



POLYLAC® PA-756

CHI MEI CORPORATION - *Acrylonitrile Butadiene Styrene*

Product Characteristics

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| Material Status | <ul style="list-style-type: none"> Commercial: Active |
| Availability | <ul style="list-style-type: none"> Middle East Latin America Africa Australia Asia South America Pacific Rim Europe North America |
| Test Standards Available | <ul style="list-style-type: none"> ASTM DIN ISO |
| Features | <ul style="list-style-type: none"> Flow, High Rigidity, High |
| Forms | <ul style="list-style-type: none"> Pellets |
| Processing Method | <ul style="list-style-type: none"> Injection Molding |

Properties ¹

| Physical | Nominal Values (English) | Test Method |
|--|--------------------------|-------------|
| Density -Specific Gravity | 1.05 sp gr 23/23°C | ASTM D792 |
| Melt Mass-Flow Rate (MFR) (200°C/5.0 kg) | 4.40 g/10 min | ASTM D1238 |
| Mold Shrink, Linear-Flow (0.125 in) | 0.0030 to 0.0070 in/in | ASTM D955 |
| Mechanical | Nominal Values (English) | Test Method |
| Tensile Modulus (73 °F) | 405000 psi | ASTM D638 |
| Tensile Strength | 6540 psi | ASTM D638 |
| Tensile Strength @ Yield (73 °F) | 6500 psi | ASTM D638 |
| Tensile Elongation @ Brk (73 °F) | 20 % | ASTM D638 |
| Flexural Modulus (73 °F) | 370000 psi | ASTM D790 |
| Flexural Strength | 10800 psi | ASTM D790 |
| Flexural Strength @ Yield (73 °F) | 10800 psi | ASTM D790 |
| Impact | Nominal Values (English) | Test Method |
| Notched Izod Impact (73 °F, 0.125 in) | 3.20 ft-lb/in | ASTM D256 |
| (73 °F, 0.250 in) | 2.80 ft-lb/in | |
| Hardness | Nominal Values (English) | Test Method |

| | | |
|-----------------------------|-----|-----------|
| Rockwell Hardness (R-Scale) | 115 | ASTM D785 |
|-----------------------------|-----|-----------|

| Thermal | Nominal Values (English) | Test Method |
|---------------------------|---------------------------------|--------------------|
| DTUL @264psi - Annealed | 210 °F | ASTM D648 |
| DTUL @264psi - Unannealed | 192 °F | ASTM D648 |
| DTUL @66psi - Unannealed | 210 °F | ASTM D648 |
| Vicat Softening Point | 221 °F | ASTM D1525 |
| CLTE, Flow | 5.4E-005 in/in/°F | ASTM D696 |

| Electrical | Nominal Values (English) | Test Method |
|--------------------|---------------------------------|--------------------|
| Volume Resistivity | 1.0E+015 ohm-cm | ASTM D257 |
| Arc Resistance | 6.00 sec | ASTM D495 |

| Ignition Characteristics | Nominal Values (English) | Test Method |
|--|---------------------------------|--------------------|
| UL File Number | E56070 | |
| Flame Rating - UL (0.0591 in) (0.118 in) | HB HB | UL 94 |

| UL 746 | Nominal Values (English) | Test Method |
|--|---------------------------------|--------------------|
| Rel Temp Indx Mech w/olmp (0.0591 in) (0.118 in) | 140 °F 140 °F | UL 746 |
| Rel Temp Indx Mech w/lmp (0.0591 in) (0.118 in) | 140 °F 140 °F | UL 746 |
| Rel Temp Indx Elect (0.0591 in) (0.118 in) | 140 °F 140 °F | UL 746 |
| Comparative Tracking Index (CTI) (PLC) | PLC 1 | UL 746 |
| High Voltage Arc Tracking Rate (HVTR) (PLC) | PLC 0 | UL 746 |
| Hot-wire Ignition (HWI) (PLC) (0.118 in) (0.0591 in) | PLC 4 PLC 4 | UL 746 |
| High Amp Arc Ignition (HAI) (PLC) (0.118 in) (0.0591 in) | PLC 0 PLC 0 | UL 746 |

Additional Properties

Melt Flow Rate, ASTM D-1238, Condition G: 4.5 g/10 min
 Volume Resistivity, ASTM D257: > 1E 15 ohm-cm
 Impact Flexural Test, ISO 179/2C, Notched: 10 kJ/m²
 Impact Flexural Test, ISO 179/2D, Unnotched: No Break
 Vicat Softening Temp, DIN 53460, 50°C/hr ; 1 kg: 104°C
 Vicat Softening Temp, DIN 53460, 50°C/hr ; 5 kg: 96°C
 Vicat Softening Temp, DIN 53460, 120°C/hr ; 1 kg: 106°C
 Vicat Softening Temp, DIN 53460, 120°C/hr ; 5 kg: 98°C
 DTUL @ 1.80 MPa, DIN 53461, Unannealed: 79°C
 DTUL @ 1.80 MPa, DIN 53461, Annealed: 98°C
 Impact Flexural Test, DIN 53453, Notched: 10 kJ/m²
 Impact Flexural Test, DIN 53453, Unnotched: No Break
 Tensile Strength @ Yield, DIN 53455, 50 mm/min: 49 MPa
 Tensile Strength @ Break, DIN 53455, 50 mm/min: 35 MPa
 Tensile Elongation, DIN 53455, 50 mm/min: 15%
 Flexural Strength, DIN 53452, 2 mm/min: 72 MPa
 Flexural Modulus, DIN 53452, 2 mm/min: 2.1 GPa
 Mass Density, DIN 53479-A, 23°C: 1.05 g/cm³

Processing Information

| Injection Molding Parameters | Nominal Values (English) | Test Method |
|------------------------------|--------------------------|-------------|
| Drying Temperature | 175 to 185 °F | |
| Drying Time | 3.0 hr | |
| Suggested Max Moisture | 0.10 % | |
| Suggested Max Regrind | 20 % | |
| Suggested Shot Size | 40 to 80 % | |
| Rear Temperature | 355 to 390 °F | |
| Middle Temperature | 390 to 430 °F | |
| Front Temperature | 420 to 455 °F | |
| Nozzle Temperature | 410 to 445 °F | |
| Processing (Melt) Temp | 465 °F | |
| Mold Temperature | 120 to 140 °F | |
| Injection Pressure | 850 to 1000 psi | |
| Injection Rate | Slow-Moderate | |
| Holding Pressure | 710 to 850 psi | |
| Back Pressure | 70.0 to 140 psi | |
| Screw Speed | 50 to 90 rpm | |

Notes

¹ Typical properties; not to be construed as specifications.

The data listed here fall within the normal range of product properties, but they should not be used to establish specification limits or used alone as a basis for design. This information is not intended as a warranty of any kind. Buyers must make their own representative test and assume all risks of use, whether used alone or in combination with other products. SIMCO assumes no obligation or liability of any advice furnished by it or results obtained with respect to these products. All warranties expressed or implied including warranties of merchantability for a particular purpose or use are excluded and disclaimed. SIMCO assumes no liability for use of products in infringement of any patent. The foregoing limitation of remedy and exclusion of liability is reflected in and is part of the consideration for the price, at which the products are sold by SIMCO. All data displayed herein has been obtained via testing of injected molded specimens of natural color. Pigmentation may affect certain properties to various degrees.