

# VALOX™ FR Resin 362 - Europe

Polybutylene Terephthalate

SABIC

PROSPECTOR®

www.ulprospector.com

## Technical Data

### Product Description

VALOX 362 is a flame retarded, unreinforced PBT injection moulding resin with excellent electrical properties. Applications: Relay sockets, switches. Unreinforced PBTP, UL94 V-0 rated. Non-blooming flame retardant. Excellent electrical properties. High tracking index. Relay sockets, switches, etc.

### General

Material Status	• Commercial: Active
UL Yellow Card <sup>1</sup>	• E45329-236592
Search for UL Yellow Card	• SABIC
Availability	• Europe
Uses	• Electrical/Electronic Applications

Physical	Nominal Value Unit	Test Method
Density	1.43 g/cm <sup>3</sup>	ISO 1183
Melt Volume-Flow Rate (MVR) (250°C/2.16 kg)	9.0 cm <sup>3</sup> /10min	ISO 1133
Molding Shrinkage <sup>3</sup>		Internal Method
Across Flow	0.90 to 1.8 %	
Flow	1.1 to 1.8 %	
Water Absorption		ISO 62
Saturation, 23°C	0.35 %	
Equilibrium, 23°C, 50% RH	0.080 %	

Mechanical	Nominal Value Unit	Test Method
Tensile Modulus	2100 MPa	ISO 527-1/1
Tensile Stress		ISO 527-2/50
Yield	45.0 MPa	
Break	35.0 MPa	
Tensile Strain		ISO 527-2/50
Yield	5.0 %	
Break	15 %	
Flexural Modulus <sup>4</sup>	2000 MPa	ISO 178
Flexural Stress <sup>4,5</sup>	65.0 MPa	ISO 178

Impact	Nominal Value Unit	Test Method
Charpy Notched Impact Strength		
-30°C <sup>6</sup>	3.0 kJ/m <sup>2</sup>	ISO 179/1eA
-20°C	3.0 kJ/m <sup>2</sup>	ISO 179/2C
23°C <sup>6</sup>	6.0 kJ/m <sup>2</sup>	ISO 179/1eA
23°C	4.0 kJ/m <sup>2</sup>	ISO 179/2C
Charpy Unnotched Impact Strength		
-30°C <sup>6</sup>	No Break	ISO 179/1eU
23°C <sup>6</sup>	No Break	ISO 179/1eU
23°C	85 kJ/m <sup>2</sup>	ISO 179/2U
Notched Izod Impact Strength <sup>7</sup>		ISO 180/1A
-30°C	4.0 kJ/m <sup>2</sup>	
23°C	5.0 kJ/m <sup>2</sup>	
Unnotched Izod Impact Strength <sup>7</sup>		ISO 180/1U
-30°C	No Break	
23°C	No Break	

Hardness	Nominal Value Unit	Test Method
Ball Indentation Hardness (H 358/30)	99.0 MPa	ISO 2039-1



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Thermal	Nominal Value Unit	Test Method
Deflection Temperature Under Load <sup>8</sup>		
0.45 MPa, Unannealed, 4.00 mm, 100 mm Span	120 °C	ISO 75-2/Be
1.8 MPa, Unannealed, 4.00 mm, 100 mm Span	50.0 °C	ISO 75-2/Ae
Vicat Softening Temperature		
--	147 °C	ISO 306/B120
--	145 °C	ISO 306/B50
Ball Pressure Test (123 to 127°C)	Pass	IEC 60695-10-2
CLTE		ISO 11359-2
Flow : 23 to 80°C	1.2E-4 cm/cm/°C	
Flow : 23 to 150°C	1.2E-4 cm/cm/°C	
Transverse : 23 to 80°C	1.3E-4 cm/cm/°C	
Transverse : 23 to 150°C	1.3E-4 cm/cm/°C	
Thermal Conductivity	0.18 W/m/K	ISO 8302
RTI Elec	75.0 °C	UL 746B
RTI Imp	75.0 °C	UL 746B
RTI Str	75.0 °C	UL 746B
Electrical	Nominal Value Unit	Test Method
Surface Resistivity	> 1.0E+15 ohms	IEC 60093
Volume Resistivity	> 1.0E+15 ohms·cm	IEC 60093
Electric Strength		IEC 60243-1
0.800 mm, in Oil	28 kV/mm	
1.60 mm, in Oil	23 kV/mm	
3.20 mm, in Oil	13 kV/mm	
Relative Permittivity		IEC 60250
50 Hz	2.90	
60 Hz	2.90	
1 MHz	2.60	
Dissipation Factor		IEC 60250
50 Hz	1.0E-3	
60 Hz	1.0E-3	
1 MHz	7.0E-3	
Comparative Tracking Index	600 V	IEC 60112
Flammability	Nominal Value Unit	Test Method
Flame Rating (1.5 mm)	V-0	UL 94
Glow Wire Flammability Index		IEC 60695-2-12
1.0 mm	850 °C	
1.6 mm	960 °C	
Oxygen Index	25 %	ISO 4589-2
Injection	Nominal Value Unit	
Drying Temperature	110 to 120 °C	
Drying Time	2.0 to 4.0 hr	
Suggested Max Moisture	0.020 %	
Hopper Temperature	40 to 60 °C	
Rear Temperature	230 to 245 °C	
Middle Temperature	240 to 255 °C	
Front Temperature	245 to 265 °C	
Nozzle Temperature	240 to 260 °C	
Processing (Melt) Temp	250 to 270 °C	
Mold Temperature	40 to 100 °C	



**Notes**

<sup>1</sup> A UL Yellow Card contains UL-verified flammability and electrical characteristics. UL Prospector continually works to link Yellow Cards to individual plastic materials in Prospector, however this list may not include all of the appropriate links. It is important that you verify the association between these Yellow Cards and the plastic material found in Prospector. For a complete listing of Yellow Cards, visit the UL Yellow Card Search.

<sup>2</sup> Typical properties: these are not to be construed as specifications.

<sup>3</sup> Tensile Bar

<sup>4</sup> 2.0 mm/min

<sup>5</sup> at Yield

<sup>6</sup> 80\*10\*4 sp=62mm

<sup>7</sup> 80\*10\*4 mm

<sup>8</sup> 120\*10\*4 mm



**Where to Buy****Supplier****SABIC**Web: <http://www.sabic.com/>**Distributor****3Polymer (Guangzhou) Chemical Technology Co., Ltd.**

Telephone: +86-20-3466-7988

Web: <http://3polymer.com>

Availability: China

**AECTRA**

Telephone: +33-4-72-54-36-42

Web: <https://www.aectra.fr/>

Availability: Bulgaria, Romania

**AGI-Augusto Guimarães & Irmão**

Telephone: +351-22753-7400

Web: <https://www.agi.pt/en/>

Availability: Portugal

**GRÄSSLIN**

Telephone: +49-7721-4040-261

Web: <https://www.graesslin-kunststoffe.de>

Availability: Germany

**Guzmán Polymers**

Telephone: +34-963-992-400

Web: <https://www.guzmanglobal.com/en/productos/plastics/>

Availability: Italy, Spain, Turkey

**Lenorplastics**

Telephone: +41-61-706-11-11

Web: <https://www.lenorplastics.ch>

Availability: Switzerland

**Plastoplan**

Telephone: +43-1-25040-0

Web: <https://www.plastoplan.com/>

Availability: Austria, Czech Republic, Hungary, Slovakia

**POLYMIX***POLYMIX is a Pan European distribution company. Contact POLYMIX for availability of individual products by country.*

Telephone: +33-3-8920-1380

Web: <http://www.polymix.eu/>

Availability: France

**RESINEX Group***RESINEX is a Pan European distribution company. Contact RESINEX for availability of individual products by country.*

Telephone: +32-14-672511

Web: <http://www.resinex.com/>

Availability: Europe

**Ultrapolymers***Ultrapolymers is a Pan European distribution company. Contact Ultrapolymers for availability of individual products by country.*

Telephone: +32-11-57-95-57

Web: <http://www.ultrapolymers.com/>

Availability: Belgium, Netherlands, South Africa

