

**FLEX NORYL™ Resin WCV072 - Europe**

(PPE+TPE)

Saudi Basic Industries Corporation (SABIC)

**Product Texts**

FLEX NORYL™ WCV072 resin is a flexible, non-reinforced extrusion grade of Polyphenylene Ether (PPE) + Thermoplastic Elastomer (TPE) with a Shore D Hardness rating of 72. FLEX NORYL WCV072 resin was developed for evaluation in automotive wire + cable applications requiring ISO6722 Class A or B. It exhibits ultra-thin wall capability, good scratch abrasion and pinch resistance, high dimensional stability, low shrinkage and warpage, very low water absorption, chemical resistance, and good dielectric strength. Processing is typically conducted on standard extrusion equipment, and UL 1581 testing is conducted on 2.0mm wire with 0.12mm X 20 stranded copper conductor.

Processing/Physical Characteristics	Value	Unit	Test Standard
<b>ISO Data</b>			
Melt volume-flow rate, MVR	13	cm <sup>3</sup> /10min	ISO 1133
Temperature	280	°C	-
Load	5	kg	-
<b>ASTM Data</b>			
Melt Flow Index, MFI	13.8	g/10min	ASTM D 1238
Temperature	280	°C	-
Load	5	kg	-

Mechanical properties	Value	Unit	Test Standard
<b>ISO Data</b>			
Tensile Modulus	1750	MPa	ISO 527
Yield stress	44	MPa	ISO 527
Yield strain	11	%	ISO 527
Stress at break	42	MPa	ISO 527
Strain at break	46	%	ISO 527
Flexural modulus	1740	MPa	ISO 178
Charpy notched impact strength, +23°C	33	kJ/m <sup>2</sup>	ISO 179/1eA
Izod notched impact strength, +23°C, 4mm	36	kJ/m <sup>2</sup>	ISO 180/1A
Izod notched impact strength, -30°C, 4mm	6	kJ/m <sup>2</sup>	ISO 180/1A
<b>ASTM Data</b>			
Tensile Modulus	1710	MPa	ASTM D 638
Tensile Strength at Yield	43	MPa	ASTM D 638
Tensile Strength at Break	41	MPa	ASTM D 638
Elongation at Yield	15	%	ASTM D 638
Elongation at Break	83	%	ASTM D 638
Flexural Modulus	1550	MPa	ASTM D 790
Izod Impact notched, 1/8 in	309	J/m	ASTM D 256
Izod Impact notched, Low-Temperature	67	J/m	ASTM D 256
Temperature	-30	°C	-

Thermal properties	Value	Unit	Test Standard
<b>ISO Data</b>			
Temp. of deflection under load, 1.80 MPa	98	°C	ISO 75-1/-2
Vicat softening temperature, B	114	°C	ISO 306
Vicat softening temperature, 120°C/h 50N	117	°C	ISO 306
<b>ASTM Data</b>			
DTUL @ 264 psi	92	°C	ASTM D 648
Vicat Temperature	114	°C	ASTM D 1525

Other properties	Value	Unit	Test Standard
Water absorption	0.12	%	Sim. to ISO 62
Humidity absorption	0.05	%	Sim. to ISO 62
Density	1030	kg/m <sup>3</sup>	ISO 1183
Density	1030	kg/m <sup>3</sup>	ASTM D 792

Processing Recommendation Injection Molding	Value	Unit	Test Standard
Screw speed	15 - 40	rpm	-

**Characteristics**

**Chemical Resistance**

General Chemical Resistance

**Regional Availability**

Europe