

TECHNICAL DATA SHEET

Arnitel® EM740

Envalior
TPC

Processing

Injection molding, Other extrusion

Delivery Form

Pellets

Additives

Release agent

Certifications

Food contact

Product Text

Product Information

Extrusion Grade, Food Contact Quality

ISO 18064 TPC-ET

| Processing/Physical Characteristics | Value | Unit | Standard |
|-------------------------------------|---------|------------------------|----------|
| Melt volume-flow rate, MVR | 4 | cm ³ /10min | ISO 1133 |
| Temperature | 230 | °C | |
| Load | 2.16 | kg | |
| Density of melt | 900 | kg/m ³ | |
| Thermal conductivity of melt | 0.1 | W/(m K) | |
| Spec. heat capacity of melt | 1900 | J/(kg K) | |
| Eff. thermal diffusivity | 5.85E-8 | m ² /s | |
| Ejection temperature | 160 | °C | |

| Mechanical Properties | Value | Unit | Standard |
|---------------------------------------|-------|-------------------|-------------|
| Charpy impact strength, +23°C | N | kJ/m ² | ISO 179/1eU |
| Charpy impact strength, -30°C | N | kJ/m ² | ISO 179/1eU |
| Charpy notched impact strength, +23°C | 15 | kJ/m ² | ISO 179/1eA |
| Charpy notched impact strength, -30°C | 8 | kJ/m ² | ISO 179/1eA |
| Stress at 10% elongation | 36 | MPa | ISO 527 |
| Stress at break TPE | 26 | MPa | ISO 527 |

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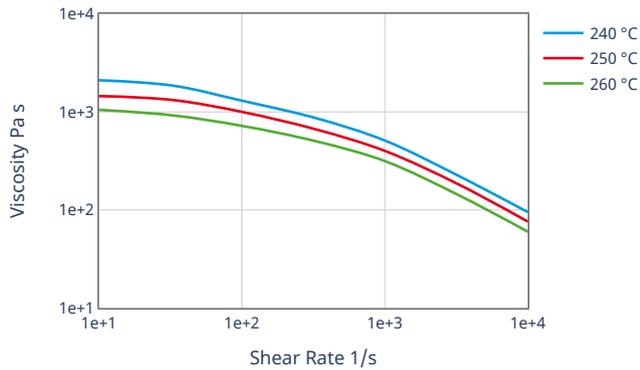
| Thermal Properties | Value | Unit | Standard |
|---------------------------------------------|-------|-------------------|-----------------|
| Melting temperature, 10°C/min | 221 | °C | ISO 11357-1/-3 |
| Vicat softening temperature, B | 160 | °C | ISO 306 |
| Coeff. of linear therm. expansion, parallel | 165 | E-6/K | ISO 11359-1/-2 |
| Coeff. of linear therm. expansion, normal | 165 | E-6/K | ISO 11359-1/-2 |
| Burning behav. at 1.5 mm nom. thickn. | HB | class | IEC 60695-11-10 |
| Thickness tested | 1.5 | mm | |
| Yellow card available | yes | | |
| Electrical Properties | Value | Unit | Standard |
| Relative permittivity, 100Hz | 3.7 | | IEC 62631-2-1 |
| Relative permittivity, 1MHz | 3.4 | | IEC 62631-2-1 |
| Dissipation factor, 1MHz | 400 | E-4 | IEC 62631-2-1 |
| Volume resistivity | 1E13 | Ohm*m | IEC 62631-3-1 |
| Electric strength | 23 | kV/mm | IEC 60243-1 |
| Comparative tracking index | 600 | | IEC 60112 |
| Other Properties | Value | Unit | Standard |
| Water absorption | 0.6 | % | Sim. to ISO 62 |
| Humidity absorption | 0.15 | % | Sim. to ISO 62 |
| Density | 1290 | kg/m ³ | ISO 1183 |
| Test Specimen Production | Value | Unit | Standard |
| Injection molding, melt temperature | 240 | °C | ISO 294 |
| Injection molding, mold temperature | 35 | °C | ISO 294 |
| Injection molding, injection velocity | 500 | mm/s | ISO 294 |

Diagrams

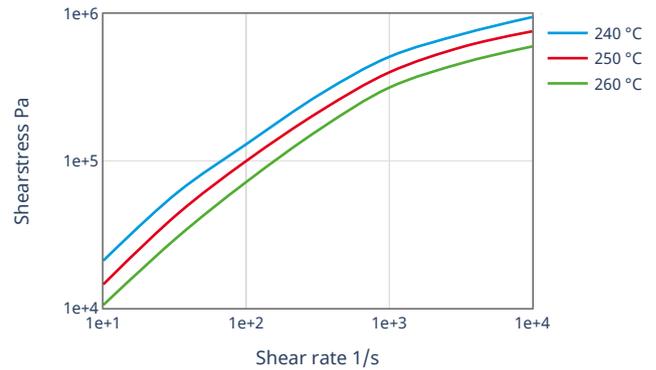
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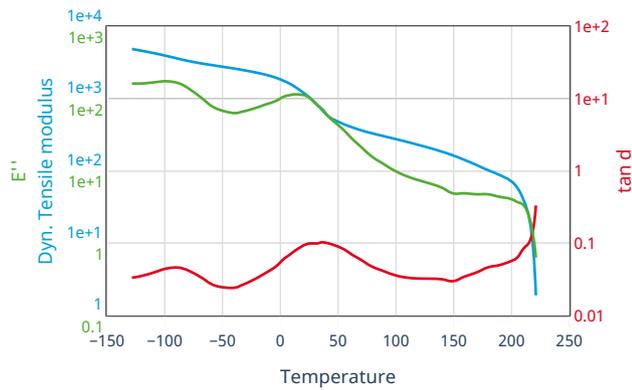
Viscosity-shear rate



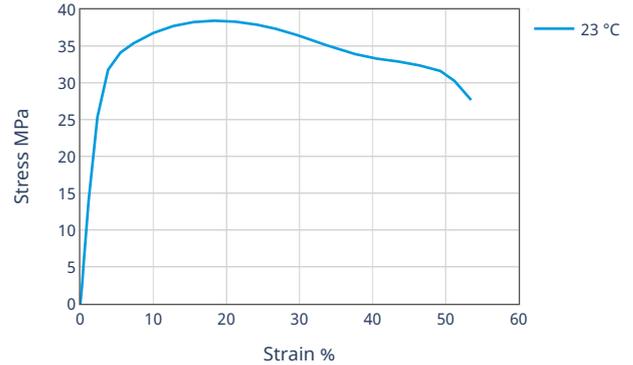
Shearstress-shear rate



Dynamic tensile modulus-temperature



Stress-strain (TPE)



Processing Information

Injection molding

Steel recommendations for molds screws and barrels
Trouble shooting guideline for injection molding

Other extrusion

Arnitel® E & P tube manufacturing guidelines
Arnitel® Recommendations for Extrusion