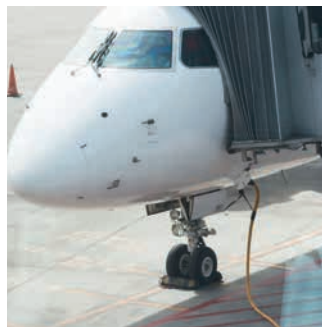


Elastollan[®] TPU

Flame Retardant & High Temperature
for Wire and Cable



Elastollan® FHF / HFFR Series

Thermoplastic polyether polyurethane elastomer

| Property | Unit of Measurement | Test Procedure | 1185 A 10 FHF | 1190 A 10 FHF |
|--|---------------------|---------------------|---------------|---------------|
| Hardness | Shore A | DIN ISO 7619-1 (3s) | 89 | 90 |
| Hardness | Shore D | DIN ISO 7619-1 (3s) | 37 | |
| Density | g/cm ³ | DIN EN ISO 1183-1-A | 1.23 | 1.25 |
| Tensile strength | MPa | DIN 53504-S2 | 35 | 25 |
| Elongation at break | % | DIN 53504-S2 | 600 | 550 |
| Stress at 20 % elongation | MPa | DIN 53504-S2 | 3.5 | 5 |
| Stress at 100 % elongation | MPa | DIN 53504-S2 | 8 | 8 |
| Stress at 300 % elongation | MPa | DIN 53504-S2 | 13 | 11 |
| Tear strength | kN/m | DIN ISO 34-1.B(b) | 60 | 60 |
| Abrasion | mm ³ | DIN ISO 4649-A | 35 | 30 |
| Compression set at 23°C / 72 hours | % | DIN ISO 815 | 25 | 26 |
| Compression set at 70°C / 24 hours | % | DIN ISO 815 | 45 | 43 |
| Tensile strength after storage in water at 80°C for 42 days | MPa | DIN 53504-S2 | 20 | 15 |
| Elongation at break after storage in water at 80°C for 42 days | % | DIN 53504-S2 | 600 | 640 |
| Notched impact strength (Charpy) +23°C | kJ/m ² | DIN EN ISO 179-1 | nb | nb |
| Notched impact strength (Charpy) -30°C | | | 120 | 46 |
| Burning behavior (depending on wall thickness) | | UL 94 | V0 | V0 |

Elastollan® HPM Series (aromatic)

Thermoplastic aromatic polyester polyurethane elastomer

| Property | Unit of Measurement | Test Procedure | | |
|--|---------------------|---------------------|---------------|---------------|
| | | | C 60 A 15 HPM | C 65 A 15 HPM |
| Hardness | Shore A | DIN ISO 7619-1 (3s) | 63 | 67 |
| Hardness | Shore D | DIN ISO 7619-1 (3s) | | |
| Density | g/cm ³ | DIN EN ISO 1183-1-A | 1.17 | 1.18 |
| Tensile strength | MPa | DIN 53504-S2 | 35 | 37 |
| Elongation at break | % | DIN 53504-S2 | 1000 | 950 |
| Stress at 20 % elongation | MPa | DIN 53504-S2 | 0.9 | 1.5 |
| Stress at 100 % elongation | MPa | DIN 53504-S2 | 1.5 | 2 |
| Stress at 300 % elongation | MPa | DIN 53504-S2 | 2 | 4 |
| Tear strength | kN/m | DIN ISO 34-1.B(b) | 40 | 44 |
| Abrasion | mm ³ | DIN ISO 4649-A | 55 | 55 |
| Compression set at 23°C / 72 hours | % | DIN ISO 815 | 25 | 25 |
| Compression set at 70°C / 24 hours | % | DIN ISO 815 | 43 | 37 |
| Compression set at 100°C / 24 hours | % | DIN ISO 815 | 60 | 55 |
| Tensile strength after storage in water at 80°C for 21 days | MPa | DIN 53504-S2 | 20 | 35 |
| Elongation at break after storage in water at 80°C for 21 days | % | DIN 53504-S2 | 1100 | 900 |
| Notched impact strength (Charpy) +23°C | °C | kJ/m ² | nb | nb |
| Notched impact strength (Charpy) -30°C | | | nb | nb |
| Vicat softening temperature at 10 N and 120°C/h (Proc. A 120) | °C | DIN EN ISO 306 | 70 | 80 |

For more detailed information, please refer to the product information and processing guidance.

- Non-halogen-based flame retardant
- Outstanding mechanical properties
- Excellent hydrolysis resistance
- Resistance to microorganisms

| 1191 A 10 FHF | 1192 A 10 FHF | 1147 D 10 FHF | 1154 D 10 FHF | 1185 A 10 HFFR | SP 3092 A 10 HFFR | 1270 D 10 FHF | 1280 D 10 FHF |
|---------------|---------------|---------------|---------------|----------------|-------------------|-----------------------------|----------------------------|
| 91 | 91 | 94 | | 86 | 95 | | |
| | | 48 | 58 | | 52 | 69 | 80 |
| 1.27 | 1.25 | 1.29 | 1.27 | 1.42 | 1.62 | 1.29 | 1.32 |
| 25 | 17 | 13 | 30 | 23 | 15 | 27 | 49 |
| 600 | 550 | 400 | 400 | 580 | 400 | 300 | 10 |
| 5 | | 7 | 13 | 4 | 8 | 18 | |
| 10 | | 9 | 19 | 6 | 7 | 20 | |
| 12 | | 10 | 33 | 8 | 7 | 22 | |
| 65 | 55 | 60 | 110 | 55 | 42 | 156 | 96 |
| 40 | 80 | 55 | 30 | | | 85 | 220 |
| | | 30 | 30 | | | | |
| | | 50 | 45 | | | | |
| | | 7 | 20 | 12 | | | |
| | | 270 | 400 | 750 | | | |
| | | nb | 50 | | | | |
| | | 21 | 3 | | | | |
| | | | V0 / V2 | | | V0 (0.43-0.47 mm ALL) | V2 (0.4 mm) V2 (3.0 mm) |

- Very good damping behavior and rebound
- High temperature resistance
- Improved setting behavior
- Good demolding properties

| Aromatic HPM | | | | | | |
|---------------|---------------|---------------|---------------|---------------|--------------|--------------|
| C 70 A 15 HPM | C 75 A 15 HPM | C 85 A 15 HPM | C 90 A 15 HPM | C 95 A 15 HPM | 785 A 10 HPM | 754 D 15 HPM |
| 71 | 75 | 85 | 91 | 96 | 85 | |
| | | | | | 54 | |
| 1.18 | 1.18 | 1.2 | 1.21 | 1.23 | 1.18 | 1.23 |
| 40 | 42 | 45 | 45 | 50 | 45 | 35 |
| 900 | 900 | 750 | 600 | 550 | 700 | 440 |
| 1.5 | 2 | 3.5 | 4 | 8.4 | 3.5 | 13 |
| 2.5 | 3.5 | 6 | 8 | 12 | 6 | 17 |
| 5 | 6 | 11 | 13 | 16 | 11 | 19 |
| 45 | 50 | 70 | 80 | 110 | 70 | 150 |
| 50 | 50 | 40 | 45 | 21 | 40 | 25 |
| 25 | 25 | 20 | 20 | 25 | 20 | 25 |
| 35 | 35 | 35 | 30 | 35 | 30 | 36 |
| 50 | 35 | 50 | 45 | 50 | 50 | 42 |
| 30 | 35 | 35 | 38 | 46 | 40 | 55 |
| 850 | 800 | 800 | 740 | 650 | 750 | 550 |
| nb | nb | nb | nb | nb | nb | nb |
| nb | nb | nb | nb | nb | nb | nb |
| 90 | 100 | 120 | 150 | 170 | 120 | 155 |

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