

# ETFE

# Fluoropolymer with Greatly Enhanced Flex Life and Resistance to Environmental Stress

ETFE is a premium fluoropolymer that is mechanically tough and offers an excellent balance of properties and extremely low surface energy. ETFE is preferred for applications where other thermoplastics are lacking in mechanical toughness, or in environments where they are expected to endure unusual thermal, mechanical, and chemical extremes.

|             | Property                       | ASTM Spec   | Unit                         | ETFE       |
|-------------|--------------------------------|-------------|------------------------------|------------|
|             | Specific Gravity               | D 792       | —                            | 1.7        |
| Environment | Water Absorption               | D570        | %                            | <0.1       |
|             | Abrasion Resistance            | Taber CS 17 | mg/1000                      | —          |
|             | Oxygen Index                   | D2863       | %                            | 30-32      |
|             | Flammability                   | UL 94       | —                            | V-0        |
|             |                                | FM 4910     | _                            | NO         |
|             | Coefficient of Friction        | C1894       | Static                       | —          |
|             |                                | C1894       | Dynamic                      | —          |
| Mechanical  | Tensile Strength (yield)       | D1708, D638 | psi                          | 6100       |
|             | Elongation (break)             | D1708, D638 | %                            | 300        |
|             | Flexural Modulus               | D790 @ 23 C | psi                          | 145,000    |
|             | Notched Izod Impact            | D256 @ 23 C | ft-lb/in.                    | No Break   |
|             | Shore D Hardness               | D2240       | _                            | 67         |
| Thermal     | Continuous Service Temperature | Maximum     | °C                           | 155        |
|             |                                |             | °F                           | 311        |
|             | Melting Point                  | D3418       | °C                           | 255–280    |
|             |                                | D3418       | °F                           | 491–536    |
|             | Vicat Softening Point          | D1525       | °C                           | —          |
|             |                                | D1525       | °F                           | —          |
|             | Coefficient of Expansion       | E831 TMA    | in/in/°F (10 <sup>-5</sup> ) | 7.4 × 10-5 |
|             | Deflection Temp (66psi)        | D648        | °C                           | 105        |
|             |                                | D648        | °F                           | 221        |
|             | Deflection Temp (264psi)       | D648        | °C                           | —          |
|             |                                | D648        | °F                           | -          |

#### **ADVANTAGES**

- Greatly enhanced flex life
- High resistance to environmental stress
- Useful properties are retained at cryogenic ranges
- Outstanding impact strength, cut-through, and abrasion resistance

### **PROVEN APPLICATIONS**

- Process tanks, liners and components
- Fluid handling systems
- Highly corrosive chemical storage
- Tank & Reactor Vessels
- Pulp & Paper Production
- Alkaline Treatment Systems

#### **STANDARD SIZES**

- 48"x96"; 48"x120"; 60"x120"
- Gauge: 0.250" 1.0"

## **CUSTOM SIZES**

• Contact inside sales

\* Continuous Service Temperature based upon "non-chemical Dry Usage." Table data reflects ASTM based average typical vendor data. Data meant as general guidelines only. Specific applications require additional testing by the buyer. All properties based on standard unbacked product tests only.

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