



Valox* Resin 321

Americas: COMMERCIAL

General purpose, unreinforced PBT resin with improved wear properties.

TYPICAL PROPERTIES ¹	TYPICAL VALUE	UNIT	STANDARD
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	520	kgf/cm ²	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	200	%	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	840	kgf/cm ²	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	23900	kgf/cm ²	ASTM D 790
IMPACT			
Izod Impact, unnotched, 23°C	163	cm-kgf/cm	ASTM D 4812
Izod Impact, notched, 23°C	5	cm-kgf/cm	ASTM D 256
Modified Gardner, 23°C	414	cm-kgf	ASTM D 3029
THERMAL			
HDT, 0.45 MPa, 6.4 mm, unannealed	154	°C	ASTM D 648
HDT, 1.82 MPa, 6.4 mm, unannealed	54	°C	ASTM D 648
PHYSICAL			
Specific Gravity	1.31	-	ASTM D 792
Mold Shrinkage, flow, 0.75-2.3 mm (5)	0.9 - 1.6	%	SABIC Method
Mold Shrinkage, flow, 2.3-4.6 mm (5)	1.5 - 2.3	%	SABIC Method
Mold Shrinkage, xflow, 0.75-2.3 mm (5)	1 - 1.7	%	SABIC Method
Mold Shrinkage, xflow, 2.3-4.6 mm (5)	1.6 - 2.4	%	SABIC Method



Valox* Resin 321

Americas: COMMERCIAL

PROCESSING PARAMETERS	TYPICAL VALUE	UNIT
Injection Molding		
Drying Temperature	120	°C
Drying Time	3 - 4	hrs
Drying Time (Cumulative)	12	hrs
Maximum Moisture Content	0.02	%
Melt Temperature	245 - 260	°C
Nozzle Temperature	240 - 255	°C
Front - Zone 3 Temperature	245 - 260	°C
Middle - Zone 2 Temperature	240 - 255	°C
Rear - Zone 1 Temperature	230 - 250	°C
Mold Temperature	50 - 75	°C
Back Pressure	0.3 - 0.7	MPa
Screw Speed	50 - 100	rpm
Shot to Cylinder Size	40 - 80	%
Vent Depth	0.013 - 0.025	mm