

# Chemlon® 182

Polyamide 66

Teknor Apex Company (Chem Polymer)

## Technical Data

### General

|                             |                                                                                    |
|-----------------------------|------------------------------------------------------------------------------------|
| Material Status             | • Commercial: Active                                                               |
| Literature <sup>1</sup>     | • <a href="#">Technical Datasheet</a>                                              |
| UL Yellow Card <sup>2</sup> | • <a href="#">E90654-252585</a>                                                    |
| Search for UL Yellow Card   | • <a href="#">Teknor Apex Company (Chem Polymer)</a><br>• <a href="#">Chemlon®</a> |
| Availability                | • Asia Pacific • Europe • North America                                            |
| Additive                    | • Flame Retardant                                                                  |
| Features                    | • Flame Retardant                                                                  |
| Forms                       | • Pellets                                                                          |
| Processing Method           | • Injection Molding                                                                |

| Physical                 | Nominal Value Unit | Test Method |
|--------------------------|--------------------|-------------|
| Specific Gravity         | 1.19 g/cm³         | ASTM D792   |
| Molding Shrinkage - Flow | 0.90 to 1.4 %      | ASTM D955   |

| Mechanical         | Nominal Value Unit | Test Method |
|--------------------|--------------------|-------------|
| Tensile Strength   | 72.4 MPa           | ASTM D638   |
| Tensile Elongation |                    | ASTM D638   |
| Yield              | 5.0 %              |             |
| Break              | 7.0 %              |             |
| Flexural Modulus   | 3210 MPa           | ASTM D790   |
| Flexural Strength  | 103 MPa            | ASTM D790   |

| Impact                     | Nominal Value Unit | Test Method |
|----------------------------|--------------------|-------------|
| Notched Izod Impact (23°C) | 53 J/m             | ASTM D256   |

| Hardness                    | Nominal Value Unit | Test Method |
|-----------------------------|--------------------|-------------|
| Rockwell Hardness (R-Scale) | 120                | ASTM D785   |

| Thermal                           | Nominal Value Unit | Test Method |
|-----------------------------------|--------------------|-------------|
| Deflection Temperature Under Load |                    | ASTM D648   |
| 0.45 MPa, Unannealed              | 224 °C             |             |
| 1.8 MPa, Unannealed               | 110 °C             |             |
| Melting Temperature               | 257 °C             | DSC         |
| RTI Elec                          |                    | UL 746      |
| 0.810 mm                          | 120 °C             |             |
| 1.50 mm                           | 120 °C             |             |
| 3.00 mm                           | 120 °C             |             |
| RTI Imp                           |                    | UL 746      |
| 0.810 mm                          | 95.0 °C            |             |
| 1.50 mm                           | 105 °C             |             |
| 3.00 mm                           | 105 °C             |             |
| RTI Str                           |                    | UL 746      |
| 0.810 mm                          | 120 °C             |             |
| 1.50 mm                           | 120 °C             |             |
| 3.00 mm                           | 120 °C             |             |

| Electrical                       | Nominal Value Unit | Test Method |
|----------------------------------|--------------------|-------------|
| Volume Resistivity               | 1.0E+14 ohm·cm     | ASTM D257   |
| Dielectric Strength (3.00 mm)    | 17 kV/mm           | ASTM D149   |
| Comparative Tracking Index (CTI) | 600 V              | UL 746      |

| Flammability            | Nominal Value Unit | Test Method |
|-------------------------|--------------------|-------------|
| Flame Rating (0.569 mm) | V-0                | UL 94       |
| Oxygen Index            | 33 %               | ASTM D2863  |

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| Injection              | Nominal Value Unit |
|------------------------|--------------------|
| Drying Temperature     | 79.4 °C            |
| Suggested Max Moisture | 0.20 %             |
| Rear Temperature       | 246 to 257 °C      |
| Middle Temperature     | 263 to 268 °C      |
| Front Temperature      | 263 to 274 °C      |
| Nozzle Temperature     | 268 to 279 °C      |
| Processing (Melt) Temp | 263 to 277 °C      |