

## Technical Data Sheet

# PolyLite™ ASA

[www.polymaker.com](http://www.polymaker.com)

V5.0



PolyLite™ ASA is an alternative to ABS with an improved weather resistance. Its UV resistance and excellent mechanical properties make it the perfect choice for real life applications.

### PHYSICAL PROPERTIES

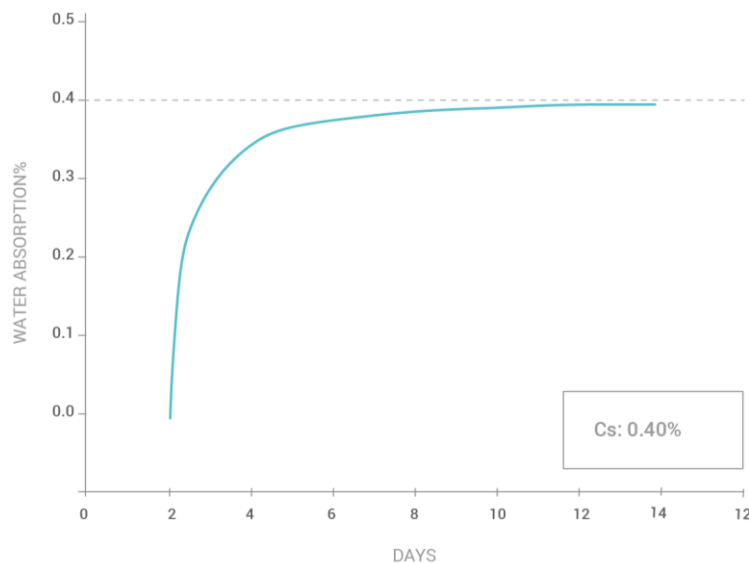
Property	Testing Method	Typical Value
Density	ISO1183, GB/T1033	1.13 g/cm <sup>3</sup> at 21°C
Melt Index	220°C, 10 kg	25 g/10min
Light Transmission	N/A	N/A
Flame retardancy	UL94	V2

### CHEMICAL RESISTANT DATA

Property	Testing Method
Effect of weak acids	Resistance
Effect of strong acids	Slightly Resistant
Effect of weak alkalis	Resistance
Effect of strong alkalis	Slightly Resistant
Effect of organic solvent	Not Resistant
Effect of oils and grease	Resistance
Effect of Sunlight	Resistance

### MOISTURE ABSORPTION CURVE

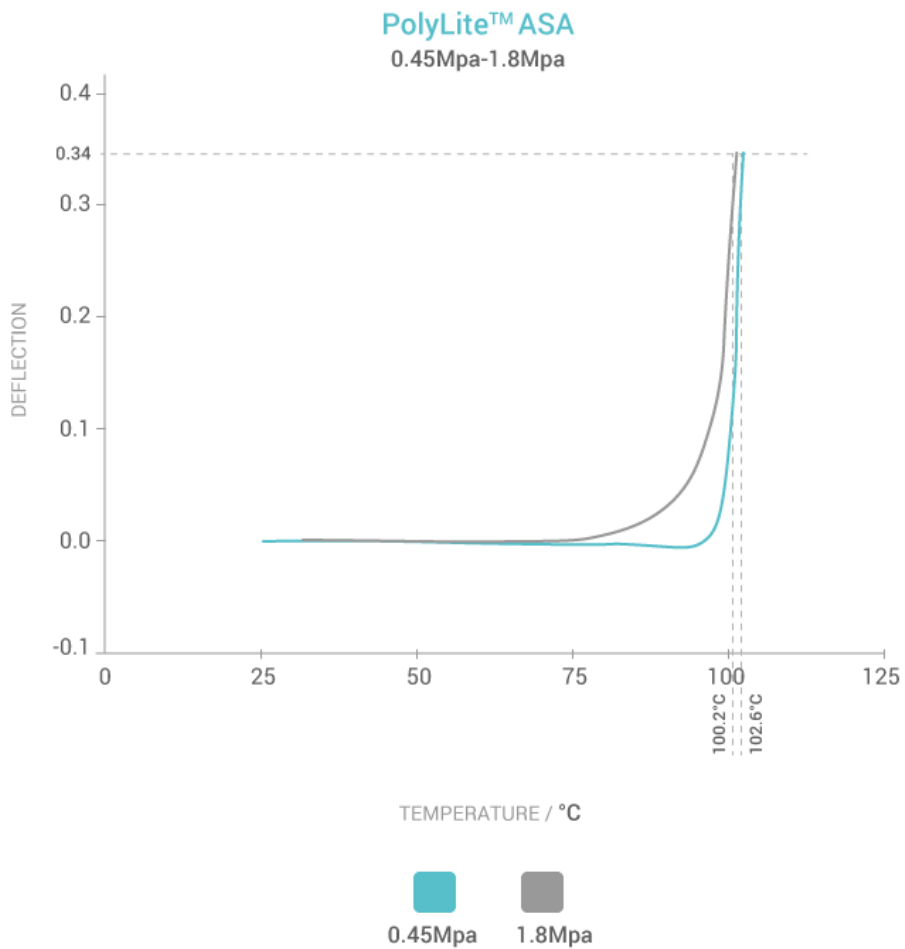
PolyLite™ ASA  
70%RH - 23°C



## THERMAL PROPERTIES

Property	Testing Method	Typical Value
Glass transition	DSC, 10°C/min	97.8 °C
Melting temperature	DSC, 10°C/min	N/A
Crystallization temperature	DSC, 10°C/min	N/A
Decomposition temperature	TGA, 20°C/min	N/A
Vicat softening temperature	ISO 306 GB/T 1633	105.3 °C
Heat deflection temperature	ISO 75 1.8MPa	100.2 °C
Heat deflection temperature	ISO 75 0.45MPa	102.6 °C
Thermal conductivity	N/A	N/A
Heat shrinkage rate	N/A	N/A

## HDT CURVE



## MECHANICAL PROPERTIES

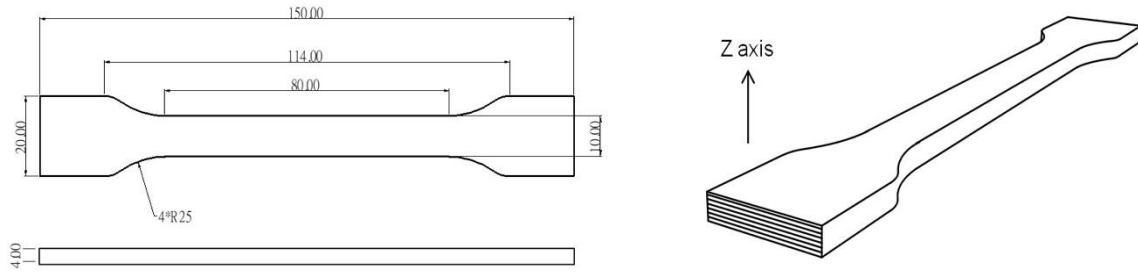
Property	Testing Method	Typical Value
Young's modulus (X-Y)	ISO 527, GB/T 1040	2379 ± 157 MPa
Young's modulus (Z)		1965 ± 136 MPa
Tensile strength (X-Y)	ISO 527, GB/T 1040	43.8 ± 0.8 MPa
Tensile strength (Z)		32 ± 1.8 MPa
Elongation at break (X-Y)	ISO 527, GB/T 1040	6.7 ± 0.6 %
Elongation at break (Z)		1.65 ± 0.2 %
Bending modulus (X-Y)	ISO 178, GB/T 9341	3206 ± 108 MPa
Bending modulus (Z)		N/A
Bending strength (X-Y)	ISO 178, GB/T 9341	73.4 ± 2.1 MPa
Bending strength (Z)		N/A
Charpy impact strength (X-Y)	ISO 179, GB/T 9343	10.3 ± 0.4 kJ/m <sup>2</sup>
Charpy impact strength (Z)		6.7 ± 1.4 kJ/m <sup>2</sup>

## HOW TO MAKE SPECIMENS

Printing temperature	260 °C
Bed temperature	90 °C
Shell	2
Top & bottom layer	4
Infill	100%
Environmental temperature	50 – 70 (recommended) (°C)
Cooling fan	OFF

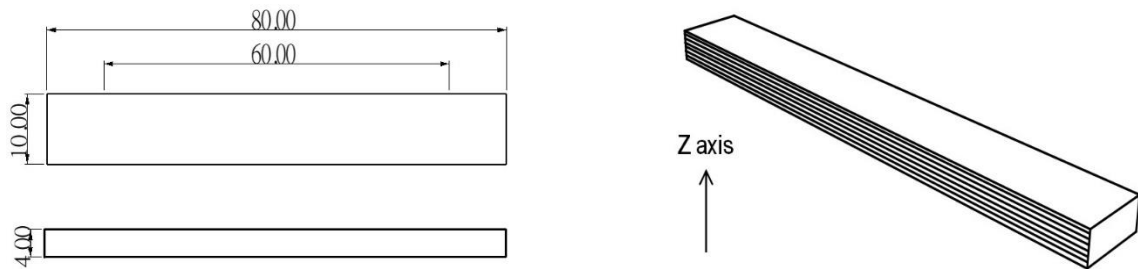
## TENSILE TESTING SPECIMEN

ASTM D638 (ISO 527, GB/T 1040)



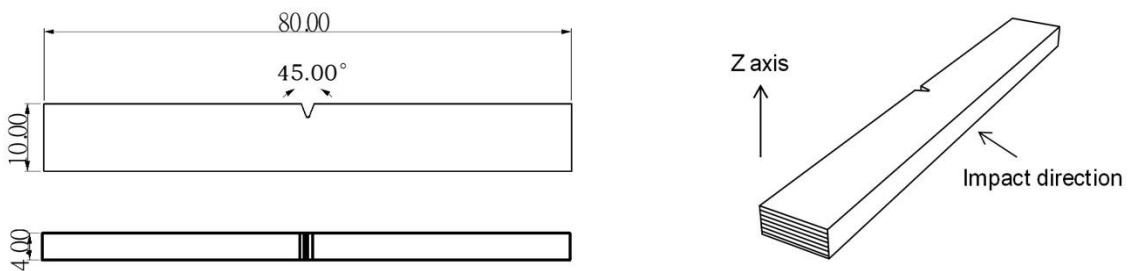
## FLEXURAL TESTING SPECIMEN

ASTM D638 (ISO 527, GB/T 1040)



## IMPACT TESTING SPECIMEN

ASTM D638 (ISO 179, GB/T 1043)



### DISCLAIMER:

The typical values presented in this data sheet are intended for reference and comparison purposes only. They should not be used for design specifications or quality control purposes. Actual values may vary significantly with printing conditions. End-use performance of printed parts depends not only on materials, but also on part design, environmental conditions, printing conditions, etc. Product specifications are subject to change without notice.

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