

# WONDERLOY® PC-510

Polycarbonate + ABS  
CHI MEI CORPORATION

PROSPECTOR®

www.ulprospector.com

## Technical Data

### Product Description

WONDERLOY® PC-510 is a Polycarbonate + ABS (PC+ABS) product. It can be processed by injection molding and is available in Africa & Middle East, Asia Pacific, Europe, Latin America, or North America.

Characteristics include:

- Flame Rated
- RoHS Compliant
- Flame Retardant
- Halogen Free

### General

Material Status	• Commercial: Active		
Literature <sup>1</sup>	• <a href="#">Processing (English)</a> • <a href="#">Technical Datasheet - ASTM (English)</a> • <a href="#">Technical Datasheet - ISO (English)</a>		
UL Yellow Card <sup>2</sup>	• <a href="#">E56070-100239180</a>		
Search for UL Yellow Card	• <a href="#">CHI MEI CORPORATION</a> • <a href="#">WONDERLOY®</a>		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Additive	• Flame Retardant		
Features	• Flame Retardant	• Halogen Free	
RoHS Compliance	• RoHS Compliant		
Processing Method	• Injection Molding		

Physical	Nominal Value Unit	Test Method
Density / Specific Gravity		
-- <sup>4</sup>	1.17 g/cm <sup>3</sup>	ASTM D792
23°C	1.17 g/cm <sup>3</sup>	ISO 1183
Melt Mass-Flow Rate (MFR) (260°C/2.16 kg)	20 g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (260°C/2.16 kg)	21 cm <sup>3</sup> /10min	ISO 1133
Spiral Flow <sup>5, 6</sup>	45.0 cm	Internal Method
Molding Shrinkage		
Flow	0.40 to 0.60 %	ASTM D955
--	0.40 to 0.60 %	ISO 2577
Mechanical	Nominal Value Unit	Test Method
Tensile Strength		
Yield, 23°C <sup>7</sup>	49.0 MPa	ASTM D638
Yield	55.0 MPa	ISO 527-2/50
Break	45.0 MPa	ISO 527-2/50
Tensile Elongation		
Break, 23°C <sup>7</sup>	100 %	ASTM D638
Break	110 %	ISO 527-2/50
Flexural Modulus		
23°C <sup>8</sup>	245 MPa	ASTM D790
-- <sup>9</sup>	2500 MPa	ISO 178
Flexural Strength		
23°C <sup>8</sup>	78.5 MPa	ASTM D790
-- <sup>9</sup>	80.0 MPa	ISO 178



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Impact	Nominal Value Unit	Test Method
Charpy Notched Impact Strength <sup>10</sup>		ISO 179
-30°C	15 kJ/m <sup>2</sup>	
23°C	45 kJ/m <sup>2</sup>	
Notched Izod Impact		
23°C, 3.18 mm	590 J/m	ASTM D256
-30°C <sup>10</sup>	15 kJ/m <sup>2</sup>	ISO 180
23°C <sup>10</sup>	45 kJ/m <sup>2</sup>	ISO 180
Hardness	Nominal Value Unit	Test Method
Rockwell Hardness (R-Scale, 23°C)	113	ASTM D785 ISO 2039-2
Thermal	Nominal Value Unit	Test Method
Deflection Temperature Under Load <sup>11</sup>		
1.8 MPa, Unannealed, 3.20 mm	78.0 °C	ASTM D648
1.8 MPa, Unannealed, 6.40 mm	87.0 °C	ASTM D648
1.8 MPa, Unannealed, 4.00 mm	73.0 °C	ISO 75-2/A
Vicat Softening Temperature		
--	94.0 °C	ASTM D1525 <sup>12</sup> ISO 306/A50 <sup>12</sup>
--	85.0 °C	ASTM D1525 <sup>13</sup> ISO 306/B50 <sup>13</sup>
CLTE - Flow (23 to 55°C)	8.0E-5 cm/cm/°C	ISO 11359-2
Electrical	Nominal Value Unit	Test Method
Surface Resistivity	2.9E+17 ohms	IEC 60093
Volume Resistivity	3.9E+19 ohms·cm	IEC 60093
Dielectric Constant (1 MHz)	3.10	IEC 60250
Flammability	Nominal Value Unit	Test Method
Flame Rating		UL 94
1.5 mm	V-0	
2.1 mm	5VB	
3.0 mm	5VA	
Injection	Nominal Value Unit	
Drying Temperature	85 °C	
Drying Time	4.0 hr	
Hopper Temperature	200 to 230 °C	
Rear Temperature	230 to 260 °C	
Middle Temperature	230 to 260 °C	
Front Temperature	230 to 260 °C	
Nozzle Temperature	220 to 250 °C	
Mold Temperature	40 to 60 °C	



Notes

- <sup>1</sup> 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.
- <sup>2</sup> A UL Yellow Card contains UL-verified flammability and electrical characteristics. UL Prospector continually works to link Yellow Cards to individual plastic materials in Prospector, however this list may not include all of the appropriate links. It is important that you verify the association between these Yellow Cards and the plastic material found in Prospector. For a complete listing of Yellow Cards, visit the UL Yellow Card Search.
- <sup>3</sup> Typical properties: these are not to be construed as specifications.
- <sup>4</sup> 23°C
- <sup>5</sup> Melt Temperature: 260°C
- <sup>6</sup> 2 mm, V: 50%, P: 50%
- <sup>7</sup> 50 mm/min
- <sup>8</sup> 1.3 mm/min
- <sup>9</sup> 2.0 mm/min
- <sup>10</sup> 3.2 mm
- <sup>11</sup> 120°C/hr
- <sup>12</sup> Rate A (50°C/h), Loading 1 (10 N)
- <sup>13</sup> Rate A (50°C/h), Loading 2 (50 N)



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### Where to Buy

#### Supplier

##### CHI MEI CORPORATION

Tainan County, Taiwan

Telephone: +886-6-266-3000

Web: <http://www.chimeicorp.com/>

#### Distributor

##### A. Westensee und Partner Rohstoff GmbH

Telephone: +49-4171-8812-0

Web: <http://www.awp-rohstoffe.de/>

Availability: Germany

##### AMP FRANCE

Telephone: +33-3-8920-1390

Web: <http://www.amp.fr/>

Availability: France

##### AMP TUNISIA

Telephone: +216-52-27-21-73

Web: <http://www.amp.fr/>

Availability: Tunisia

##### Biesterfeld

*Biesterfeld is a Pan European distribution company. Contact Biesterfeld for availability of individual products by country.*

Telephone: +49-40-32008-0

Web: <http://www.biesterfeld-plastic.com/>

Availability: Algeria, Austria, Bosnia and Herzegovina, Brazil, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Egypt, Faroe Islands, Finland, France, Germany, Greece, Hungary, Iceland, Italy, Libyan Arab Jamahiriya, Mauritania, Morocco, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey

##### Calsak Polymers

Telephone: 800-743-2595

Web: <http://www.calsak.com/>

Availability: North America

##### Distrupol Ltd

*Distrupol Ltd is a Pan European distribution company. Contact Distrupol Ltd for availability of individual products by country.*

Telephone: 08452003040

Web: <http://www.distrupol.com/>

Availability: Belgium, Denmark, Finland, Ireland, Luxembourg, Netherlands, Norway, Sweden, United Kingdom

##### Entec Polymers

Telephone: 800-375-5440

Web: <http://www.entecpolymers.com/>

Availability: North America

##### The Materials Group

Telephone: 616-863-6046

Web: <http://thematerialsgroup.com/>

Availability: North America

