

**NORYL™ Resin 7310RC5**

(PPE+PS)

Saudi Basic Industries Corporation (SABIC)

**Product Texts**

NORYL 7310RC5 resin is a unfilled Post Consumer recycle (PCR) based injection moldable modified polyphenylene ether resin comprising at least 50% PCR styrenic series resin content. This injection moldable grade exhibits good surface appearance, high ductility, and good impact resistance along with low moisture absorption, creep resistance, dimensional stability, and hydrolytic stability. NORYL 7310RC5 resin is an excellent candidate for a variety of applications. Black only offering.

Processing/Physical Characteristics	Value	Unit	Test Standard
<b>ISO Data</b>			
Melt volume-flow rate, MVR	12	cm <sup>3</sup> /10min	ISO 1133
Temperature	280	°C	-
Load	5	kg	-

<b>ASTM Data</b>			
Melt Flow Index, MFI	12	g/10min	ASTM D 1238
Temperature	280	°C	-
Load	5	kg	-
Mold Shrinkage, MD	0.0028	mm/mm	ASTM D 955

**Mechanical properties**

	Value	Unit	Test Standard
<b>ISO Data</b>			
Tensile Modulus	2400	MPa	ISO 527
Yield stress	50	MPa	ISO 527
Stress at break	45	MPa	ISO 527
Flexural modulus, 23°C	2350	MPa	ISO 178
Charpy notched impact strength, +23°C	7	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy notched impact strength, -30°C	5	kJ/m <sup>2</sup>	ISO 179/1eA
Izod impact strength, +23°C	70	kJ/m <sup>2</sup>	ISO 180/1U
Izod notched impact strength, +23°C	8	kJ/m <sup>2</sup>	ISO 180/1A
Izod notched impact strength	5	kJ/m <sup>2</sup>	ISO 180/1A
Temperature	-30	°C	-

<b>ASTM Data</b>			
Tensile Modulus	2400	MPa	ASTM D 638
Tensile Strength at Yield	50	MPa	ASTM D 638
Tensile Strength at Break	45	MPa	ASTM D 638
Flexural Modulus	2300	MPa	ASTM D 790
Izod Impact notched, 1/8 in	70	J/m	ASTM D 256
Izod Impact notched, Low-Temperature	50	J/m	ASTM D 256
Temperature	-30	°C	-
Izod Impact unnotched, 1/8 in	950	J/m	ASTM D 256

**Thermal properties**

	Value	Unit	Test Standard
<b>ISO Data</b>			
Temp. of deflection under load, 1.80 MPa	110	°C	ISO 75-1/-2
Temp. of deflection under load, 0.45 MPa	124	°C	ISO 75-1/-2
Vicat softening temperature, A	134	°C	ISO 306
Vicat softening temperature, B	130	°C	ISO 306

<b>ASTM Data</b>			
Coefficient of Thermal Expansion, MD	70	E-6/K	ASTM D 696
Coefficient of Thermal Expansion, TD	74	E-6/K	ASTM D 696
DTUL @ 264 psi	110	°C	ASTM D 648
Vicat Temperature	132	°C	ASTM D 1525

**Other properties**

	Value	Unit	Test Standard
Water absorption	0.06	%	Sim. to ISO 62
Humidity absorption	0.2	%	Sim. to ISO 62
Density	1100	kg/m <sup>3</sup>	ISO 1183

**Processing Recommendation Injection Molding**

	Value	Unit	Test Standard
Pre-drying - Temperature	105 - 110	°C	-
Pre-drying - Time	3 - 4	h	-

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Processing humidity	≤0.02	%	-
Melt temperature	280 - 310	°C	-
Mold temperature	75 - 105	°C	-
Zone 1	250 - 300	°C	-
Zone 2	260 - 305	°C	-
Zone 3	270 - 310	°C	-
Nozzle temperature	280 - 310	°C	-
Screw speed	20 - 100	rpm	-
Back pressure	0.3 - 0.7	MPa	-

**Characteristics****Processing**

Injection Molding

**Delivery form**

Black

**Special Characteristics**

High impact or impact modified

**Features**

Creep Resistance, Ductile

**Chemical Resistance**

Hydrolytically Stable

**Certifications**

Recycled Resin Content

**Applications**

Building Construction, IT / Business Machine, Electrical and Electronical

**Regional Availability**

North America, Europe, Asia Pacific, South and Central America