

SECTION 1 – Product Identification

This 'Product Safety Data Information' Sheet covers Pall hydrophobic, acrylic copolymer membrane cast on a nonwoven nylon support.

Example Product name(s): Versapor® R membranes
 Hydrophobic Acrylic Copolymer membranes and Hydrophobic ACP membranes

Example Part Number(s): See Appendix 1.

The membrane filters detailed above are intended for filtration and separation applications with compatible fluids – which do not soften, swell or adversely affect the filter, or its materials of construction. For use in line with Pall's instructions for use and within published recommended use conditions.

These membranes are only intended for use in applications or for inclusion in devices, which do not pose any risk of bioavailability of any residual chemicals present in the polymer membrane.

These membranes contain residual levels of PFOA and/or PFOA-related compounds and therefore users must assure themselves their intended use is in accordance with applicable restrictions such as those of the Stockholm Convention on Persistent Organic Pollutants (POP) and applicable legislation and regulations.

For further information on Pall products, please visit Pall at <https://www.pall.com/en/about-pall.html>

SECTION 2 – Hazards Identification

Product definition: Article.

These products are not classified as hazardous according to REACH Regulation 1907/2006, or European CLP/GHS Regulation 1272/2008.

Suitable gloves must be worn when handling these membranes out of their packaging, to address any concerns related to residual levels of PFOA related to the material as supplied.

GHS Signal word: No signal word.

Hazard statements: No known significant effects or critical hazards.

Special packaging requirements: None

SECTION 3 – Materials of Construction

3.1 The membrane filters detailed in Section 1 are comprised of the following materials:

Material Name	CAS Number	Percentage Composition
Acrylic copolymer membrane	Pall proprietary	10% to 50%
Non-woven nylon 6,6 support material	32131-17-2	50% to 90%
Hydrophobic 'R' surface treatment	Pall proprietary	0.1% to 5%

Packaging Material	CAS Number
Polyethylene bagging	9002-88-4
PVC support core	9002-86-2

These products are not known to contain bisphenol-A diglycidyl ether (BADGE), Novolac glycidyl ethers (NOGE), or bisphenol-F diglycidyl ether (BFDGE).

Trace additives will be present in the plastic components- for example antioxidants are present for stabilisation purposes.

There are no additional ingredients present which, within the current knowledge of the supplier, are classified and contribute to the classification of the article.

These products may contain residual perfluorooctanoic acid (PFOA), its salts and PFOA-related compounds at levels not known to exceed the current SVHC limits laid down (0.1% wt.) according to European REACH Regulation 1907/2006 as amended on 20th June 2013 to include PFOA on the Candidate List for Authorisation.

In addition, these membranes will be impacted by changes to country legislation in the European Union and the UK, which implement the European Commission adoption of the Stockholm Convention POPs decision on perfluorooctanoic acid (PFOA) and/or PFOA-related compounds to its POPs Annex A. The levels of residual PFOA, its salts and PFOA-related compounds are known to exceed residual concentration limits in these articles, as set out in the Commission adoption and IEC62474:

PFOA and its salts	25ppb
PFOA related compounds	1000ppb

Accordingly, the future supply of replacement products will be in line with this regulatory change; which reduces the acceptable levels of residual perfluorooctanoic acid (PFOA), and PFOA-related compounds. For further information on suitability for your intended use or alternative product offerings please contact your Pall representative.

Please note that in May 2019 the Stockholm Convention moved to add perfluorooctanoic acid (PFOA) and/or PFOA-related compounds to its POPs Annex A. With the intention of restricting the use of PFOA and its related compounds to a limited range of applications within the ratifying countries.

There are no other current SVHC substances (including Bisphenol-A) known to be present in the finished articles above 0.1%.

There are no current RoHS2 (Directive 2011/65/EU) and amendment (2015/863) substances of concern (including Lead, Cadmium, Mercury, Hexavalent Chromium, Polybrominated biphenyl (PBB), Polybrominated diphenyl ether (PBDE), Bis(2ethylhexyl) phthalate (DEHP), Benzyl Butyl Phthalate (BBP), Dibutyl phthalate (DBP) and Di isobutyl phthalate (DIBP) present in the filter membrane material employed in excess of the limits laid down.

**WARNING:**

This product can expose you to PFOA which is known in the State of California to cause cancer, birth defects or other reproductive harm.

For more information go to www.P65Warnings.ca.gov

These products placed on the market in the State of California by Pall are not intended for 'consumer' sale, but, are for professional or industrial use. Therefore, the only anticipated exposure to these items would be through 'occupational exposure' which does not require mandatory labelling of all articles. In line with the 'Questions and Answers for business' (dated August 2017) on the labelling requirements – Q41 - this SDS convey this warning for occupational exposure.

SECTION 4 – First Aid Measures**4.1 First aid measures**

Always consult the SDS details for the product being filtered, for specific in process advice and how to address any contaminants present on the filter membrane as the result of use.

Eye Contact:	Eye injury could result from physical impact. Get medical attention immediately.
Inhalation:	Inhalation is not considered a likely route of exposure for the filter media product as supplied by Pall.
Skin Contact:	Wash with soap and water. If irritation persists, get medical attention.
Ingestion:	This material is not intended for ingestion and is not expected to present an ingestion hazard in the form and quantities present in a work place setting. If ingestion occurs, seek medical attention.
Protection of first-aiders:	No action shall be taken involving any personal risk or without suitable training.

4.2 Key symptoms and effects, both acute and delayed

No known significant effects or critical hazards related to the materials of construction of the filter media as supplied.

SECTION 5 – Fire Fighting Measures

5.1 Extinguishing media

Select an extinguish medium suitable for surrounding / working environment and consult the SDS of the product being filtered for specific advice.

For filter media use dry chemical, CO₂, water spray (fog) or foam.

5.2 Specific Hazards

Consult the SDS details of product being filtered for specific advice.

For the filter media alone: No specific fire or explosion hazard. Hazardous thermal decomposition products: CO, CO₂, Acrid Smoke,

Note: These products may contain residual PFOA and PFOA-related compounds – which should be taken into account on thermal decomposition of the product and in disposal of resulting waste from firefighting.

5.3 Advice to Fire Fighters

No special precaution required related to the filter media alone. Fire-fighters should wear appropriate protective equipment, including self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

SECTION 6 – Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Suitable gloves must be worn when handling these membranes out of their packaging, to address any concerns related to residual levels of PFOA related to the material as supplied.

No special measures are required in respect of the filter media in the unused condition as supplied.

6.2 Environmental precautions

Do not allow the material to enter the environment

For unused filter media, place in designated waste container appropriate to the materials of construction listed in Section 3 and dispose of in accordance with local regulations via a licensed waste disposal contractor.

For used filter media, consult the SDS details of the product being filtered for specific advice on spillage, using clear-up, containment and appropriate PPE measures related to the product being filtered and the materials of construction detailed in Section 3.

6.3 Spillage containment and cleaning up

Use suitable equipment to collect the filter media and place in a designated, labelled waste container. Dispose of via a licensed waste disposal contractor.

Care should be taken to consider the nature of any contamination on the filter as the result of use and suitable PPE employed.

SECTION 7 – Handling and Storage

7.1 Handling

Suitable gloves must be worn when handling these membranes out of their packaging, to address any concerns related to residual levels of PFOA related to the material as supplied.

Put on appropriate personal protective equipment for the working environment (See Section 8). Consult details of product being filtered for specific advice. Avoid activities that can damage the filter media.

Follow good industrial hygiene practice. Eating, drinking and smoking are prohibited in areas where this product is handled, stored or processed. Workers must follow standard work-place hygiene before eating, drinking or smoking after using this product. Wear gloves to prevent contamination of the filter media and maintain cleanliness.

7.2 Storage

In the received condition, suitable gloves must be worn when handling these membranes out of their packaging, to address any concerns related to residual levels of PFOA related to the material as supplied. Gloves are also recommended to prevent contamination of the filter cartridge and maintain cleanliness. Handling of used filters must take into account the nature of the process fluids used and potential contaminant. The article is supplied dry, without the presence of any preserving fluid.

1. Handle with care to avoid damage or abrading.
2. Do not allow the material to enter the environment.
3. Store at temperatures between 5°C and 30°C (41°F – 86°F), in dry conditions.
4. Do not expose to direct sunlight or other radiation or direct weather conditions.
5. Store in original shipping bag or boxing.
6. Ensure careful handling to avoid physical damage. Ensure shipping bag and seals are intact prior to use. Membrane can be damaged if roughly handled – particularly at sub-zero temperatures. Thermal shock by quickly raising the temperatures from sub-zero should be avoided.
7. Visual inspection of packaging and product and, where appropriate, integrity testing is recommended prior to use. Do not use damaged articles.

For conditions outside of these the above or questions related to correct storage please consult Pall for further advice.

Pall recommends a visual inspection prior to use. Do not use if the product or packaging is damaged (please contact Pall for further advice).

Please also consult the Pall instructions for use information on the product prior to use.

7.3 Shelf life

Pall recommends a customer shelf life of 3 years from the date of manufacture when the product has been stored in accordance with the conditions laid out in section 7.2.

SECTION 8 – Exposure Controls/Personal Protection**8.1 Control parameters**

Occupational Exposure limits: None required.

Recommended monitoring procedures: None required

8.2 Exposure controls

There are no special ventilation requirements for the article as supplied in the new and unused condition.

Hygiene Measures No special measures required. Good hygiene practice in line with local working environmental requirements and industry guidelines.

Hand protection: Disposable gloves are recommended to ensure filter remains clean during installation.

Environmental Exposure Controls: Do not allow the material to enter the environment.

After the filter has been used additional exposure controls care should be taken in line with the nature of any contaminant on the filter as a result of its use.

SECTION 9 – Physical and Chemical Properties

Appearance: Filter membrane sheet material

Physical state: Solid

Colour: White.

Melting Point/ freezing point: Typically 230°C for acrylic fibres
Typically 215°C (for nylon polymers)

Flash Point: Not applicable

Solubility: Insoluble in water.

Auto-ignition temperature: Not applicable

Sensitive to shock: Mechanical / thermal shock can result if damage to the filter

SECTION 10 – Stability and Reactivity

Reactivity: The membrane is stable under the recommended conditions of use and storage.

Chemical Stability: The membrane is stable under recommended conditions of use and storage.

Hazardous Polymerisation: Polymerisation will not occur.

Other hazardous reactions:	Consult details of product being filtered for specific advice. Under normal conditions of storage and use, no hazardous reactions will occur.
Conditions to Avoid:	Avoid conditions that soften, swell or adversely affect the filter or its materials of construction. Consult Pall if the filter is to be used for continuous periods at 82°C or more. Do not allow fluids to freeze on the filter.
Incompatible Materials:	Strong Acids, Strong Alkalis, Strong Oxidising Agents.
Decomposition Products:	Under recommended conditions of use or storage, no hazardous decomposition products will be produced.

SECTION 11 – Toxicological Information

The information in this section contains generic advice and guidance in respect of the unused filter as supplied. Consult SDS details of the product being filtered for specific advice and recommendations.

11.1 Acute Toxicity

Irritation/Corrosion/Sensitisation:	No known concern
Mutagenicity / Carcinogenicity / Reproductive Toxicity / Teratogenicity:	No known concern
Aspiration Hazard:	Not applicable for un-used filter.
Potential acute health effects:	No known significant effects or critical hazards for the unused filter as supplied.

11.2 Chronic health effects

No known significant effects or critical hazards for the unused filter as supplied.

Carcinogenicity:	Classified 3 (Not classifiable for humans.) by IARC [Acrylic fibers].
------------------	---

SECTION 12 – Ecological Information

The information in this section contains generic advice and guidance related to hydrophobic, acrylic and nylon materials.

Versapor R, Pall Hydrophobic Acrylic Copolymer and Pall Hydrophobic ACP filter membranes are not expected to degrade in contact with soil or water under ambient conditions.

Do not allow the material to enter the environment - Please also see information on PFOA and PFOA-related compounds in Section 3.

SECTION 13 – Disposal Information

The information in this section contains generic advice and guidance.

Product

Methods of disposal: Disposal/handling of the used and un-used membranes should be in-line with national legislation and local regulatory requirements for the materials present. Unused membranes may be used incinerated via an approved process – however, these products may contain residual PFOA and PFOA-related compounds – which should be taken into account on thermal decomposition of the product and decision on incineration.

Due consideration shall be made to the nature of the contaminants on the filters as a result of use.

Hazardous Waste: To the best of our knowledge, this product if un-used is not regarded as hazardous waste as defined by the EU Directive 91/689/EEC and amendments. Due consideration must be made to the nature of the contaminants on the filters as a result of use, when considering whether the used filters are classified as hazardous waste. However, due to the presence of residual PFOA and PFOA-related compounds these products should not be sent to landfill.

Packaging

Bagging: Plastic (polyethylene)

Core: PVC

Box: Cardboard

The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled where suitable arrangements and facilities exist. Incineration or land-fill should only be considered where re-cycling is not feasible.

SECTION 14 – Transport Information

The clean and un-used filter, supplied in its original packaging, is not classified as dangerous goods under ADR, RID, IMDG or IATA regulations.

SECTION 15 – Regulatory Information

Stockholm Convention on Persistent Organic Pollutants (POP) related to PFOA content. See section 1 above.

EU Regulation (EC) No. 1907/2006 (REACH): See section 3 above as amended by EC 2017/1000

Black List Chemicals: Not Listed

Priority List Chemicals: Not Listed

Integrated pollution prevention and control List – Air: Not Listed

Integrated pollution prevention and control List – Water: Not Listed

Date of revision issue: 18 May 2020

Date of original issue: 29th April 2019

Pall Corporation provides the information contained herein in good faith and states that it represents the best information currently available. However, no warranties or representations are expressed or implied and Pall Corporation assumes no liabilities resulting from its use. Users should make their own investigations to determine the suitability of the information for their applications. In no way shall Pall Corporation be responsible for losses or damages resulting from the use or reliance on this information. Page 8 of 10

Version: 3

Notice to Reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above Pall Corporation, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any materials 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 cannot guarantee that these are the only hazards that exist.

® indicates a trademark registered in the USA

© Pall Corporation, 2020.

APPENDIX 1

Example part number:

Product: Versapor

Part Number: V %%R500####

Where:

(%%) indicates filter series (200R, 450R, 800R, 1200R, 3000R, 5000R, 10000R) and rating (μm)

(####) indicates unique filter size

Country of Origin: Made in the U.S.A.