

DECLARATION OF COMPLIANCE Membralox® Ceramic Membranes

Part Numbers

EP1 (P1940), EP2 (P1960), EP3 (P3730), EP4 (P3740), EP5 (P4840) and EP6 (P2760)

Membralox ceramic elements comprise asymmetric multi-channel membranes composed of a porous high purity alpha-alumina support and filtering layer(s).

The patented alpha-Alumina end-sealing, sintered into the support porosity, provides superior resistance to corrosion and cleaning cycles while preventing any filtering layer by-pass through element end faces support structure.

The filtering layer(s), cast onto the inner surface of the lumens and sintered, employ Alumina, Zirconia or Titania depending on rating:

Microfiltration (MF)	0.2, 0.5, 0.8, 1.4 micron	Alpha-Alumina
Ultrafiltration (UF)	10, 20, 50, 100 nm	Zirconia
Ultrafiltration (UF)	5, 10 nm	Titania

Membralox GP membranes have a sintered support structure modification made of high purity alpha-Alumina that creates a permeability gradient along the length of the element. These membranes benefit from the same features of the other standard Membralox membranes.

An initial flush is recommended prior to use.

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Reference	FBDCMEMLOXENa
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Membralox Ceramic Membranes

Components

Support and End-seal		α -Alumina (α -Al ₂ O ₃)
Standard layers	MF	α -Alumina (α -Al ₂ O ₃)
	UF	Zirconia (ZrO ₂)
Special layers	Fine UF	Titania (TiO ₂)

Declaration

Membralox ceramic membranes comprise of materials that meet regulatory and legislative requirements and guidelines for food contact in that:

- **Europe**

Membralox ceramic membranes meet the requirements for food contact as detailed in European Regulation (EC) Number 1935/2004 in that:

The materials of construction comply with European Commission Ceramics Directive 2005/31/EC following analytical certification of compliance in relation to lead and cadmium leach testing in 4 % acetic acid at 22 °C for 24 hours.

They are also approved for drinking water filtration by French Health Minister directive dg5/vs4 2000 -166 March 28, 2000 in annex 1, §II list B.

- **USA**

The materials of construction are listed in the FDA requirements for food contact use as detailed in Code of Federal Regulations, 21 CFR paragraphs 170-199:

Zirconia layers on Alumina support are listed in 21 CFR section 177.2910.

Membralox crossflow membrane modules, model type SD and HCS are conforming to 3-A Sanitary Standards (section 45- 02, authorization 1187).

Note: Titania (TiO₂) is approved as an indirect food additive and is listed in 21 CFR section 178.3297.

Process Quality System

Site of Manufacture:

Pall Exekia, France

This product is manufactured under a Quality Management System certified to ISO 9001:2008.

These products / product packaging carry a lot number / date code to facilitate traceability to suppliers' materials and Pall production records.

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