemically inert, water insoluble, with low vapor pressures. Chemical inertness varies with the different polymers and the user should confirm the compatibility of these materials with the process fluids to be used.

10. Stability and reactivity

Chemical Stability: Stable at normal temperatures and pressure.
 Hazardous Polymerization: Will not occur.
 Incompatible with: Strong oxidizing agents, organic solvents, heat
 Hazardous Decomposition/ Modified acrylic resins will begin to decompose at
 Combustion Products: temperatures above 200 °C. The nature and concentration of various decomposition and combustion products that will result from heating of these polymers will vary depending upon variables such as temperature, oxygen and water vapor concentration, and the presence of other materials. The possible products, include, but are not limited to those shown below:

<u>Polymer</u>	<u>Decomposition or Combustion Products</u>
Polyether Sulfone Polymer	Carbon monoxide, carbon dioxide, sulfur dioxide and sulfur trioxide.
Modified Acrylic Resin	Carbon monoxide, organic acids, aldehydes and alcohols

11. Toxicological information

Carcinogenicity: No components are listed as carcinogenic by IARC, NIOSH, NTP, or OSHA
 Endocrine Disrupters: To the best of our knowledge, none of the components are suspected endocrine disrupters.
 Exposure Limits:

INGREDIENT	OSHA PEL	ACGIH TLV	NIOSH REL
Polyethersulfone and	None	None	None
modified acrylic resin.	listed	listed	listed

12. Ecological information

Due to the inert nature of the polymeric materials in these devices, it is expected that they will have very limited biodegradability in water or soils. The product is not considered dangerous for the environment.



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13. Disposal considerations

The components of the TPP filter units are not listed as RCRA D, F, P or U Series hazardous wastes. The liquid processed through these devices may leave residual materials, which are subject to hazardous waste regulations, and would, therefore, subject the used devices to disposal regulation. Waste devices should be disposed of in a manner consistent with federal, state and local regulations.

General Principles

1. Where facilities exist, TPP encourages the recycling of these products.

The regulatory status, availability and cost of land disposal (land filling, burial) vary widely throughout the world. In addition, many facilities have adopted internal policies that prohibit land disposal of operational expendables.

2. The user should consult with their regulatory personnel before placing these products into the conventional solid waste stream. Similarly, the regulatory status, availability and cost of thermal destruction via incineration or energy recover differ among jurisdictions. Some of the compounds formed are air pollutants that may be harmful to human health and the environment. Incineration and energy recovery facilities can advise the user on limits that may exist for the presence of certain elements in the waste stream. Waste of disposal must be according to local regulations.

14. Transport information

The transport of these devices is not regulated by USDOT, ICAO/IATA, ADR or IMO as a hazardous material or dangerous goods. However, once used, these devices may contain residual materials that are regulated materials. The user should determine the applicability of current regulation prior to shipping used devices. Not restricted for transport (ADR/RID, IMDG or ICAO/ATA)

15. Regulatory information

All components of these devices are listed on the USEPA Toxic Substances Control Act (TSCA) Inventory or are covered by the polymer exemption of the Act. Not classified according to Annex I, Directive 67/548/EEC (dangerous substances) and 1999/45/EC (dangerous preparations).



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16. Other information

The information contained herein is based on the present state of our knowledge and does not therefore guarantee certain properties. Recipients of our product must take responsibility for observing existing laws and regulations. To the best of our knowledge, the information contained herein is accurate. However, neither TPP nor any other supplier of TPP products assumes any liability what so ever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we can not guarantee that this is the entire list of possible endangering that might arise.

In the course of product improvement TPP reserves the right to change the raw material without further notice. The Material Safety Data Sheet will be provided upon request. The above information is believed to be current and accurate; however, TPP makes no warranty with respect to such information and assumes no liability for any loss or injury which may result from the use of this information. Users should conduct their own investigations to determine the suitability of the information.