# Halar® 901

## ethylene chlorotrifluoroethylene copolymer

| General | | |
|---|---|---|
| Material Status | • Commercial: Active | |
| Availability | • Africa & Middle East<br>• Asia Pacific<br>• Europe | • Latin America<br>• North America |
| Features | • High Viscosity | |
| Forms | • Pellets | |
| Processing Method | • Compression Molding | • Extrusion |

| Physical | Typical Value | Unit | Test method |
|---|---|---|---|
| Density / Specific Gravity | 1.68 | | ASTM D792 |
| Melt Mass-Flow Rate (MFR) (275°C/2.16 kg) | 1.0 | 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) | 1660 | MPa | ASTM D638 |
| Tensile Strength [1] | | | ASTM D638 |
| Yield, 23°C | 30.0 | MPa | |
| Break, 23°C | 54.0 | MPa | |
| Tensile Elongation [1] | | | ASTM D638 |
| Yield, 23°C | 5.0 | % | |
| Break, 23°C | 250 | % | |
| 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 | 110 | J/m | |
| 23°C, 3.20 mm | No Break | | |

| Hardness | Typical Value | Unit | Test method |
|---|---|---|---|
| Rockwell Hardness (R-Scale) | 90 | | ASTM D785 |
| Durometer Hardness (Shore D) | 75 | | ASTM D2240 |

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| Thermal | Typical Value | Unit | Test method |
|---|---|---|---|
| Deflection Temperature Under Load | | | ASTM D648 |
| 0.45 MPa, Unannealed | 90.0 | °C | |
| 1.8 MPa, Unannealed | 65.0 | °C | |
| Brittleness Temperature | < -76.0 | °C | ASTM D746A |
| Glass Transition Temperature | 85.0 | °C | DMA |
| Melting Temperature | 242 | °C | ASTM D3418 |
| Peak Crystallization Temperature (DSC) | 222 | °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 |
| Crystallization Heat | 40.0 | J/g | ASTM D3418 |
| Heat of Fusion | 42.0 | J/g | ASTM D3418 |
| Thermal Stability - 1% mass loss, N2 | 405 | °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 |

### Additional Information

Storage and Handling

- Halar® melt processable fluoropolymer resins can be stored without shelf life issues when kept in a clean and dry area at ambient temperatures. Opened containers should be tightly resealed to prevent any contamination.

## 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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