

VALOX™ RESIN VX3101N

REGION EUROPE

DESCRIPTION

VALOX VX3101N is an unreinforced PBT injection moulding resin, with excellent flow properties, good hydrolitical stability and chemical resistance.

TYPICAL PROPERTY VALUES

Revision 20181114

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Taber Abrasion, CS-17, 1 kg	9	mg/1000cy	SABIC method
Tensile Stress, yield, 50 mm/min	65	MPa	ISO 527
Tensile Stress, break, 50 mm/min	50	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	3.5	%	ISO 527
Tensile Strain, break, 50 mm/min	15	%	ISO 527
Tensile Modulus, 1 mm/min	2800	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	85	MPa	ISO 178
Flexural Modulus, 2 mm/min	2600	MPa	ISO 178
Ball Indentation Hardness, H358/30	100	MPa	ISO 2039-1
IMPACT			
Izod Impact, unnotched 80°10°4 +23°C	NB	kJ/m²	ISO 180/1U
Izod Impact, unnotched 80°10°4 -30°C	NB	kJ/m²	ISO 180/1U
Izod Impact, notched 80°10°4 +23°C	4	kJ/m²	ISO 180/1A
Izod Impact, notched 80°10°4 0°C	2	kJ/m²	ISO 180/1A
Izod Impact, notched 80°10°4 -30°C	2	kJ/m²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80°10°4 sp=62mm	5	kJ/m²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80°10°4 sp=62mm	3	kJ/m²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80°10°4 sp=62mm	NB	kJ/m²	ISO 179/1eU
Charpy -30°C, Unnotch Edgew 80°10°4 sp=62mm	NB	kJ/m²	ISO 179/1eU
THERMAL			
CTE, 23°C to 60°C, flow	1.3E-04	1/°C	ISO 11359-2
CTE, 23°C to 60°C, xflow	1.3E-04	1/°C	ISO 11359-2
Ball Pressure Test, 125°C +/- 2°C	PASSES	-	IEC 60695-10-2
Vicat Softening Temp, Rate B/50	183	°C	ISO 306
Vicat Softening Temp, Rate B/120	185	°C	ISO 306
HDT/Be, 0.45MPa Edgew 120°10°4 sp=100mm	175	°C	ISO 75/Be
HDT/Ae, 1.8 MPa Edgew 120°10°4 sp=100mm	60	°C	ISO 75/Ae
PHYSICAL			
Mold Shrinkage on Tensile Bar, flow	1.1 – 1.8	%	SABIC method
Mold Shrinkage on Tensile Bar, xflow	0.9 – 1.8	%	SABIC method
Density	1.31	g/cm³	ISO 1183
Water Absorption, (23°C/saturated)	0.34	%	ISO 62-1
Moisture Absorption (23°C / 50% RH)	0.08	%	ISO 62
Melt Volume Rate, MVR at 250°C/1.2 kg	20	cm³/10 min	ISO 1133
ELECTRICAL			

© 2024 Copyright by SABIC. All rights reserved

CHEMISTRY THAT MATTERS™



PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Volume Resistivity	>1.E+15	Ω.cm	IEC 60093
Surface Resistivity, ROA	>1.E+15	Ω	IEC 60093
Dielectric Strength, in oil, 3.2 mm	16	kV/mm	IEC 60243-1
Relative Permittivity, 1 MHz	2.9	-	IEC 60250
Dissipation Factor, 50/60 Hz	0.002	-	IEC 60250
Dissipation Factor, 1 MHz	0.02	-	IEC 60250
Comparative Tracking Index	600	V	IEC 60112
Relative Permittivity, 50/60 Hz	3.1	-	IEC 60250
FLAME CHARACTERISTICS			
UL Compliant, 94HB Flame Class Rating	1.5	mm	UL 94 by SABIC-IP
Glow Wire Flammability Index 850°C, passes at	1	mm	IEC 60695-2-12
Oxygen Index (LOI)	20	%	ISO 4589
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	

DISCLAIMER

Any sale by SABIC, its subsidiaries and affiliates (each a "seller"), is made exclusively under seller's standard conditions of sale (available upon request) unless agreed otherwise in writing and signed on behalf of the seller. While the information contained herein is given in good faith, SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, INCLUDING MERCHANTABILITY AND NON-INFRINGEMENT OF INTELLECTUAL PROPERTY, NOR ASSUMES ANY LIABILITY, DIRECT OR INDIRECT, WITH RESPECT TO THE PERFORMANCE, SUITABILITY OR FITNESS FOR INTENDED USE OR PURPOSE OF THESE PRODUCTS IN ANY APPLICATION. Each customer must determine the suitability of seller materials for the customer's particular use through appropriate testing and analysis. No statement by seller concerning a possible use of any product, service or design is intended, or should be construed, to grant any license under any patent or other intellectual property right.

