

Valox* Resin 5031

Europe-Africa-Middle East: COMMERCIAL

VALOX 5031 is a 30% glass reinforced PBT+PC blend with low warpage characteristics. Applications: appliance handles, automotive doorhandles. This grade is a 508 with reduced warpage.

Property

TYPICAL PROPERTIES ⁽¹⁾			
	Value	Unit	Standard
MECHANICAL			
Tensile Stress, break, 5 mm/min	120	MPa	ISO 527
Tensile Strain, break, 5 mm/min	2	%	ISO 527
Tensile Modulus, 1 mm/min	9000	MPa	ISO 527
Flexural Stress, break, 2 mm/min	175	MPa	ISO 178
Flexural Modulus, 2 mm/min	8500	MPa	ISO 178
Hardness, H358/30	123	MPa	ISO 2039-1
IMPACT			
	Value	Unit	Standard
Izod Impact, unnotched 80*10*4 +23°C	45	kJ/m ²	ISO 180/1U
Izod Impact, unnotched 80*10*4 -30°C	45	kJ/m ²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	8	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	7	kJ/m ²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	7	kJ/m ²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm	6	kJ/m ²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	45	kJ/m ²	ISO 179/1eU
Charpy -30°C, Unnotch Edgew 80*10*4 sp=62mm	45	kJ/m ²	ISO 179/1eU
THERMAL			
	Value	Unit	Standard
CTE, 23°C to 60°C, flow	4.E-05	1/°C	ISO 11359-2
CTE, 23°C to 60°C, xflow	8.E-05	1/°C	ISO 11359-2
Ball Pressure Test, 125°C +/- 2°C	PASSES	-	IEC 60695-10-2
Vicat Softening Temp, Rate B/50	140	°C	ISO 306
Vicat Softening Temp, Rate B/120	142	°C	ISO 306
HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm	185	°C	ISO 75/Be
HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm	135	°C	ISO 75/Ae
PHYSICAL			
	Value	Unit	Standard
Mold Shrinkage on Tensile Bar, flow (2)	0.3 - 0.7	%	SABIC Method
Mold Shrinkage on Tensile Bar, xflow (2)	0.5 - 0.9	%	SABIC Method
Density	1.47	g/cm ³	ISO 1183
Water Absorption, (23°C/sat)	0.09	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0.05	%	ISO 62
Melt Volume Rate, MVR at 250°C/2.16 kg	7	cm ³ /10 min	ISO 1133
ELECTRICAL			
	Value	Unit	Standard
Volume Resistivity	>1.E+15	Ohm-cm	IEC 60093
Surface Resistivity, ROA	>1.E+15	Ohm	IEC 60093
Dielectric Strength, in oil, 3.2 mm	19	kV/mm	IEC 60243-1
Relative Permittivity, 50/60 Hz	3.3	-	IEC 60250
Relative Permittivity, 100 Hz	3.5	-	IEC 60250
Relative Permittivity, 1 MHz	3.2	-	IEC 60250
Dissipation Factor, 50/60 Hz	0.001	-	IEC 60250

Dissipation Factor, 1 MHz	0.013	-	IEC 60250
Comparative Tracking Index	200	V	IEC 60112
FLAME CHARACTERISTICS			
	Value	Unit	Standard
UL Compliant, 94HB Flame Class Rating (3)(4)	1.5	mm	UL 94 by GE
Glow Wire Flammability Index 850°C, passes at	3.2	mm	IEC 60695-2-12
Oxygen Index (LOI)	21	%	ISO 4589

Source GMD, last updated:10/27/1993

Processing

Parameter	Value	Unit
Injection Molding		
Drying Temperature	110 - 120	°C
Drying Time	2 - 4	hrs
Maximum Moisture Content	0.02	%
Melt Temperature	250 - 270	°C
Nozzle Temperature	240 - 260	°C
Front - Zone 3 Temperature	245 - 265	°C
Middle - Zone 2 Temperature	240 - 255	°C
Rear - Zone 1 Temperature	230 - 245	°C
Hopper Temperature	40 - 60	°C
Mold Temperature	40 - 100	°C

Source GMD, last updated:10/27/1993

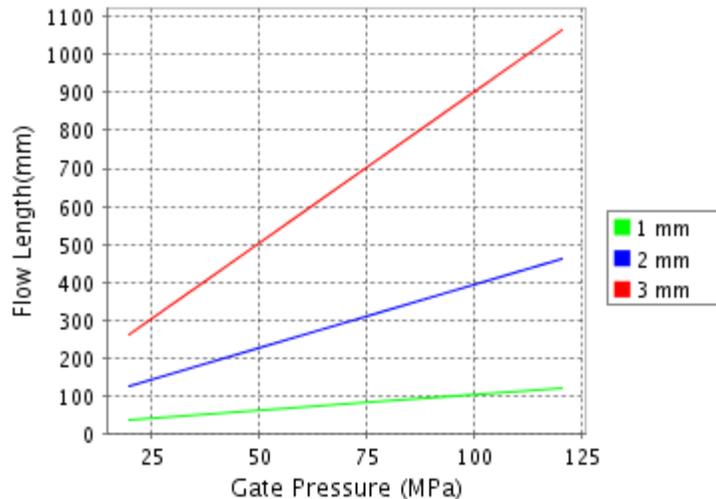
CALCULATED FLOW LENGTH INDICATION

Moldflow® Radial Flow Analysis

Valox® 212HPR

Melt Temperature : 260°C

Mold Temperature : 70°C



Note: Technical support is recommended if Gate Pressure is greater than 80 MPa. Contact your local representative.

® Moldflow is a registered trademark of the Moldflow Corporation.

THESE PROPERTY VALUES ARE NOT INTENDED FOR SPECIFICATION PURPOSES.

PLEASE CHECK WITH YOUR [\(LOCAL SALES OFFICE\)](#) FOR AVAILABILITY IN YOUR REGION

(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.

Disclaimer : All information, recommendation or advice given by SABIC Innovative Plastics, or any of its subsidiaries, affiliates or authorized representatives, whether written or oral, is given in good faith, to the best of its knowledge and based on current procedures in effect. Each user of the products shall convince himself, through all available sources (including finished product testing in its appropriate environment) of the suitability of the products supplied for its own particular purpose. Because actual use of the products by the user is beyond the control of SABIC Innovative Plastics Company, its subsidiaries and affiliates, such use is in the exclusive responsibility of the user. SABIC Innovative Plastics Company, its subsidiaries and affiliates cannot be held responsible respectively liable for any loss incurred through incorrect or faulty use of the products. Information, recommendations and/or advice are neither made to infringe on any patents, nor to grant a license under any patent or intellectual property right of SABIC Innovative Plastics Company or any of its subsidiaries or affiliated companies, nor to grant the right to file for any patent protection.

* Valox is a trademark of the SABIC Innovative Plastics Company

© 1997-2008 SABIC Innovative Plastics Company. All rights reserved