# POLYLAC® PA-764

## CHI MEI CORPORATION - Acrylonitrile Butadiene Styrene

Sunday, November 3, 2019

### General Information

| General | | | |
|---|---|---|---|
| Material Status | • Commercial: Active | | |
| Availability | • Africa & Middle East<br>• Asia Pacific | • Europe<br>• Latin America | • North America |
| Features | • Good Weather Resistance | | |
| RoHS Compliance | • RoHS Compliant | | |
| Resin ID (ISO 1043) | • >ABS-FR(17)< | | |

### ASTM & ISO Properties [1]

| Physical | Nominal Value | Unit | Test Method |
|---|---|---|---|
| Density / Specific Gravity [2] | 1.19 | | ASTM D792 |
| Density (73°F) | 1.19 | g/cm³ | ISO 1183 |
| Melt Mass-Flow Rate (200°C/5.0 kg) | 3.2 | g/10 min | ASTM D1238 |
| Melt Volume-Flow Rate (MVR) (220°C/10.0 kg) | 30 | cm³/10min | ISO 1133 |
| Molding Shrinkage | 0.30 to 0.60 | % | ISO 294-4 |
| **Mechanical** | **Nominal Value** | **Unit** | **Test Method** |
| Tensile Strength [3] (Yield) | 5250 | psi | ASTM D638 |
| Tensile Stress (Yield) | 5370 | psi | ISO 527-2/50 |
| Tensile Stress (Break) | 4060 | psi | ISO 527-2/50 |
| Tensile Elongation [3] (Break) | 15 | % | ASTM D638 |
| Tensile Strain (Break) | 10 | % | ISO 527-2/50 |
| Flexural Modulus [4] | 280000 | psi | ASTM D790 |
| Flexural Modulus [5] | 247000 | psi | ISO 178 |
| Flexural Strength [4] | 8360 | psi | ASTM D790 |
| Flexural Stress [5] | 7980 | psi | ISO 178 |
| **Impact** | **Nominal Value** | **Unit** | **Test Method** |
| Charpy Notched Impact Strength | | | ISO 179 |
| -22°F | 3.3 | ft·lb/in² | |
| 73°F | 6.2 | ft·lb/in² | |
| Notched Izod Impact | | | ASTM D256 |
| 73°F, 0.126 in | 2.6 | ft·lb/in | |
| 73°F, 0.252 in | 2.2 | ft·lb/in | |
| Notched Izod Impact Strength | | | ISO 180/1A |
| -22°F | 3.3 | ft·lb/in² | |
| 73°F | 6.2 | ft·lb/in² | |
| **Hardness** | **Nominal Value** | **Unit** | **Test Method** |
| Rockwell Hardness (R-Scale) | 98 | | ASTM D785 |
| **Thermal** | **Nominal Value** | **Unit** | **Test Method** |
| Deflection Temperature Under Load | | | ASTM D648 |
| 264 psi, Unannealed | 172 | °F | |
| Heat Deflection Temperature (264 psi, Unannealed) | 180 | °F | ISO 75-2/A |
| Deflection Temperature Under Load (264 psi, Annealed) | 198 | °F | ASTM D648 |

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| Thermal | Nominal Value | Unit | Test Method |
|---|---|---|---|
| Heat Deflection Temperature (264 psi, Annealed) | 198 | °F | ISO 75-2/A |
| Vicat Softening Temperature | 207 | °F | ASTM D1525 [6] |
| Vicat Softening Temperature | | | |
| -- | 214 | °F | ISO 306/A50 |
| -- | 194 | °F | ISO 306/B50 |
| CLTE - Flow | 4.7E-5 | in/in/°F | ISO 11359-2 |

| Flammability | | Nominal Value | Unit | Test Method |
|---|---|---|---|---|
| Flame Rating | | | | UL 94 |
| 0.06 in | • | V-0 | | |
| | • | 5VB | | |
| 0.10 in | | 5VA | | |

## Processing Information

| Injection | Nominal Value | Unit |
|---|---|---|
| Drying Temperature | 176 to 185 | °F |
| Drying Time | 2.0 to 4.0 | hr |
| Rear Temperature | 356 to 410 | °F |
| Middle Temperature | 374 to 428 | °F |
| Front Temperature | 374 to 428 | °F |
| Mold Temperature | 104 to 158 | °F |
| Injection Pressure | 711 to 1140 | psi |
| Injection Rate | Slow-Moderate | |
| Holding Pressure | 284 to 711 | psi |
| Back Pressure | 71.1 to 142 | psi |
| Cushion | 0.125 | in |

### Notes

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

[2] 23°C

[3] 0.24 in/min

[4] 0.11 in/min

[5] 0.079 in/min

[6] Rate A (50°C/h), Loading 1 (10 N)