

## Industrial UF Spiral-Wound E-Coat Element: V7 (PVDF 800kDa)

Synder Filtration is a leading supplier of Ultrafiltration (UF) membranes and complete systems to the E-Coat industry worldwide. With a full range of molecular weight cutoffs and element sizes for both cathodic and anodic paint baths, Synder can outfit any E-Coat paint line with reliable ultrafiltration membrane elements.

### MEMBRANE SPECS

| Model | Polymer | Approx. Molecular Weight Cutoff |
|-------|---------|---------------------------------|
| V7    | PVDF    | 800,000                         |

### COMMON APPLICATIONS

- Cathodic electrocoat paint
- Laundry waste water
- Industrial water processes

### RECOMMENDED OPERATING PARAMETERS

| Operating Parameters   |                                                                            |
|------------------------|----------------------------------------------------------------------------|
| Typical Operating Flux | 5-35 GFD (8-60 LMH)                                                        |
| Membrane Type          | Proprietary PVDF                                                           |
| Membrane Construction  | Round shell net or FRP                                                     |
| Membrane Temperature   | Continuous Operation: 122°F (50°C)<br>Clean-In-Place (CIP): 110°F (43.3°C) |
| pH Range               | Continuous Operation: 1-11<br>Clean-In-Place (CIP): 2-10.5                 |
| Maximum Pressure Drop  | FRP Element: 35psi (241kPa)<br>Net Wrap Element: 17psi (117kPa)            |
| Chlorine Tolerance     | 180ppm maximum per cleaning cycle                                          |

### COMPREHENSIVE TECHNICAL SUPPORT

- Paint/MEQ Analysis
- On-site Flow Analysis
- UF System Optimization
- Analyte System Optimization
- Personalized Technical Support



### V-SERIES FEATURES & BENEFITS

- The V-Series has a proprietary positive charge to repel paint particles, promote maximum flux rates, and reduce fouling.
- Membrane only requires one cleaning chemical plus acid. No other additives required.
- Integrated end plugs allow for easy integration and removal.
- Synder maintains a large portion of E-Coat devoted sales, engineering, and staff compared to other membrane manufacturers worldwide.

### CONTACT US



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## ELEMENT DIMENSIONS & WEIGHT

| Model #  | Body Length (mm) | Element OD (mm) | ID Perm Tube ID (mm) | OD Perm Tube (mm) | Tube Ext Length (Male)     | Feed Rate GPM (lpm) | Standard Housing |
|----------|------------------|-----------------|----------------------|-------------------|----------------------------|---------------------|------------------|
| 1812TM   | 10.00" (254)     | 1.8" (46)       |                      | 0.675" (17)       | 0.75" (perm) 1.0" (plug)   | 2.0 (7.6)           | IH-1812          |
| 2519H    | 19.25" (489)     | 2.5" (63.5)     | 0.62" (15.8)         |                   |                            | 6.0 (23)            | IH-2519          |
| 2540H    | 38.00" (965.2)   | 2.5" (63.5)     |                      | 0.75" (19.1)      | 1.00" (both ends)          | 6.0 (23)            | IH-2540          |
| 3940AH   | 38.80" (985.5)   | 3.93" (99.8)    |                      | 0.827" (21)       | 0.60" (both ends)          | 25 (95)             |                  |
| 3945H    | 45.00" (1143)    | 3.93" (99.8)    | 0.62" (15.8)         |                   |                            | 25 (95)             |                  |
| 4030H    | 27.0" (658.8)    | 3.93" (99.8)    |                      | 0.84" (21.3)      | 3.00" (perm) 3.63" (plug)  | 25 (95)             | IH-4030          |
| 4032H    | 29.50" (749.3)   | 3.93" (99.8)    |                      | 0.75" (19.1)      | 1.06" (both ends)          | 25 (95)             |                  |
| 4033H    | 33.00" (838.2)   | 3.93" (99.8)    | 0.62" (15.8)         |                   |                            | 25 (95)             |                  |
| 4037H    | 27.00" (685.8)   | 3.93" (99.8)    |                      | 0.84" (21.3)      | 3.00" (perm) 8.625" (plug) | 25 (95)             | IH-KR4           |
| 4040AH   | 40.00" (1016)    | 3.93" (99.8)    | 0.62" (15.8)         |                   |                            | 25 (95)             |                  |
| 4040BH   | 40.00" (1016)    | 3.93" (99.8)    | 0.76" (19.3)         |                   |                            | 25 (95)             |                  |
| 4045BH   | 40.00" (1016)    | 3.93" (99.8)    |                      | 0.84" (21.3)      | 3.00" (perm) 1.875" (plug) | 25 (95)             | IH-4042          |
| 4045CH   | 45.00" (1143)    | 3.93" (99.8)    | 0.62" (15.8)         |                   |                            | 25 (95)             |                  |
| 4051.5H  | 40.00" (1016)    | 3.93" (99.8)    |                      | 0.84" (21.3)      | 3.00" (perm) 8.50" (plug)  | 25 (95)             | IH-40RF          |
| 5640H    | 40.00" (1016)    | 5.60" (142.2)   | 1.29" (32.8)         |                   |                            | 40 (151)            |                  |
| 5647.5H  | 40.00" (1016)    | 5.60" (142.2)   |                      | 1.66" (42.2)      | 3.00" (perm) 4.375" (plug) | 40 (151)            | IH-60A           |
| 5651.5H  | 40.00" (1016)    | 5.60" (142.2)   |                      | 1.66" (42.2)      | 3.00" (perm) 8.375" (plug) | 40 (151)            | IH-60RF          |
| 7637H    | 33.00" (838.2)   | 7.45" (189.2)   |                      | 1.66" (42.2)      | 2.00" (both ends)          | 70 (265)            |                  |
| 7640HB   | 40.00" (1016)    | 7.28" (184.9)   | 1.29" (32.7)         |                   |                            | 70 (265)            |                  |
| 7640HC   | 40.00" (1016)    | 7.28" (184.9)   | 1.29" (32.7)         |                   |                            | 70 (265)            |                  |
| 7647.5HB | 40.00" (1016)    | 7.45" (189.2)   |                      | 1.66" (42.2)      | 3.00" (perm) 4.375" (plug) | 70 (265)            | IH-80S           |
| 7647.5HC | 40.00" (1016)    | 7.28" (184.9)   |                      | 1.66" (42.2)      | 3.00" (perm) 4.375" (plug) | 70 (265)            | IH-80D(C,E)      |
| 7940HA   | 38.25" (717.6)   | 7.90" (200.7)   |                      | 1.66" (42.2)      | 0.875" (both ends)         | 80 (303)            |                  |
| F7940HA  | 40.00" (1016)    | 7.90" (200.7)   | 1.139" (28.9)        |                   |                            | 80 (303)            |                  |
| 8040H    | 40.00" (1016)    | 7.90" (200.7)   | 1.125" (28.6)        |                   |                            | 80 (303)            |                  |

| Membrane Model               |           |
|------------------------------|-----------|
| <b>V6-2-F7647.5HB</b>        |           |
| Industrial Designations      |           |
| H = Fiber Glass Shell        |           |
| T = Tape Wrapped             |           |
| HB = Stainless Steel Housing |           |
| HC = PVC Housing             |           |
| HS = Fiber Glass Shell w/net |           |
| HA = Version A               |           |
| HK = KPAK™ Retrofit          |           |
| HM = Male                    |           |
| HF = Female                  |           |
| N = Net Wrapped              |           |
| HS = Roundshell - Net Wrap   |           |
| Spacer Size                  | Model No. |
| 24 mil                       | 1         |
| 31 mil                       | 2         |
| 46 mil                       | 3         |
| 65 mil                       | 4         |
| 80 mil                       | 5         |

**NOTE:** These designations may vary. Always consult Synder before ordering.

## TECHNICAL NOTES

For element sizes not listed, please call or email Synder Filtration for details. We can design an element to fit your exact needs – just specify the element outer diameter (OD) or vessel/housing inner diameter (ID), element inner diameter (ID), and length. Additional feed spacers are also available.

## RECOMMENDED ELEMENT CROSS FLOW RATE

| Element |       | Feed Spacer (in mils) |    |    |    |     |
|---------|-------|-----------------------|----|----|----|-----|
|         |       | 24                    | 31 | 46 | 65 | 80  |
| 1.8"    | m³/hr | 1                     | 1  | 1  | 1  | 1   |
|         | gpm   | 3                     | 3  | 4  | 4  | 5   |
| 2.5"    | m³/hr | 1                     | 2  | 2  | 2  | 2   |
|         | gpm   | 6                     | 7  | 8  | 9  | 9   |
| 4.0"    | m³/hr | 3                     | 4  | 5  | 5  | 5   |
|         | gpm   | 15                    | 17 | 20 | 23 | 24  |
| 8"      | m³/hr | 15                    | 17 | 20 | 23 | 24  |
|         | gpm   | 66                    | 75 | 89 | 99 | 105 |

\*Note: The recommended cross flow rate will be subject to differential pressure limitations and specific applications.

## MEMBRANE AREA (SQ. FT)

| Element |  | Feed Spacer (in mils) |     |     |     |     |
|---------|--|-----------------------|-----|-----|-----|-----|
|         |  | 24                    | 31  | 46  | 65  | 80  |
| 1812TM  |  | 3.1                   | 2.7 | 2.1 | 1.6 | 1.3 |
| 2540M   |  | 26                    | 22  | 19  | 14  | 12  |
| 2540F   |  | 27                    | 23  | 20  | 15  | 13  |
| 4040M   |  | 77                    | 67  | 54  | 43  | 36  |
| 4040F   |  | 79                    | 69  | 56  | 45  | 38  |
| 8040F   |  | 365                   | 317 | 250 | 193 | 166 |