



**VALOX™ Resin 306HP**  
**Americas: COMMERCIAL**

PBT for compounding/fibers only. Not intended for injection molding. FDA compliant. Melt viscosity: 250C at 21.6 kgf is 1450-1850 poise. Available in Natural color (1001) only.

TYPICAL PROPERTIES <sup>1</sup>	TYPICAL VALUE	Unit	Standard
<b>MECHANICAL</b>			
Tensile Stress, yld, Type I, 50 mm/min	590	kgf/cm <sup>2</sup>	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	260	kgf/cm <sup>2</sup>	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	3.7	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	140	%	ASTM D 638
Tensile Modulus, 5 mm/min	26500	kgf/cm <sup>2</sup>	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	840	kgf/cm <sup>2</sup>	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	24400	kgf/cm <sup>2</sup>	ASTM D 790
Tensile Stress, yield, 50 mm/min	50	MPa	ISO 527
Tensile Stress, break, 50 mm/min	49	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	3.2	%	ISO 527
Tensile Strain, break, 50 mm/min	8.6	%	ISO 527
Tensile Modulus, 1 mm/min	2600	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	80	MPa	ISO 178
Flexural Modulus, 2 mm/min	2200	MPa	ISO 178
<b>IMPACT</b>			
Izod Impact, notched, 23°C	3	cm-kgf/cm	ASTM D 256
Izod Impact, notched, -30°C	3	cm-kgf/cm	ASTM D 256
Instrumented Impact Total Energy, 23°C	254	cm-kgf	ASTM D 3763
Izod Impact, notched 80*10*4 +23°C	4	kJ/m <sup>2</sup>	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	3	kJ/m <sup>2</sup>	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	4	kJ/m <sup>2</sup>	ISO 179/1eA
<b>THERMAL</b>			
Vicat Softening Temp, Rate B/50	167	°C	ASTM D 1525

(1) Typical values only. Variations within normal tolerances are possible for various colors. All values are measured after at least 48 hours storage at 23°C/50% relative humidity. All properties, except the melt volume and melt flow rates, are measured on injection molded samples. All samples tested under ISO test standards are prepared according to ISO 294.

(2) Only typical data for selection purposes. Not to be used for part or tool design.

(3) This rating is not intended to reflect hazards presented by this or any other material under actual fire conditions.

(4) Internal measurements according to UL standards.

(5) Measurements made from laboratory test coupon. Actual shrinkage may vary outside of range due to differences in processing conditions, equipment, part geometry and tool design. It is recommended that mold shrinkage studies be performed with surrogate or legacy tooling prior to cutting tools for new molded article.

Source GMD, last updated:

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TYPICAL PROPERTIES <sup>1</sup>	TYPICAL VALUE	Unit	Standard
<b>THERMAL</b>			
HDT, 0.45 MPa, 3.2 mm, unannealed	120	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	49	°C	ASTM D 648
CTE, -40°C to 40°C, flow	7.6E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	7.8E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, flow	7.6E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	7.8E-05	1/°C	ISO 11359-2
Vicat Softening Temp, Rate B/50	173	°C	ISO 306
Vicat Softening Temp, Rate B/120	169	°C	ISO 306
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	49	°C	ISO 75/Af
<b>PHYSICAL</b>			
Specific Gravity	1.31	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm (5)	1.5 - 2	%	SABIC Method
Mold Shrinkage, xflow, 3.2 mm (5)	1.5 - 2	%	SABIC Method
Melt Flow Rate, 250°C/2.16 kgf	50	g/10 min	ASTM D 1238
Melt Viscosity	1650	poise	SABIC Method
Density	1.31	g/cm <sup>3</sup>	ISO 1183
Water Absorption, (23°C/sat)	0.34	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0.08	%	ISO 62
Melt Volume Rate, MVR at 250°C/2.16 kg	45	cm <sup>3</sup> /10 min	ISO 1133

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PROCESSING PARAMETERS	TYPICAL VALUE	Unit
<b>Compounding Extrusion</b>		
Drying Temperature	110 - 120	°C
Drying Time	4 - 6	hrs
Drying Time (Cumulative)	8	hrs
Maximum Moisture Content	0	%
Melt Temperature	245 - 260	°C
Barrel - Zone 1 Temperature	200 - 230	°C
Barrel - Zone 2 Temperature	240 - 255	°C
Barrel - Zone 3 Temperature	240 - 275	°C
Barrel - Zone 4 Temperature	240 - 275	°C
Adapter Temperature	240 - 275	°C
Die Temperature	240 - 275	°C
Waterbath Temperature	25 - 35	°C

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