

# ETFE Rod

**Formula:** ETFE

**Diameter:** 11mm

**Length:** 1000mm

**CAS Number:** 25038-71-5

**UOM Code:** 579-055-07

**SKU:** 1000114919-group

**Product Code:** FP36-RD-000120

## Material Properties for Polymers

### Chemical Resistance

| Element                  | Value |
|--------------------------|-------|
| Acids - concentrated     | Good  |
| Acids - dilute           | Good  |
| Alcohols                 | Good  |
| Alkalis                  | Good  |
| Aromatic hydrocarbons    | Good  |
| Greases and Oils         | Good  |
| Halogenated Hydrocarbons | Good  |
| Halogens                 | Good  |
| Ketones                  | Good  |

### Electrical Properties

| Element                                    | Value             |
|--|-------------------|
| Dielectric constant @ 1MHz                 | 2.6               |
| Dissipation factor @ 1MHz                  | 0.0005            |
| Dielectric strength( kV mm <sup>21</sup> ) | 25                |
| Surface resistivity( Ohm/sq )              | >10 <sup>1?</sup> |
| Volume resistivity( Ohmcm )                | 10 <sup>1?</sup>  |

### Physical Properties

| Element      | Value |
|--------------|-------|
| Flammability | V0    |

| <b>Element</b>              | <b>Value</b> |
|-----------------------------|--------------|
| Radiation resistance        | Fair         |
| Refractive index            | 1.403        |
| Resistance to Ultra-violet  | Excellent    |
| Limiting oxygen index( % )  | 30-32        |
| Water absorption( % )       | 0-0.03       |
| Density( gcm <sup>3</sup> ) | 1.7          |

## **Mechanical Properties**

| <b>Element</b>                            | <b>Value</b> |
|---|--------------|
| Hardness - Rockwell                       | R50          |
| Elongation at break( % )                  | 250-350      |
| Tensile modulus( GPa )                    | 0.8          |
| Izod impact strength( J m <sup>21</sup> ) | 1000         |
| Tensile strength( MPa )                   | 28-48        |

## **Thermal Properties**

| <b>Element</b>  | <b>Value</b> |
|---|--------------|
| Heat-deflection temperature - 0.45MPa( C )                            | 105          |
| Heat-deflection temperature - 1.8MPa( C )                             | 70           |
| Lower working temperature( C )  | -100         |
| Upper working temperature( C )  | 150-160      |
| Specific heat( J K <sup>21</sup> kg <sup>21</sup> )                   | 1900-2000    |
| Thermal conductivity( W m <sup>21</sup> K <sup>21</sup> )             | 0.24@23°C    |
| Coefficient of thermal expansion( x10 <sup>22</sup> K <sup>21</sup> ) | 90-170       |