

NORYL[™] RESIN FP5140HF

REGION AMERICAS

DESCRIPTION

NORYLFP5140HF is an unfilled, injection moldable modified polyphenylene ether resin with an ISO306 Vicat B/120 of 100 deg C. Designed for good dimensional stability and high flow, this resin also uses non-chlorinated, non-brominated FR additives to achieve a V1 UL94 rating at 1.5mm with a specific density of 1.11g/cm3. NORYL FP5140 may be an excellent material for Flat Panel TV enclosure applications requiring good rheological properties, heat resistance, low density and thin wall flame resistance

TYPICAL PROPERTY VALUES

Revision 20181012

MECHANICA! Meph Modulus, 50 mm/min 48 Meph Mogus ASTM D 638 Tensile Stress, yield, 50 mm/min 48 Meph S 50 527 Tensile Stress, break, 50 mm/min 44 Meph S 50 527 Tensile Strain, yield, 50 mm/min 27 \$ 50 527 Tensile Strain, yield, 50 mm/min 2530 MPa 50 527 Tensile Modulus, 1 mm/min 2530 MPa 50 527 Flexural Stress, yield, 2 mm/min 80 MPa 50 527 Flexural Modulus, 2 mm/min 2450 MPa 50 178 Flexural Stress, yield, 2 mm/min 80 MPa 50 178 Flexural Modulus, 2 mm/min 2450 MPa 50 180/14 Flexural Stress, yield, 2 mm/min 80 MPa 50 180/14 Idental Modulus, 2 mm/min 80 MI/m² 50 180/14 Idental Stress, yield, 2 mm/min 80 MI/m² 50 180/14 Idental Stress, yield, 2 mm/min 80 MI/m² 50 180/14 Idental Stress, yield, 2 mm/min 80 MI/m² 50 180/14 Izer Ma	PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Fernile Stress, yield. 50 mm/min 48 MFa ISO 527 Tensile Stress, break, 50 mm/min 44 MFa ISO 527 Tensile Strain, yield, 50 mm/min 21.4 % ISO 527 Tensile Isotain, break, 50 mm/min 21.4 % ISO 527 Tensile Modulus, 1 mm/min 2530 MFa ISO 178 Flexural Modulus, 2 mm/min 80 MFa ISO 178 Flexural Modulus, 2 mm/min 6 M/m² ISO 180/1A Izod Impact, notched 80°10°4 *23°C 6 M/m² ISO 180/1A Izod Impact, notched 80°10°4 *39°C 5 M/m² ISO 180/1A Izod Impact, notched 80°10°4 *39°C 5 M/m² ISO 180/1A Izod Impact, notched 80°10°4 *39°C 5 M/m² ISO 180/1A Izod Impact, notched 80°10°4 *39°C 5 M/m² ISO 180/1A Izod Impact, notched 80°10°4 *39°C 5 M/m² ISO 180/1A Izod Impact, notched 80°10°4 *39°C 8 M/m² ISO 180/1A Izod Impact, notched 80°10°4 *39°C 8 M/m² ISO 180/1A	MECHANICAL			
Tensile Stress, break, 50 mm/min 44 MPa ISO 527 Tensile Strain, yield, 50 mm/min 2.7 % ISO 527 Tensile Strain, break, 50 mm/min 21.4 % ISO 527 Tensile Strain, break, 50 mm/min 21.40 % ISO 527 Tensile Strain, break, 50 mm/min 21.30 MPa ISO 178 Flexural Stress, yield, 2 mm/min 80 MPa ISO 178 Flexural Modulus, 2 mm/min 40 MPa ISO 178 IMPACT Impact, notched 80°10°4.23°C 6 M/m² ISO 180/1A Cool Impact, notched 80°10°4.23°C 5 M/m² ISO 180/1A Chard Macha, contched 80°10°4.23°C 5 M/m² ISO 180/1A Chard Cook of Control & Salo (19°4 a) = 62mm 7 W/m² ISO 180/1A Chard Softening Temp, Rate B/50 9 ° ASTM D 152 CHE, 40°C to 40°C, flow 8.36.5 1/°C ASTM E 831 CHE, 40°C to 40°C, flow 8.36.5 1/°C ASTM E 831 CHE, 40°C to 40°C, flow 7.76.5 1/°C ISO	Tensile Modulus, 50 mm/min	2940	MPa	ASTM D 638
Ensile Strain, yield, 50 mm/min 2.7 % ISO 527 Tensile Strain, break, 50 mm/min 21.4 % ISO 527 Tensile Modulus, 1 mm/min 2530 MPa ISO 178 Flexural Modulus, 2 mm/min 80 MPa ISO 178 IMPACT United Modulus, 2 mm/min 80 MPa ISO 180 IMPACT Impact, notched 80°10°4 +23°C 6 MI/m² ISO 180/1A Izod Impact, notched 80°10°4 +23°C 5 MI/m² ISO 180/1A Izod Impact, notched 80°10°4 sp=62mm 7 My/m² ISO 180/1A Izod Impact, notched 80°10°4 sp=62mm 7 W My/m² ISO 180/1A Izod Impact, notched 80°10°4 sp=62mm 7 W My/m² ISO 180/1A Izod Impact, notched 80°10°4 sp=62mm 7 W C ASTM 181 Izod Impact, notched 80°10°4 sp=62mm 7 C ASTM 181 Izod Impact, Macte 81950 7 C ASTM 181 Izot Softening Temp, Rate 8150 7 C ASTM E 831 Izot 40°C to 40°C, slow<	Tensile Stress, yield, 50 mm/min	48	MPa	ISO 527
Tensile Strain, break, 50 mm/min 21.4 % ISO 527 Tensile Modulus, 1 mm/min 2530 MPa ISO 527 Flexural Stress, yield, 2 mm/min 80 MPa ISO 178 Flexural Modulus, 2 mm/min 2450 MPa ISO 180/18 IMPACT IV ISO 180/14 ISO 180/14 Izod Impact, notched 80°10°4 +23°C 6 M/m² ISO 180/1A Izod Impact, notched 80°10°4 spe62mm 5 M/m² ISO 180/1A Izod Impact, notched 80°10°4 spe62mm 7 W ISO 180/1A Izod Impact, notched 80°10°4 spe62mm 7 W ISO 180/1A Izod Impact, notched 80°10°4 spe62mm 7 X ISO 180/1A Izod Impact, notched 80°10°4 spe62mm 7 X ISO 180/1A Izod Impact, notched 80°10°4 spe62mm 7 X ISO 180/1A Izod Impact, notched 80°10°4 spe62mm 9 C ASTM 051/1A Itotal Softening Temp, Rate 8/50 9 ° C ASTM 0525 ICE, 40°C to 40°C, sflow 7 ° C	Tensile Stress, break, 50 mm/min	44	MPa	ISO 527
Fensile Modulus, 1 mm/min 2530 MPa ISO 178 Flexural Stress, yield, 2 mm/min 2450 MPa ISO 178 IMPACT ISO 180 IND ISO 180 IND Izod Impact, notched 80*10*4 +23*°C 6 M/m² ISO 180 IND Cad Impact, notched 80*10*4 sp=62mm 7 M/m² ISO 180 IND Thermal Wim² ISO 180 IND IND MDT, 182 MPa, 3.2mm, unannealed 97 °C ASTM D 683 IND ASTM D 683 IND ASTM E83 IND IND	Tensile Strain, yield, 50 mm/min	2.7	%	ISO 527
Flexural Stress, yield, 2 mm/min 80 MPa ISO 178 Flexural Modulus, 2 mm/min 2450 MPa ISO 178 IMPACT IMPACT ISO 180/1A ISO 180/1A Izod Impact, notched 80°10°4 + 23°C 6 Id/m² ISO 180/1A Izod Impact, notched 80°10°4 + 23°C 6 Id/m² ISO 180/1A Clary 23°C, V-notch Edgew 80°10°4 sp=62mm 7 (% (% 1870 place Chary 23°C, V-notch Edgew 80°10°4 sp=62mm 97 °C ASTM D 1525 C THERMAL Vicat Softening Temp, Rate B/50 97 °C ASTM D 1525 ASTM D 648 CTE, 40°C to 40°C, flow 3.2-605 1/°C ASTM E 831 ASTM E 831 CTE, 40°C to 40°C, flow 3.2-605 1/°C ASTM E 831 ASTM E 831 CTE, 40°C to 40°C, flow 7.2-05 1/°C ISO 1359-2 Vicat Softening Temp, Rate B/50 7°C ISO 306 Vicat Softening Temp, Rate B/120 100 °C ISO 306 Vicat Softening Temp, Rate B/120 6 °C ISO 75/AI <	Tensile Strain, break, 50 mm/min	21.4	%	ISO 527
Flexural Modulus, 2 mm/min 2450 MPa ISO 178 IMPACT Ixod Impact, notched 80°10°4 +23°C 6 kl/m² ISO 180/1A Izod Impact, notched 80°10°4 -30°C 5 kl/m² ISO 180/1A Charpy 23°C, V-notch Edgew 80°10°4 sp=62mm 7 kl/m² ISO 179/1eA THERMAL "C ASTM D 1525 HDT, 1.82 MPa, 3.2mm, unannealed 78 "C ASTM D 648 CTE, -40°C to 40°C, flow 8.3E-05 1/°C ASTM E 831 CTE, -40°C to 40°C, flow 8.3E-05 1/°C ASTM E 831 CTE, -40°C to 40°C, flow 7.7E-05 1/°C SO 11359-2 Vicat Softening Temp, Rate B/50 97 "C ISO 306 Vicat Softening Temp, Rate B/120 97 "C ISO 306 Vicat Softening Temp, Rate B/120 10° "C ISO 306 HDT/At, 1.8 MPa Flatuv 80°10°4 sp=64mm 80 "C ISO 306 Relative Temp Index, Elec 65 "C IU 7468 Relative Temp Index, Mech w/ impact 65 "C IX TAGE	Tensile Modulus, 1 mm/min	2530	MPa	ISO 527
IMPACT Ixod Impact, notched 80*10*4 +23*C 6 kJ /m² ISO 180/1A Izod Impact, notched 80*10*4 -30*C 5 kJ /m² ISO 180/1A Charpy 23*C, V-notch Edgew 80*10*4 sp=62mm 7 kJ /m² ISO 180/1A THERMAL "C ASTM D 1525 HDT, 1.82 MPa, 3.2mm, unannealed 78 °C ASTM D 1525 HDT, 1.82 MPa, 3.2mm, unannealed 78 °C ASTM D 648 CTE, -40°C to 40°C, flow 8.3€-05 1/°C ASTM E 831 CTE, -40°C to 40°C, flow 7.7€-05 1/°C ASTM E 831 CTE, -40°C to 40°C, flow 7.7€-05 1/°C ASTM E 831 CTE, -40°C to 40°C, flow 7.7€-05 1/°C ISO 1359-2 CTE, -40°C to 40°C, flow 7.7€-05 1/°C ISO 1359-2 CTE, -40°C to 40°C, flow 59 °C ISO 306 Vicat Softening Temp, Rate B/120 97 °C ISO 306 Vicat Softening Temp, Rate B/120 65 °C IU.746B Relative Temp Index, Elec 65 °C UL 746B	Flexural Stress, yield, 2 mm/min	80	MPa	ISO 178
Izod Impact, notched 80°10°4 +23°C 6 kJ/m² ISO 180/1A Izod Impact, notched 80°10°4 ×30°C 5 kJ/m² ISO 180/1A Charpy 23°C, V-notch Edgew 80°10°4 ×p=62mm 7 kJ/m² ISO 179/1eA THERMAL Wicat Softening Temp, Rate B/50 97 °C ASTM D 1525 HDT, 1.82 MPa, 3.2mm, unannealed 78 °C ASTM D 648 CTE, 40°C to 40°C, flow 8.3E-05 1/°C ASTM E 831 CTE, 40°C to 40°C, flow 7.7E-05 1/°C ASTM E 831 CTE, 40°C to 40°C, flow 7.7E-05 1/°C ISO 306 CTE, 40°C to 40°C, flow 7.7E-05 1/°C ISO 306 CTE, 40°C to 40°C, flow 7.7E-05 1/°C ISO 306 CTE, 40°C to 40°C, flow 7.7E-05 1/°C ISO 306 Vicat Softening Temp, Rate B/50 9 °C ISO 306 PUT, 1.8 MPa Flatw 80°10°4 sp=64mm 80 °C ISO 75/AI Relative Temp Index, Mech w/ impact 65	Flexural Modulus, 2 mm/min	2450	MPa	ISO 178
Icod Impact, notched 80°10°4 30°C 5 kJ/m² ISO 180/1A Charpy 23°C, V-notch Edgew 80°10°4 sp=62mm 7 kJ/m² ISO 179/1eA THERMAL Vicat Softening Temp, Rate B/50 97 °C ASTM D 1525 HDT, 1.82 MPa, 3.2mm, unannealed 78 °C ASTM D 648 CTE, 40°C to 40°C, flow 8.3E-05 1/°C ASTM E 831 CTE, 40°C to 40°C, flow 8.3E-05 1/°C ASTM E 831 CTE, 40°C to 40°C, flow 7.7E-05 1/°C ASTM E 831 CTE, 40°C to 40°C, flow 7.7E-05 1/°C ISO 11359-2 CTE, 40°C to 40°C, flow 7.7E-05 1/°C ISO 306 Vicat Softening Temp, Rate B/120 97 °C ISO 306 Vicat Softening Temp, Rate B/120 80 °C ISO 306 HDT/Af, 1.8 MPa Flatw 80°10°4 sp=64mm 80 °C ISO 75/Af Relative Temp Index, Mech w/impact 65 °C UL746B Relative Temp Index, Mech w/impact 65 °C UL746B PHYSICAL Specific Gravity	IMPACT			
Charpy 23°C, V-notch Edgew 80°10°4 sp=62mm 7 kJ/m² ISO 179/1eA THERMAL Vicat Softening Temp, Rate B/50 97 °C ASTM D 1525 HDT, 1.82 MPa, 3.2mm, unannealed 78 °C ASTM D 648 CTE, 40°C to 40°C, flow 8.3E·05 1/°C ASTM E 831 CTE, 40°C to 40°C, flow 8.3E·05 1/°C ASTM E 831 CTE, 40°C to 40°C, flow 7.7E·05 1/°C ISO 11359-2 CTE, 40°C to 40°C, flow 7.7E·05 1/°C ISO 11359-2 CTE, 40°C to 40°C, flow 7.7E·05 1/°C ISO 11359-2 Vicat Softening Temp, Rate B/50 97 °C ISO 306 Vicat Softening Temp, Rate B/120 100 °C ISO 306 Wicat Softening Temp, Rate B/120 80 °C ISO 75/Af Relative Temp Index, Mech w/or specific 65 °C UL 7468 Relative Temp Index, Mech w/or impact 65 °C UL 7468 PHYSICAL Specific Gravity 1.11 - ASTM D 792 <th< td=""><td>Izod Impact, notched 80*10*4 +23°C</td><td>6</td><td>kJ/m²</td><td>ISO 180/1A</td></th<>	Izod Impact, notched 80*10*4 +23°C	6	kJ/m²	ISO 180/1A
THERMAL Vicat Softening Temp, Rate B/50 97 °C ASTM D 1525 HDT, 1.82 MPa, 3.2mm, unannealed 78 °C ASTM D 648 CTE, 40°C to 40°C, flow 8.3E-05 1/°C ASTM E 831 CTE, 40°C to 40°C, flow 7.7E-05 1/°C ASTM E 831 CTE, 40°C to 40°C, flow 8.3E-05 1/°C ASTM E 831 CTE, 40°C to 40°C, flow 7.7E-05 1/°C ISO 11359-2 CTE, 40°C to 40°C, flow 7.7E-05 1/°C ISO 306 Vicat Softening Temp, Rate B/50 97 °C ISO 306 Vicat Softening Temp, Rate B/120 100 °C ISO 306 HDT/Af, 1.8 MPa Flatw 80°10°4 sp=64mm 80 °C ISO 306 Relative Temp Index, Elec 65 °C UL 7468 Relative Temp Index, Mech w/impact 65 °C UL 7468 Relative Temp Index, Mech w/o impact 65 °C UL 7468 PHYSICAL Specific Gravity 1.11 9 ASTM D 792 Mold Shrinkage, flow,	Izod Impact, notched 80*10*4 -30°C	5	kJ/m²	ISO 180/1A
Vicat Softening Temp, Rate B/50 97 °C ASTM D 1525 HDT, 1.82 MPa, 3.2mm, unannealed 78 °C ASTM D 648 CTE, -40°C to 40°C, flow 8.3E-05 1/°C ASTM E 831 CTE, -40°C to 40°C, xflow 7.7E-05 1/°C ASTM E 831 CTE, -40°C to 40°C, xflow 8.3E-05 1/°C ISO 11359-2 CTE, -40°C to 40°C, xflow 7.7E-05 1/°C ISO 306 Vicat Softening Temp, Rate B/50 97 °C ISO 306 Vicat Softening Temp, Rate B/120 100 °C ISO 306 HDT/Af, 1.8 MPa Flatw 80°10°4 sp=64mm 80 °C IL 746B Relative Temp Index, Elec 65 °C UL 746B Relative Temp Index, Mech w/impact 65 °C UL 746B Relative Temp Index, Mech w/o impact 65 °C UL 746B PHYSICAL Specific Gravity 1.11 - ASTM D 792 Mold Shrinkage, flow, 3.2 mm 0.5-0.7 % ASBIC method Density 1.11 g/cm³ ISO 62	Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	7	kJ/m²	ISO 179/1eA
HDT, 1.82 MPa, 3.2mm, unannealed 78 °C ASTM D 648 CTE, -40°C to 40°C, flow 8.3E-05 1/°C ASTM E 831 CTE, -40°C to 40°C, xflow 7.7E-05 1/°C ASTM E 831 CTE, -40°C to 40°C, xflow 8.3E-05 1/°C ISO 11359-2 CTE, -40°C to 40°C, xflow 7.7E-05 1/°C ISO 11359-2 CTE, -40°C to 40°C, xflow 7.7E-05 1/°C ISO 306 Vicat Softening Temp, Rate B/50 97 °C ISO 306 Vicat Softening Temp, Rate B/120 100 °C ISO 306 HDT/Af, 1.8 MPa Flatw 80°10°4 sp=64mm 80 °C ISO 75/Af Relative Temp Index, Elec 65 °C UL 746B Relative Temp Index, Mech w/ impact 65 °C UL 746B PHYSICAL Specific Gravity 1.11 - ASTM D 792 Mold Shrinkage, flow, 3.2 mm 0.5 - 0.7 % SABIC method Density 1.11 9/cm³ ISO 62 Molecular methods, 23°C/sat) 0.18 % ISO 62	THERMAL			
CTE, -40°C to 40°C, flow 8.3E-05 1/°C ASTME 831 CTE, -40°C to 40°C, xflow 7.7E-05 1/°C ASTME 831 CTE, -40°C to 40°C, xflow 8.3E-05 1/°C ISO 11359-2 CTE, -40°C to 40°C, xflow 7.7E-05 1/°C ISO 11359-2 Vicat Softening Temp, Rate B/50 97 °C ISO 306 Vicat Softening Temp, Rate B/120 100 °C ISO 306 HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm 80 °C ISO 75/Af Relative Temp Index, Elec 65 °C UL746B Relative Temp Index, Mech w/impact 65 °C UL746B Relative Temp Index, Mech w/o impact 65 °C UL746B PHYSICAL Specific Gravity 1.11 - ASTM D 792 Mold Shrinkage, flow, 3.2 mm 0.5 - 0.7 % SABIC method Density 1.11 g/cm³ ISO 62 Molecular of Specific Gravity 1.11 % SO 62 Water Absorption, (23°C/sat) 0.18 % ISO 62<	Vicat Softening Temp, Rate B/50	97	°C	ASTM D 1525
CTE, -40°C to 40°C, xflow 7.7E-05 1/°C ASTM E 831 CTE, -40°C to 40°C, flow 8.3E-05 1/°C ISO 11359-2 CTE, -40°C to 40°C, xflow 7.7E-05 1/°C ISO 11359-2 Vicat Softening Temp, Rate B/50 97 °C ISO 306 Vicat Softening Temp, Rate B/120 100 °C ISO 306 HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm 80 °C ISO 75/Af Relative Temp Index, Elec 65 °C UL 746B Relative Temp Index, Mech w/impact 65 °C UL 746B Relative Temp Index, Mech w/o impact 65 °C UL 746B PHYSICAL ** ASTM D 792 Mold Shrinkage, flow, 3.2 mm 0.5 – 0.7 % SABIC method Density 1.11 g/cm³ ISO 1183 Water Absorption, (23°C/sat) 0.18 % ISO 62 Moisture Absorption (23°C/ 50% RH) 0.05 % ISO 62	HDT, 1.82 MPa, 3.2mm, unannealed	78	°C	ASTM D 648
CTE, -40°C to 40°C, flow 8.3E-05 1/°C ISO 11359-2 CTE, -40°C to 40°C, xflow 7.7E-05 1/°C ISO 11359-2 Vicat Softening Temp, Rate B/50 97 °C ISO 306 Vicat Softening Temp, Rate B/120 100 °C ISO 306 HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm 80 °C ISO 75/Af Relative Temp Index, Elec 65 °C UL 7468 Relative Temp Index, Mech w/impact 65 °C UL 746B Relative Temp Index, Mech w/o impact 65 °C UL 746B PHYSICAL ** ASTM D 792 Mold Shrinkage, flow, 3.2 mm 0.5 - 0.7 % SABIC method Density 1.11 g/cm³ ISO 1183 Water Absorption, (23°C/sat) 0.18 % ISO 62 Moisture Absorption (23°C / 50% RH) 0.05 % ISO 62	CTE, -40°C to 40°C, flow	8.3E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow 7.7E-05 1/°C ISO 11359-2 Vicat Softening Temp, Rate B/50 97 °C ISO 306 Vicat Softening Temp, Rate B/120 100 °C ISO 306 HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm 80 °C ISO 75/Af Relative Temp Index, Elec 65 °C UL 746B Relative Temp Index, Mech w/impact 65 °C UL 746B Relative Temp Index, Mech w/o impact 65 °C UL 746B PHYSICAL ** ASTM D 792 Mold Shrinkage, flow, 3.2 mm 0.5 – 0.7 % SABIC method Density 1.11 g/cm³ ISO 62 Water Absorption, (23°C/sat) 0.18 % ISO 62	CTE, -40°C to 40°C, xflow	7.7E-05	1/°C	ASTM E 831
Vicat Softening Temp, Rate B/50 97 °C ISO 306 Vicat Softening Temp, Rate B/120 100 °C ISO 306 HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm 80 °C ISO 75/Af Relative Temp Index, Elec 65 °C UL 746B Relative Temp Index, Mech w/impact 65 °C UL 746B Relative Temp Index, Mech w/o impact 65 °C UL 746B PHYSICAL Specific Gravity 1.11 - ASTM D 792 Mold Shrinkage, flow, 3.2 mm 0.5 – 0.7 % SABIC method Density 1.11 g/cm³ ISO 1183 Water Absorption, (23°C/sat) 0.18 % ISO 62 Moisture Absorption (23°C / 50% RH) 0.05 % ISO 62	CTE, -40°C to 40°C, flow	8.3E-05	1/°C	ISO 11359-2
Vicat Softening Temp, Rate B/120 100 °C ISO 306 HDT/Af, 1.8 MPa Flatw 80°10°4 sp=64mm 80 °C ISO 75/Af Relative Temp Index, Elec 65 °C UL 746B Relative Temp Index, Mech w/impact 65 °C UL 746B Relative Temp Index, Mech w/o impact 65 °C UL 746B PHYSICAL Specific Gravity 1.11 - ASTM D 792 Mold Shrinkage, flow, 3.2 mm 0.5 − 0.7 % SABIC method Density 1.11 g/cm³ ISO 1183 Water Absorption, (23°C/sat) 0.18 % ISO 62 Moisture Absorption (23°C / 50% RH) 0.05 % ISO 62	CTE, -40°C to 40°C, xflow	7.7E-05	1/°C	ISO 11359-2
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm 80 °C ISO 75/Af Relative Temp Index, Elec 65 °C UL 746B Relative Temp Index, Mech w/o impact 65 °C UL 746B PHYSICAL ** UL 746B Specific Gravity 1.11 - ASTM D 792 Mold Shrinkage, flow, 3.2 mm 0.5 − 0.7 % SABIC method Density 1.11 g/cm³ ISO 1183 Water Absorption, (23°C/sat) 0.18 % ISO 62 Moisture Absorption (23°C / 50% RH) 0.05 % ISO 62	Vicat Softening Temp, Rate B/50	97	°C	ISO 306
Relative Temp Index, Elec 65 °C UL 746B Relative Temp Index, Mech w/impact 65 °C UL 746B PHYSICAL Specific Gravity 1.11 - ASTM D 792 Mold Shrinkage, flow, 3.2 mm 0.5 - 0.7 % SABIC method Density 1.11 g/cm³ ISO 1183 Water Absorption, (23°C/sat) 0.18 % ISO 62 Moisture Absorption (23°C / 50% RH) 0.05 % ISO 62	Vicat Softening Temp, Rate B/120	100	°C	ISO 306
Relative Temp Index, Mech w/impact 65 °C UL 746B PHYSICAL Specific Gravity 1.11 - ASTM D 792 Mold Shrinkage, flow, 3.2 mm 0.5 - 0.7 % SABIC method Density 1.11 g/cm³ ISO 1183 Water Absorption, (23°C/sat) 0.18 % ISO 62 Moisture Absorption (23°C / 50% RH) 0.05 % ISO 62	HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	80	°C	ISO 75/Af
Relative Temp Index, Mech w/o impact 65 °C UL 746B PHYSICAL Specific Gravity 1.11 - ASTM D 792 Mold Shrinkage, flow, 3.2 mm 0.5 - 0.7 % SABIC method Density 1.11 g/cm³ ISO 1183 Water Absorption, (23°C/sat) 0.18 % ISO 62 Moisture Absorption (23°C / 50% RH) 0.05 % ISO 62	Relative Temp Index, Elec	65	°C	UL 746B
PHYSICAL Specific Gravity 1.11 - ASTM D 792 Mold Shrinkage, flow, 3.2 mm 0.5 - 0.7 % SABIC method Density 1.11 g/cm³ ISO 1183 Water Absorption, (23°C/sat) 0.18 % ISO 62 Moisture Absorption (23°C / 50% RH) 0.05 % ISO 62	Relative Temp Index, Mech w/impact	65	°C	UL 746B
Specific Gravity 1.11 - ASTM D 792 Mold Shrinkage, flow, 3.2 mm 0.5 - 0.7 % SABIC method Density 1.11 g/cm³ ISO 1183 Water Absorption, (23°C/sat) 0.18 % ISO 62 Moisture Absorption (23°C / 50% RH) 0.05 % ISO 62	Relative Temp Index, Mech w/o impact	65	°C	UL 746B
Mold Shrinkage, flow, 3.2 mm 0.5 – 0.7 % SABIC method Density 1.11 g/cm³ ISO 1183 Water Absorption, (23°C/sat) 0.18 % ISO 62 Moisture Absorption (23°C / 50% RH) 0.05 % ISO 62	PHYSICAL			
Density 1.11 g/cm³ ISO 1183 Water Absorption, (23°C/sat) 0.18 % ISO 62 Moisture Absorption (23°C / 50% RH) 0.05 % ISO 62	Specific Gravity	1.11	-	ASTM D 792
Water Absorption, (23°C/sat) 0.18 % ISO 62 Moisture Absorption (23°C / 50% RH) 0.05 % ISO 62	Mold Shrinkage, flow, 3.2 mm	0.5 - 0.7	%	SABIC method
Moisture Absorption (23°C / 50% RH) 0.05 % ISO 62	Density	1.11	g/cm³	ISO 1183
	Water Absorption, (23°C/sat)	0.18	%	ISO 62
Melt Volume Rate, MVR at 280°C/1.2 kg 17 cm³/10 min ISO 1133	Moisture Absorption (23°C / 50% RH)	0.05	%	ISO 62
	Melt Volume Rate, MVR at 280°C/1.2 kg	17	cm³/10 min	ISO 1133



PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Melt Volume Rate, MVR at 280°C/2.16 kg	48	cm³/10 min	ISO 1133
FLAME CHARACTERISTICS			
UL Compliant, 94V-1 Flame Class Rating	1.5	mm	UL 94 by SABIC-IP
INJECTION MOLDING			
Drying Temperature	70 – 80	°C	
Drying Time	2 – 3	hrs	
Melt Temperature	250 – 285	°C	
Nozzle Temperature	240 – 270	°C	
Front - Zone 3 Temperature	250 – 285	°C	
Middle - Zone 2 Temperature	230 – 260	°C	
Rear - Zone 1 Temperature	200 – 220	°C	
Hopper Temperature	60 – 80	°C	
Mold Temperature	40 – 65	°C	

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