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PUREPRO Membranes

Product Information

PUREPRO reverse osmosis membrane elements for home drinking water are the industry's most reliable. Advanced membrane technology and automated fabrication allow these elements to deliver consistent performance that equipment suppliers, water treatment dealers and residential customers can rely on. A thin film composite (TFC) high quality membrane that processes 50 gallons per day. It remove the following hard water contaminants that may be present in your water: lead, cooper, barium, chromium, mercury, sodium, cadmium, fluoride, nitrite, nitrate, and selenium.

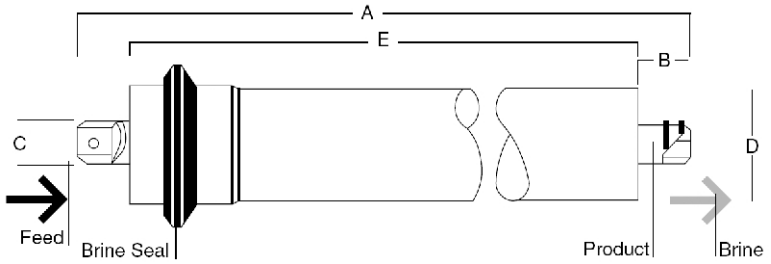
PUREPRO home drinking water elements are rated at 50 psi and will purify about 20% more water than competitive elements rated at 60 psi (please see reference charts on back for more information).

PUREPRO
DRINKING WATER SYSTEM

Product Specifications

Product	Applied pressure Psig(bar)	Permeate Flow Rate, gpd(l/h)	Stabilized Salt Rejection(%)
TW30-1812-50	80 (5.4)	50 (7.9)	98
TW30-1812-80	80 (5.4)	80 (12)	98
TW30-1812-100	80 (5.4)	100 (15.7)	98
TW30-1812-200	80 (5.4)	200 (31.5)	98

1.Permeate flow and salt rejection based on the following test conditions: 250 ppm softened tapwater, 77^{0}F(25^{0}C), 15% recovery and the specified applied pressure.
2.Minimum salt rejection is 96.0%.
3.Permeate flows for individual elements may vary +/-20%.



	Dimensions-Inches (mm)				
Product	A	B	C	D	E
TW30-1812	11.74 (298)	0.87 (22)	0.68 (17)	1.75 (44.5)	10.0 (254)

4. TW30-1812 Home Drinking Water Elements fit nominal 2-inch I.D. pressure vessel. 1 inch = 25.4 mm

Operating Limits

Membrane Type .....Polyamide Thin-Film Composite
Maximum Operating Temperature .....113^{0}F (45^{0}C)
Maximum Operating Pressure .....300 psig (21 bar)
Maximum Feed Flow Rate ..... 2.0 gpm (7.6 lpm)
pH Range, Continuous Operation[a] 211
pH Range, Short-Term Cleaning (30 min.)[b].....112
Maximum Feed Silt Density Index (SDI) .....SDI 5
Free Chlorine Tolerance[c].....<0.1 ppm

General Information

1.The first full tank of permeate should be discarded. Do not use this initial permeate for drinking water or food preparation.
2.Keep elements moist at all times after initial wetting.
3.If operating limits and guidelines given in this bulletin are not strictly followed, the limited warranty will be null and void.
4.To prevent biological growth during prolonged system shutdowns, it is recommended that membrane elements be immersed in a preservative solution.
5.The membrane shows some resistance to short-term attack by chlorine (hypochlorite). Continuous exposure, however, may damage the membrane and should be avoided.
6.The customer is fully responsible for the effects of incompatible chemicals and lubricants on elements. Their use will void the element limited warranty.

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Estimated Percent Rejection of Various Solutes by PUREPRO Membranes

In order to assist customers in estimating the rejection of PUREPRO FT30 membranes, tests have been performed with a variety of solute compounds. The results of these tests are indicated as a % rejection for each compound listed in the tables below.

Actual system performance may vary from the listed data, particularly with changes in feedwater concentration, pH, and temperature.

For this reason, these tables should be used as a quick screen. Pilot trials should be performed to determine actual rejection in a specific application.

Solute	MW	Rejection, %
1,1,1-Trichloroethane	133	98
1,2 Dibromoethane	173	15
1,2 Dichloroethane	99	37
1,2,3-Trichlorobenzene	181	>57
1,2,4-Trichlorobenzene	181	96
1,2,4-Trimethylbenzene	120	57
1,2-Dichlorobenzene	147	70-92
1,3-Dichlorobenzene	147	66-69
1,4-Dichlorobenzene	147	61
1-Chlorododecane	204	87
1-Methylnaphthalene	142	67
2,2',5,5' Tetrachlorobiphenyl	290	46
2,4,6-Trichlorophenol	197	100
2,4-Dichlorophenol	163	93
2,6 Dimethylphenol	122	92
2,6-Di-Tert-Butyl-4-Methylphenol	220	96
3,8 Dimethyphenol	122	92
3-Hydroxy-Capric Acid	188	>98
3-Pentanone	86	74
4-Ethylphenol	122	84
4-Isopropylphenol	136	84
5-Chlorouracil	146	88
Acetic Acid	60	45
Acetone	58	70
Aluminum Nitrate	213	86
Aluminum Sulfate	342	89
Aniline	93	64-75
Anthraquinone	208	93
Benzene	78	7819
Benzoic Acid	122	92
Benzothiazole	133	79
Biphenyl	154	91
Bis (2-Ethylhexyl) Phthalate	390	94
Boric Acid	230	
Bromodichloromethane	163	79
Bromoform	94	>67
Cadmium Sulfate	208	97
Caffeine	174	99
Calcium Chloride	111	99
Calcium Nitrate	164	95
Carbon Tetrachloride	153	98
Cesium Chloride	168	97
Chlorobenzene	112	0-50
Chlorofoam	50	71-90
cis-1,2 Dichloroethylene	97	20
Clofibric Acid	214	>99
Copper Sulfate	160	99
Cyclohexanone	98	95
Dibromochloromethane	208	79
e-Caprolactum	113	85
Ethanol	46	38-70
Ethyl Benzene	106	71
Formaldehyde	30	35

Solute	MW	Rejection, %
Furfural	96	35
Glucose	180	98-99
Glycine	188	78
Heptaldehyde	114	100
Humic Acid		98
Hydrochloric Acid	36	28
Isophorone	138	96
Isopropanol	60	90
Lactic Acid (ph2)	90	94
Lactic Acid (ph5)	42	99
Magnesium Chloride	120	98
Magnesium Sulfate	120	99
Manganese (II) Sulfate	151	97
Methanol	32	25
Methl Ethyl Ketone	72	73
Methyl Isobutyl Keytone	100	98
Naphthalene	128	80
Nickel Chloride	130	96-99
Nickel Sulfate	155	97-99
o-Cresol	108	84
o-Xylene	106	67
p & m Xylene	106	38
Pentachlorophenol	266	86
Phenol - 80%	94	65
Phosphoric Acid	96	94
Quinoline	129	97
Silica	60	98
Sodium Acetate (1%)	82	88
Sodium Bicarbonate	84	98
Sodium Bromide	103	96
Sodium Chloride	58	99
Sodium Cyanide	49	95
Sodium Di-H Phosphate	120	98
Sodium Fluoride	42	98
Sodium Hydrogen Sulfate	120	76
Sodium Iodide	150	97
Sodium Mono-H Phosphate	142	98
Sodium Nitrate	85	93-98
Sodium Orthophosphate	164	99
Stearic Acid	204	71
Strontium Chloride	158	96
Succinic Acid	118	35
Sucrobe	342	99
Sulfuric Acid	98	84
Tetrachloroethylene	165	68-80
Tin (II) Sulfate	215	85
Tributyl Phosphate	266	49
Trichloroethylene	131	30-43
Trimesic Acid	210	96
Urea	60	70
Zinc Chloride	136	93
Zinc Sulfate	161	98