

Halar® 1400LC

ethylene chlorotrifluoroethylene copolymer

General

| | |
|-------------------|--|
| Material Status | • Commercial: Active |
| Availability | <ul style="list-style-type: none"> • Africa & Middle East • Asia Pacific • Europe • Latin America • North America |
| Features | • Low Viscosity |
| Uses | • Fibers |
| Forms | • Pellets |
| Processing Method | • Meltblown Nonwovens |

| Physical | Typical Value | Unit | Test method |
|---|---------------|----------|-------------|
| Density / Specific Gravity | 1.68 | | ASTM D792 |
| Melt Mass-Flow Rate (MFR) (275°C/2.16 kg) | 500 | g/10 min | ASTM D1238 |
| Molding Shrinkage - Flow | 2.5 | % | ASTM D955 |
| Water Absorption (Equilibrium) | < 0.10 | % | ASTM D570 |

| Mechanical | Typical Value | Unit | Test method |
|---|---------------|------|-------------|
| Tensile Modulus ¹ (23°C) | 1780 | MPa | ASTM D638 |
| Tensile Strength ¹ (Yield, 23°C) | 30.0 | MPa | ASTM D638 |
| Tensile Elongation ¹ (Yield, 23°C) | 1.0 to 10 | % | ASTM D638 |
| Flexural Modulus ² (23°C) | 1690 | MPa | ASTM D790 |
| Flexural Strength ² (23°C) | 47.0 | MPa | ASTM D790 |
| Coefficient of Friction | | | ASTM D1894 |
| vs. Itself - Dynamic | 0.20 | | |
| vs. Itself - Static | 0.20 | | |

| Impact | Typical Value | Unit | Test method |
|---------------------|---------------|------|-------------|
| Notched Izod Impact | | | ASTM D256 |
| -40°C, 3.20 mm | 19 | J/m | |
| 23°C, 3.20 mm | 25 | J/m | |

| Hardness | Typical Value | Unit | Test method |
|------------------------------|---------------|------|-------------|
| Rockwell Hardness (R-Scale) | 73 | | ASTM D785 |
| Durometer Hardness (Shore D) | 69 | | ASTM D2240 |

| Thermal | Typical Value | Unit | Test method |
|-----------------------------------|---------------|----------|-------------|
| Deflection Temperature Under Load | | | ASTM D648 |
| 0.45 MPa, Unannealed | 109 | °C | |
| 1.8 MPa, Unannealed | 68.0 | °C | |
| Melting Temperature | 235 | °C | ASTM D3418 |
| CLTE - Flow | 1.0E-4 | cm/cm/°C | ASTM D696 |
| Specific Heat (23°C) | 962 | J/kg/°C | ASTM D3418 |
| Thermal Conductivity (40°C) | 0.15 | W/m/K | ASTM C177 |

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| Thermal | Typical Value | Unit | Test method |
|--|---------------|---------|-------------|
| Thermal Stability - 1% mass loss, N2 | 300 | °C | TGA |
| Electrical | Typical Value | Unit | Test method |
| Volume Resistivity ³ (23°C) | 5.5E+16 | ohms·cm | ASTM D257 |
| Dielectric Strength (23°C, 3.20 mm) | 14 | kV/mm | ASTM D149 |
| Dielectric Constant (23°C, 1 MHz) | 2.57 | | ASTM D150 |
| Flammability | Typical Value | Unit | Test method |
| Flame Rating | V-0 | | UL 94 |
| Oxygen Index | 52 | % | ASTM D2863 |

Notes

Typical properties: these are not to be construed as specifications.

¹ 50 mm/min

² 2.5 mm/min

³ 50% RH



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