



# Chemlon® 223

Teknor Apex Company - Polyamide 6

## General Information

### General

|                   |                      |          |                 |
|-------------------|----------------------|----------|-----------------|
| Material Status   | • Commercial: Active |          |                 |
| Availability      | • Asia Pacific       | • Europe | • North America |
| Additive          | • Nucleating Agent   |          |                 |
| Features          | • Nucleated          |          |                 |
| Forms             | • Pellets            |          |                 |
| Processing Method | • Injection Molding  |          |                 |

## ASTM & ISO Properties <sup>1</sup>

| Physical                                                 | Nominal Value | Unit                  | Test Method |
|----------------------------------------------------------|---------------|-----------------------|-------------|
| Density                                                  | 1.13          | g/cm <sup>3</sup>     | ISO 1183    |
| Melt Mass-Flow Rate (MFR) (235°C/1.0 kg)                 | 8.0           | g/10 min              | ASTM D1238  |
| Molding Shrinkage                                        | 1.0 to 1.5    | %                     | ISO 2577    |
| Mechanical                                               | Nominal Value | Unit                  | Test Method |
| Tensile Stress                                           | 12000         | psi                   | ISO 527     |
| Tensile Strain (Yield)                                   | 5.0           | %                     | ISO 527     |
| Tensile Strain (Break)                                   | 25            | %                     | ISO 527     |
| Flexural Modulus                                         | 421000        | psi                   | ISO 178/A   |
| Flexural Stress                                          | 15500         | psi                   | ISO 178/A   |
| Impact                                                   | Nominal Value | Unit                  | Test Method |
| Notched Izod Impact Strength (73°F)                      | > 1.7         | ft·lb/in <sup>2</sup> | ISO 180/A   |
| Hardness                                                 | Nominal Value | Unit                  | Test Method |
| Rockwell Hardness (R-Scale)                              | 120           |                       | ASTM D785   |
| Thermal                                                  | Nominal Value | Unit                  | Test Method |
| Deflection Temperature Under Load (66 psi, Unannealed)   | 374           | °F                    | ISO 75-2/B  |
| Deflection Temperature Under Load<br>264 psi, Unannealed | 194           | °F                    | ISO 75-2/A  |
| Melting Temperature                                      | 420           | °F                    | DSC         |
| CLTE - Flow                                              | 3.4E-5        | in/in/°F              | ASTM D696   |
| RTI Elec                                                 |               |                       | UL 746B     |
| 0.03 in                                                  | 257           | °F                    |             |
| 0.06 in                                                  | 257           | °F                    |             |
| 0.12 in                                                  | 257           | °F                    |             |
| RTI Imp                                                  |               |                       | UL 746B     |
| 0.03 in                                                  | 167           | °F                    |             |
| 0.06 in                                                  | 167           | °F                    |             |
| 0.12 in                                                  | 167           | °F                    |             |
| RTI Str                                                  |               |                       | UL 746B     |
| 0.03 in                                                  | 230           | °F                    |             |
| 0.06 in                                                  | 248           | °F                    |             |
| 0.12 in                                                  | 257           | °F                    |             |
| Electrical                                               | Nominal Value | Unit                  | Test Method |
| Volume Resistivity                                       | 1.0E+15       | ohms·cm               | ASTM D257   |
| Dielectric Strength (0.118 in)                           | 360           | V/mil                 | ASTM D149   |
| Comparative Tracking Index (CTI)                         | 600           | V                     | UL 746A     |

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| Flammability           | Nominal Value | Unit | Test Method |
|------------------------|---------------|------|-------------|
| Flame Rating (0.03 in) | V-2           |      | UL 94       |
| Oxygen Index           | 25            | %    | ASTM D2863  |
| FMVSS Flammability     | PASSES        |      | FMVSS 302   |

#### Processing Information

| Injection              | Nominal Value | Unit |
|------------------------|---------------|------|
| Drying Temperature     | 175           | °F   |
| Suggested Max Moisture | 0.20          | %    |
| Suggested Max Regrind  | 25            | %    |
| Rear Temperature       | 425 to 455    | °F   |
| Middle Temperature     | 465 to 500    | °F   |
| Front Temperature      | 465 to 500    | °F   |
| Nozzle Temperature     | 465 to 510    | °F   |
| Processing (Melt) Temp | 465 to 510    | °F   |

#### Notes

<sup>1</sup> Typical properties: these are not to be construed as specifications.