

## SABIC Innovative Plastics Cycloy® HCX1640 PC+ABS (Europe-Africa-Middle East)

Category : Polymer , Thermoplastic , ABS Polymer , Polycarbonate/ABS Alloy, Unreinforced , Polycarbonate (PC)

### Material Notes:

CYCOLOY™ HCX1640 a PC+ABS blend specially developed for medical devices and pharmaceutical applications requiring improved mechanical performance . It combines good flow with excellent impact and low temperature ductility. Healthcare management of change, biocompatible (ISO10993 or USP Class VI).

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_SABIC-Innovative-Plastics-Cycloy-HCX1640-PCABS-Europe-Africa-Middle-East.php](http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Cycloy-HCX1640-PCABS-Europe-Africa-Middle-East.php)

Physical Properties	Metric	English	Comments
Specific Gravity	1.15 g/cc	1.15 g/cc	ASTM D792
Density	1.15 g/cc	0.0415 lb/in <sup>3</sup>	ISO 1183
Moisture Absorption	0.100 %	0.100 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	0.40 %	0.40 %	ISO 62
Linear Mold Shrinkage, Flow	0.0040 - 0.0060 cm/cm @Thickness 3.20 mm	0.0040 - 0.0060 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	19 g/10 min @Load 5.00 kg, Temperature 260 °C	19 g/10 min @Load 11.0 lb, Temperature 500 °F	ASTM D1238
Melt Index of Compound	18 g/10 min @Load 5.00 kg, Temperature 260 °C	18 g/10 min @Load 11.0 lb, Temperature 500 °F	MVR [cm <sup>3</sup> /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	50.0 MPa	7250 psi	Type I, 50 mm/min; ASTM D638
	50.0 MPa	7250 psi	50 mm/min; ISO 527
Tensile Strength, Yield	55.0 MPa	7980 psi	Type I, 50 mm/min; ASTM D638
	55.0 MPa	7980 psi	50 mm/min; ISO 527
Elongation at Break	>= 50 %	>= 50 %	Type I, 50 mm/min; ASTM D638
	>= 50 %	>= 50 %	50 mm/min; ISO 527
Elongation at Yield	5.0 %	5.0 %	Type I, 50 mm/min; ASTM D638
	5.0 %	5.0 %	50 mm/min; ISO 527

Mechanical Properties	Metric <sup>Pa</sup>	English	Comments <sup>ASTM D638</sup>
	2.40 GPa	348 ksi	1 mm/min; ISO 527
Flexural Yield Strength	85.0 MPa	12300 psi	1.3 mm/min, 50 mm span; ASTM D790
	85.0 MPa	12300 psi	2 mm/min; ISO 178
Flexural Modulus	2.30 GPa	334 ksi	1.3 mm/min, 50 mm span; ASTM D790
	2.30 GPa	334 ksi	2 mm/min; ISO 178
Izod Impact, Notched	1.50 J/cm	2.81 ft-lb/in	Izod Impact, double-gated, 23°C; SABIC Method
	5.50 J/cm	10.3 ft-lb/in	ASTM D256
	3.00 J/cm	5.62 ft-lb/in	ASTM D256
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Izod Impact, Notched (ISO)	50.0 kJ/m <sup>2</sup>	23.8 ft-lb/in <sup>2</sup>	80*10*3; ISO 180/1A
	20.0 kJ/m <sup>2</sup>	9.52 ft-lb/in <sup>2</sup>	80*10*3; ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact, Notched	5.00 J/cm <sup>2</sup>	23.8 ft-lb/in <sup>2</sup>	Edgew 80*10*3 sp=62mm; ISO 179/1eA
	2.00 J/cm <sup>2</sup>	9.52 ft-lb/in <sup>2</sup>	Edgew 80*10*3 sp=62mm; ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Dart Drop, Total Energy	65.0 J	47.9 ft-lb	ASTM D3763
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	70.0 µm/m-°C	38.9 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
	70.0 µm/m-°C	38.9 µin/in-°F	ISO 11359-2
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
CTE, linear, Transverse to Flow	70.0 µm/m-°C	38.9 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
	70.0 µm/m-°C	38.9 µin/in-°F	ISO 11359-2
	@Temperature -40.0 -	@Temperature -40.0 -	

Thermal Properties	40.0 °C Metric	104 °F English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	122 °C @Thickness 3.20 mm	252 °F @Thickness 0.126 in	unannealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	108 °C	226 °F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	108 °C @Thickness 3.20 mm	226 °F @Thickness 0.126 in	unannealed; ASTM D648
Vicat Softening Point	130 °C	266 °F	Rate B/50; ASTM D1525
	130 °C	266 °F	Rate B/50; ISO 306
	132 °C	270 °F	Rate B/120; ISO 306

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