+135-3858-6433 (GuangDong)
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TEKNOR APEX

# Chemlon® MDS4

## Teknor Apex Company (Chem Polymer) - Polyamide 6

### General Information

**Product Description**

MDS4 is a 25% glass sphere filled nylon 6 that offers increased rigidity coupled with low distortion.

**General**

| | | |
|---|---|---|
| Material Status | • Commercial: Active | |
| Availability | • Europe | |
| Filler / Reinforcement | • Glass Bead, 25% Filler by Weight | |
| Features | • Good Surface Finish | • Low Shrinkage |
| Processing Method | • Injection Molding | |

### ASTM & ISO Properties [1]

| Physical | Dry | Conditioned | Unit | Test Method |
|---|---|---|---|---|
| Density | 1.32 | -- | g/cm³ | ISO 1183 |
| Molding Shrinkage [2] | 1.1 to 1.8 | -- | % | Internal Method |
| Water Absorption | | | | ISO 62 |
| Equilibrium, 73°F, 50% RH | 2.3 | -- | % | |
| **Mechanical** | **Dry** | **Conditioned** | **Unit** | **Test Method** |
| Tensile Modulus | 522000 | -- | psi | ISO 527-2 |
| Tensile Stress | 10200 | 5800 | psi | ISO 527-2 |
| Tensile Strain (Break) | 3.0 | 5.0 | % | ISO 527-2 |
| Flexural Modulus | 508000 | 174000 | psi | ISO 178 |
| Flexural Stress | 15200 | 5800 | psi | ISO 178 |
| **Impact** | **Dry** | **Conditioned** | **Unit** | **Test Method** |
| Charpy Notched Impact Strength | 3.3 | 16 | ft·lb/in² | ISO 179/1eA |
| Charpy Unnotched Impact Strength | No Break | No Break | | ISO 179/1eU |
| **Thermal** | **Dry** | **Conditioned** | **Unit** | **Test Method** |
| Heat Deflection Temperature | | | | ISO 75-2/B |
| 66 psi, Unannealed | > 392 | -- | °F | |
| Heat Deflection Temperature | | | | ISO 75-2/A |
| 264 psi, Unannealed | 230 | -- | °F | |
| **Electrical** | **Dry** | **Conditioned** | **Unit** | **Test Method** |
| Surface Resistivity | 1.0E+15 | 1.0E+12 | ohms | IEC 60093 |
| Volume Resistivity | 1.0E+17 | 1.0E+14 | ohms·cm | IEC 60093 |
| Electric Strength (0.118 in) | 250 | 230 | V/mil | IEC 60243-1 |
| Comparative Tracking Index | 525 | -- | V | IEC 60112 |
| **Flammability** | **Dry** | **Conditioned** | **Unit** | **Test Method** |
| Oxygen Index | 23 | -- | % | ISO 4589-2 |

### Processing Information

| Injection | Dry | Unit |
|---|---|---|
| Drying Temperature | 176 | °F |
| Drying Time | 2.0 | hr |
| Rear Temperature | 473 to 536 | °F |
| Middle Temperature | 473 to 536 | °F |
| Front Temperature | 473 to 536 | °F |
| Processing (Melt) Temp | 473 to 536 | °F |
| Mold Temperature | 140 to 176 | °F |

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| Injection | Dry | Unit |
|---|---|---|
| Injection Rate | Fast | |
| Back Pressure | Low | |
| Screw Speed | Moderate | |

**Injection Notes**

No drying is necessary unless the material has been exposed to air for longer than three hours. The appearance of splash marks on the surface of mouldings indicates excessive moisture is present.

### Notes

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

[2] Mould shrinkage is significantly influenced by many factors including wall thickness, gating, moulding shape and processing conditions. The range values given are determined from specimen bar mouldings of 1.5mm to 4mm wall thickness. They are provided as a guide for comparison purposes only and no guarantee should be inferred from their inclusion. (Specimens measured in the dry state, 24 hours after moulding).