

VALOX™ 215HPR resin

Polybutylene Terephthalate

SABIC Innovative Plastics

Message:

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.

General Information			
Additive	Mold Release		
Features	Food Contact Acceptable		
Agency Ratings	FDA Food Contact, Unspecified Rating		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.31	g/cm ³	ASTM D792
Specific Volume	0.770	cm ³ /g	ASTM D792
Molding Shrinkage			Internal Method
Flow ¹	0.90 to 1.6	%	
Flow ²	1.5 to 2.3	%	
Across Flow ³	1.0 to 1.7	%	
Across Flow ⁴	1.6 to 2.4	%	
Water Absorption (24 hr)	0.080	%	ASTM D570
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength ⁵ (Yield)	51.7	MPa	ASTM D638
Tensile Elongation ⁶ (Break)	10	%	ASTM D638
Flexural Modulus ⁷ (50.0 mm Span)	2340	MPa	ASTM D790
Flexural Strength ⁸ (Yield, 50.0 mm Span)	82.7	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C)	53	J/m	ASTM D256
Unnotched Izod Impact (23°C)	1600	J/m	ASTM D4812
Gardner Impact ⁹ (23°C)	40.7	J	ASTM D3029
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed, 6.40 mm	154	°C	
1.8 MPa, Unannealed, 6.40 mm	54.4	°C	
CLTE - Flow			ASTM E831
-40 to 40°C	8.1E-5	cm/cm/°C	
60 to 138°C	1.4E-4	cm/cm/°C	
Fill Analysis	Nominal Value	Unit	Test Method
Melt Viscosity	110	Pa · s	Internal Method
Injection	Nominal Value	Unit	

Drying Temperature	121	°C
Drying Time	3.0 to 4.0	hr
Drying Time, Maximum	12	hr
Suggested Max Moisture	0.020	%
Suggested Shot Size	40 to 80	%
Rear Temperature	232 to 249	°C
Middle Temperature	238 to 254	°C
Front Temperature	243 to 260	°C
Nozzle Temperature	238 to 254	°C
Processing (Melt) Temp	243 to 260	°C
Mold Temperature	48.9 to 76.7	°C
Back Pressure	0.345 to 0.689	MPa
Screw Speed	50 to 100	rpm
Vent Depth	0.013 to 0.025	mm

NOTE

- | | |
|----|-------------------|
| 1. | 0.75 to 2.3 mm |
| 2. | 2.3 to 4.6 mm |
| 3. | 0.75 to 2.3 mm |
| 4. | 2.3 to 4.6 mm |
| 5. | Type I, 50 mm/min |
| 6. | Type I, 50 mm/min |
| 7. | 1.3 mm/min |
| 8. | 1.3 mm/min |
| 9. | Modified |

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