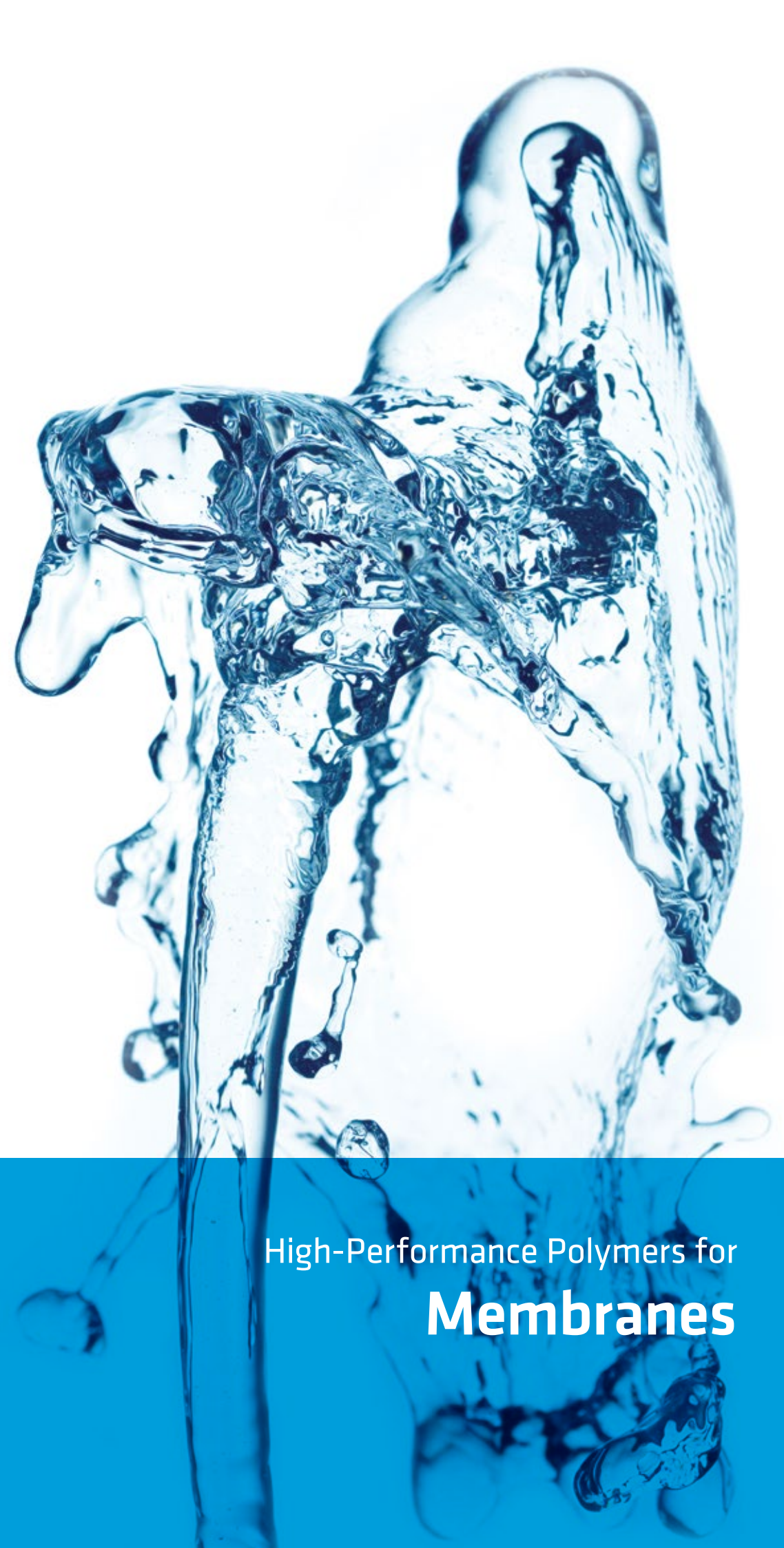

SOLVAY

asking more from chemistry®

High-Performance Polymers for

Membranes

SPECIALTY POLYMERS

Solvay Gives You The Performance You Need

Solvay offers the largest selection of sulfone polymers and fluoropolymers for membranes. They have the solubility, purity and range of molecular weight needed to make hollow fiber, flat sheet and tubular membranes with the pore size and separation selectivity you need. Available in pellets and powders, our products cover a wide range of molecular weights with controlled viscosities, making it easier to fine-tune dope solutions and maximize process stability. Technologies range from reverse osmosis (RO) to microfiltration (MF) for symmetric and asymmetric membranes.

Toughness and chemical resistance along with hydrolytic and oxidative stability help membranes tolerate a variety of feed streams and cleaning methods. High molecular weight grades improve fiber strength and minimize fiber breakage.

Sulfone Polymers

Solvay's sulfone polymers have been used to produce membranes for over 25 years. They are soluble in conventional processing solvents and used to make hollow fiber, flat sheet and tubular membranes. Low cyclic dimer grades improve the stability of dope solutions, reduce filter clogging, and minimize manufacturing defects.

Key features

- Excellent mechanical properties
- Outstanding hydrolytic stability
- Stable at pH levels from 2 to 13
- Excellent biocompatibility
- Easy to form MF and UF membranes
- Low level of insolubles and extractibles
- Sterilizable by steam, ethylene oxide and gamma radiation
- Global agency approvals

Membrane Grades

	Pellets	Powders	Typical Mol. Wt. [Mw (x10^3)]
Udel® PSU polysulfone	P-1700 LCD		67–72
	P-3500 LCD		75–81
Veradel® PESU polyether-sulfone		3000MP	64–68
		3000P	62–64
		3100P	52–55
		3200P	45–47
Radel® PPSU polyphenylsulfone	R-5000		52–55
	R-5500		55–59

Additional grades are available upon request.

Solef® PVDF

Solef® PVDF homopolymers are made using a suspension-type polymerization process which provides a linear, gel-free product. These materials are soluble in conventional processing solvents to make hollow fiber and flat sheet membranes by DIPS and TIPS processes.

Key features

- Excellent toughness and durability
- Easy to form MF and UF membranes
- Stable at pH levels from 1 to 11
- Outstanding chlorine and UV resistance
- High purity and high crystallinity
- Global agency approvals

Membrane Grades

	Pellets	Powders	Typical Mol. Wt. [Mw (KDa)]
Solef® PVDF homopolymer polyvinylidene fluoride	6010	6010	300–320
	6012	6012	380–400
		1015	570–600
		6020	670–700

Additional grades are available upon request.

Halar® ECTFE

The molecular structure that gives Halar® ECTFE its exceptional chemical resistance is not compatible with solution phase inversion processing. The polymer must be processed at temperatures close to its melting point (200°C - 240°C) using a TIPS process for hollow fibers. Grades with differing molecular weights and melt temperatures are available.

Key features

- Outstanding resistance to ozone and chlorine
- Stable at pH levels from 1 to 14
- Limited solubility in organic solvents
- Very good tensile properties
- High purity resins
- FDA compliance for selected grades

Membrane Grades

	Pellets	Melt Flow Index, g/10 min ASTM D1238, 275°C
Halar® ECTFE ethylene chlorotrifluoroethylene	901	1.0 (tested at 2.16 kg)
	902	1.0 (tested at 5.0 kg)

Typical properties reported. Actual properties of individual batches will vary within specification limits.

Customer Service and Technical Support

At Solvay, we place a high value on establishing close working relationships with our customers. We believe that the better we know our customers, the better we can serve them. That's why we have a global network of sales representatives and technical support dedicated to serving the membranes industry. We maintain and regularly update our status with global regulatory agencies and specifications. Please contact your Solvay representative for details.



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Safety Data Sheets (SDS) are available by emailing us or contacting your sales representative. Always consult the appropriate SDS before using any of our products.

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