

SABIC Innovative Plastics Valox[®] 215HPR PBT

Category : Polymer , Thermoplastic , Polyester, TP , Polybutylene Terephthalate (PBT)

Material Notes:

Unreinforced PBT with mold release. FDA food contact compliant in limited colors. Effective March 2008 this grade will no longer be supported with biocompatibility data. Alternative grade Valox HX215HP.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Valox-215HPR-PBT.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.31 g/cc	1.31 g/cc	ASTM D792
Water Absorption	0.080 % @Time 86400 sec	0.080 % @Time 24.0 hour	ASTM D570
Viscosity	100000 cP	100000 cP	Melt Viscosity; SABIC Method
Linear Mold Shrinkage, Flow	0.0090 - 0.016 cm/cm @Thickness 0.750 - 2.30 mm	0.0090 - 0.016 in/in @Thickness 0.0295 - 0.0906 in	SABIC Method
	0.015 - 0.023 cm/cm @Thickness 2.30 - 4.60 mm	0.015 - 0.023 in/in @Thickness 0.0906 - 0.181 in	SABIC Method
Linear Mold Shrinkage, Transverse	0.010 - 0.017 cm/cm @Thickness 0.750 - 2.30 mm	0.010 - 0.017 in/in @Thickness 0.0295 - 0.0906 in	SABIC Method
	0.016 - 0.024 cm/cm @Thickness 2.30 - 4.60 mm	0.016 - 0.024 in/in @Thickness 0.0906 - 0.181 in	SABIC Method

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	51.0 MPa	7400 psi	Type I, 50 mm/min; ASTM D638
Elongation at Break	10 %	10 %	Type I, 50 mm/min; ASTM D638
Flexural Yield Strength	82.0 MPa	11900 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	2.34 GPa	339 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	0.530 J/cm	0.993 ft-lb/in	ASTM D256
Izod Impact, Unnotched	16.02 J/cm	30.01 ft-lb/in	ASTM D4812

Gardner Impact Mechanical Properties	40.0 J Metric	29.5 ft-lb English	ASTM D3029 Comments
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Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	81.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	45.0 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	ASTM E 831
	@Temperature -40.0 - 40.0 $\text{Å}^\circ\text{C}$	@Temperature -40.0 - 104 $\text{Å}^\circ\text{F}$	
	139 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	77.2 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	ASTM E 831
	@Temperature 60.0 - 138 $\text{Å}^\circ\text{C}$	@Temperature 140 - 280 $\text{Å}^\circ\text{F}$	
Deflection Temperature at 0.46 MPa (66 psi)	154 $\text{Å}^\circ\text{C}$ @Thickness 6.40 mm	309 $\text{Å}^\circ\text{F}$ @Thickness 0.252 in	unannealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	54.0 $\text{Å}^\circ\text{C}$ @Thickness 6.40 mm	129 $\text{Å}^\circ\text{F}$ @Thickness 0.252 in	unannealed; ASTM D648

Descriptive Properties	Value	Comments
Specific Volume	0.76cm ³ /g	ASTM D792

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China