

Quadrant EPP TIVAR® PolySteel

Ultra High Molecular Weight Polyethylene

Quadrant Engineering Plastic Products

Message:

Quadrant EPP TIVAR® PolySteel is an Ultra High Molecular Weight Polyethylene product. It is available in North America.

Characteristics include:

- Flame Rated
- Chemical Resistant
- High Molecular Weight

| General Information | |
|---------------------|-----------------------------|
| Features | Acid Resistant |
| | Alcohol Resistant |
| | Alkali Resistant |
| | High Specific Gravity |
| | Hydrocarbon Resistant |
| | Machinable |
| | Solvent Resistant |
| | Ultra High Molecular Weight |

| | |
|-------|-----------------|
| Forms | Preformed Parts |
| | Profiles |
| | Rod |
| | Sheet |
| | Tubing |

| Physical | Nominal Value | Unit | Test Method |
|--|---------------|-------------------|-----------------|
| Specific Gravity | 1.45 | g/cm ³ | ASTM D792 |
| Water Absorption | | | ASTM D570 |
| 24 hr | < 0.010 | % | |
| Saturation | < 0.010 | % | |
| Hardness | Nominal Value | Unit | Test Method |
| Durometer Hardness (Shore D) | 64 | | ASTM D2240 |
| Mechanical | Nominal Value | Unit | Test Method |
| Tensile Modulus | 703 | MPa | ASTM D638 |
| Tensile Strength (Ultimate) | 19.3 | MPa | ASTM D638 |
| Tensile Elongation (Break) | 130 | % | ASTM D638 |
| Flexural Modulus | 752 | MPa | ASTM D790 |
| Compressive Modulus | 579 | MPa | ASTM D695 |
| Compressive Strength (10% Strain,23°C) | 24.8 | MPa | ASTM D695 |
| Coefficient of Friction (vs. Steel - Static) | 0.14 | | Internal Method |

| Thermal | Nominal Value | Unit | Test Method |
|--|---------------|------|-------------|
| Maximum Use Temperature - Long Term, Air | 82 | °C | |
| Peak Crystallization Temperature (DSC) | 127 | °C | ASTM D3418 |
| Electrical | Nominal Value | Unit | Test Method |
| Surface Resistivity | > 1.0E+10 | ohms | ASTM D257 |
| Flammability | Nominal Value | Unit | Test Method |
| Flame Rating (3.18 mm, Estimated Rating) | HB | | UL 94 |

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Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

