

Polylac@PA-765 Acrylonitrile Butadiene Styrene

| General | | | |
|-------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| Material Status | <ul style="list-style-type: none"> Commercial: Active | | |
| Literature ¹ | <ul style="list-style-type: none"> Processing (English) Technical Datasheet (English) | <ul style="list-style-type: none"> Technical Datasheet - ISO data (English) Approvals Document - UL (English) | <ul style="list-style-type: none"> Approvals Document - RoHS (English) |
| Availability | <ul style="list-style-type: none"> Africa & Middle East Asia Pacific | <ul style="list-style-type: none"> Europe Latin America | <ul style="list-style-type: none"> North America South America |
| Additive | <ul style="list-style-type: none"> Ignition Resistant | | |
| Features | <ul style="list-style-type: none"> Flame Retardant High Flow | <ul style="list-style-type: none"> Medium Impact Resistance Self Extinguishing | |
| RoHS Compliance | <ul style="list-style-type: none"> RoHS Compliant | | |
| Forms | <ul style="list-style-type: none"> Pellets | | |
| Processing Method | <ul style="list-style-type: none"> Injection Molding | | |
| Physical | Nominal Value | Unit | Test Method |
| Specific Gravity | | | |
| -- | 1.19 | | ASTM D792 |
| -- | 1.19 | g/cm ³ | ISO 1183 |
| Melt Mass-Flow Rate (MFR) (200°C/5.0 kg) | 5.2 | g/10 min | ASTM D1238 |
| Melt Volume-Flow Rate (MVR) (220°C/10.0 kg) | 2.99 | in ³ /10min | ISO 1133 |
| Hardness | Nominal Value | Unit | Test Method |
| Rockwell Hardness (R-Scale, 0.500 in) | 100 | | ASTM D785 |
| Ball Indentation Hardness (H 358/30) | 11500 | psi | ISO 2039-1 |
| Mechanical | Nominal Value | Unit | Test Method |
| Tensile Strength | | | |
| Yield, 73°F, 0.125 in ² | 5530 | psi | ASTM D638 |
| Yield | 5660 | psi | ISO 527-2/50 |
| Break | 4930 | psi | ISO 527-2/50 |
| Tensile Elongation | | | |
| Break, 0.125 in ² | 15 | % | ASTM D638 |
| Break | 10 | % | ISO 527-2/50 |
| Flexural Modulus | | | |
| 0.250 in ³ | 300000 | psi | ASTM D790 |
| -- ⁴ | 261000 | psi | ISO 178 |
| Flexural Strength | | | |
| 0.250 in ³ | 8800 | psi | ASTM D790 |
| -- ⁴ | 7980 | psi | ISO 178 |
| Impact | Nominal Value | Unit | Test Method |
| Charpy Notched Impact Strength | 9.52 | ft·lb/in ² | ISO 179 |
| Notched Izod Impact | | | |
| 73°F, 0.125 in | 4.00 | ft·lb/in | ASTM D256 |
| 73°F, 0.250 in | 3.30 | ft·lb/in | ASTM D256 |
| -- | 8.09 | ft·lb/in ² | ISO 180/1A |
| Thermal | Nominal Value | Unit | Test Method |

[Deflection Temperature Under Load](#)

| | | |
|-------------------------------|--------|------------|
| 264 psi, Unannealed, 0.250 in | 165 °F | ASTM D648 |
| 264 psi, Unannealed | 187 °F | ISO 75-2/A |
| 264 psi, Annealed, 0.250 in | 181 °F | ASTM D648 |
| 264 psi, Annealed | 205 °F | ISO 75-2/A |

[Vicat Softening Temperature](#)

| | | |
|----|--------|-----------------------------------------------------|
| -- | 194 °F | ASTM D1525 ⁵ , ISO 306/A120 ⁵ |
| -- | 192 °F | ISO 306/A50 |
| -- | 172 °F | ISO 306/B50 |
| -- | 176 °F | ISO 306/B120 |

| Electrical | Nominal Value Unit | Test Method |
|--------------------------------------|---------------------------|--------------------|
| Arc Resistance (PLC) | PLC 7 | ASTM D495 |

| Flammability | Nominal Value Unit | Test Method |
|-----------------------------------|---------------------------|--------------------|
| Flame Rating - UL | | UL 94 |

| | |
|-----------------------|---------------------------------------------------------------------|
| 0.0591 in, All colors | <ul style="list-style-type: none">• V-0• 5VB |
| 0.0984 in | <ul style="list-style-type: none">• V-0• 5VA |
| 0.118 in | <ul style="list-style-type: none">• V-0• 5VA |
| UL File Number | E56070 |

| UL 746 | Nominal Value Unit | Test Method |
|-------------------------|---------------------------|--------------------|
| RTI Str | | UL 746 |

| | |
|-----------|--------|
| 0.0591 in | 176 °F |
| 0.0984 in | 176 °F |
| 0.118 in | 176 °F |

| RTI Imp | | UL 746 |
|-------------------------|--|--------|
|-------------------------|--|--------|

| | |
|-----------|--------|
| 0.0591 in | 176 °F |
| 0.0984 in | 176 °F |
| 0.118 in | 176 °F |

| RTI Elec | | UL 746 |
|--------------------------|--|--------|
|--------------------------|--|--------|

| | |
|-----------|--------|
| 0.0591 in | 176 °F |
| 0.0984 in | 176 °F |
| 0.118 in | 176 °F |

| | | |
|--------------------------------------------------------|-------|--------|
| 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) | | UL 746 |
|-----------------------------------------------|--|--------|

| | |
|-----------|-------|
| 0.0591 in | PLC 0 |
| 0.0984 in | PLC 2 |
| 0.118 in | PLC 0 |

| | | |
|---------------------------------------------------|--|--------|
| High Amp Arc Ignition (HAI) (PLC) | | UL 746 |
|---------------------------------------------------|--|--------|

| | |
|-----------|-------|
| 0.0591 in | PLC 0 |
| 0.0984 in | PLC 0 |
| 0.118 in | PLC 0 |

Additional Information

Impact Flexural Test, ISO 179/2C, Notched: 12 kJ/m²
Impact Flexural Test, ISO 179/2D, Unnotched: No Break

| Injection | Nominal Value Unit |
|------------------|---------------------------|
|------------------|---------------------------|

| | |
|--------------------|-----------------|
| Drying Temperature | 176 °F |
| Drying Time | 2.0 to 3.0 hr |
| Rear Temperature | 356 to 410 °F |
| Middle Temperature | 374 to 428 °F |
| Nozzle Temperature | 374 to 428 °F |
| Mold Temperature | 104 to 158 °F |
| Back Pressure | 71.1 to 142 psi |

Injection Notes

Injection Pressure: 50 to 60%

Holding Pressure: 40 to 50%

Notes

¹ These links provide you with access to supplier literature. We work hard to keep them up to date, however you may find the most current literature from the supplier.

² 0.24 in/min

³ 0.11 in/min

⁴ 0.079 in/min

⁵ Rate A (50°C/h)

Component - Plastics

E56070

CHI MEI CORPORATION

59-1 SAN CHIA, JEN TE, TAINAN HSIEN 717 TW

PA-765(+)**Acrylonitrile Butadiene Styrene (ABS), "Polylac", furnished as pellets**

| Color | Min Thk (mm) | Flame Class | HWI | HAI | RTI | | RTI Str |
|-------|-----------------|----------------|-----|-----|------|-----|------------|
| | | | | | Elec | Imp | |
| ALL | 1.0 | V-1 | 4 | 0 | 80 | 80 | 80 |
| | 1.5 | V-0, 5VB | 2 | 0 | 80 | 80 | 80 |
| | 2.5 | V-0, 5VA | 2 | 0 | 80 | 80 | 80 |
| | 3.0 | V-0, 5VA | 0 | 0 | 80 | 80 | 80 |

Comparative Tracking Index (CTI): **1**

Dimensional Stability (%): -

High-Voltage Arc Tracking Rate
(HVTR): **0**High Volt, Low Current Arc Resis (D495): **7**

Dielectric Strength (kV/mm): -

Volume Resistivity (10^x ohm-cm) : **15****(+) - Optional prefix or suffix; may be used to denote usage of 0-0.5 percent acid scavengers.**

ANSI/UL 94 small-scale test data does not pertain to building materials, furnishings and related contents. ANSI/UL 94 small-scale test data is intended solely for determining the flammability of plastic materials used in the components and parts of end-product devices and appliances, where the acceptability of the combination is determined by UL.

Report Date: 1983-06-23

Last Revised: 2008-07-03

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**IEC and ISO Test Methods**

| Test Name | Test Method | Units | Thickness | |
|-----------------------------------|----------------------------------|-------------------|----------------|-------------------|
| | | | Tested (mm) | Value |
| Flammability | IEC 60695-11-10, IEC 60695-11-20 | Class (color) | 1.0 | V-1 (ALL) |
| | | | 1.5 | V-0, 5VB (ALL) |
| | | | 2.5 | V-0, 5VA (ALL) |
| | | | 3.0 | V-0, 5VA (ALL) |
| Glow-Wire Flammability (GWF) | IEC 60695-2-12 | C | - | - |
| Glow-Wire Ignition (GWIT) | IEC 60695-2-13 | C | - | - |
| IEC Comparative Tracking Index | IEC 60112 | Volts (Max) | - | - |
| IEC Ball Pressure | IEC 60695-10-2 | C | - | - |
| ISO Heat Deflection (1.80 MPa) | ISO 75-2 | C | - | - |
| ISO Tensile Strength | ISO 527-2 | MPa | - | - |
| ISO Flexural Strength | ISO 178 | MPa | - | - |
| ISO Tensile Impact | ISO 8256 | kJ/m ² | - | - |
| ISO Izod Impact | ISO 180 | kJ/m ² | - | - |
| ISO Charpy Impact | ISO 179-2 | kJ/m ² | - | - |

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