

LNPTM ELCRINTM DX23A1RC1

ER017028

DESCRIPTION

LNP ELCRIN DX23A1RC1 compound is based on recycled polycarbonate (PC) resin containing a total of 75% recycled content with up to 25% post-consumer recycled (PCR) polycarbonate content and 50% pre-consumer recycled glass fiber content. No PFAS intentionally added. Added features of this grade include: high modulus, non-brominated and non-chlorinated flame retardant. Available in black color only.

INDUSTRY	SUB INDUSTRY
Consumer	Personal Accessory
Electrical and Electronics	Electronic Components

TYPICAL PROPERTY VALUES

Revision 20250715

Tensile Modulus, 1 mm/min 15700 MPa ISO 178 Flexural Stress, break, 2 mm/min 251 MPa ISO 178 Flexural Modulus, 2 mm/min 15500 MPa ISO 178 Tensile Stress, brik, Type I, 5 mm/min 164 MPa ASTM D638 Tensile Strain, brk, Type I, 5 mm/min 14700 MPa ASTM D638 Flexural Modulus, 5 mm/min 15000 MPa ASTM D638 Flexural Modulus, 1.3 mm/min, 50 mm span 15000 MPa ASTM D638 Flexural Modulus, 1.3 mm/min, 50 mm span 15000 MPa ASTM D638 Flexural Modulus, 1.3 mm/min, 50 mm span 15000 MPa ASTM D638 Impact, unotched 80°10°4 + 23°C 14 J/m² ISO 180/1A Izod Impact, unotched 80°10°4 + 23°C 42 J/m² ISO 180/1A Izod Impact, unnotched 80°10°4 - 30°C 46 J/m² ASTM D4812 Izod Impact, unnotched, 30°C 740 J/m² ASTM D4812 Izod Impact, unnotched, 30°C 120 J/m² ASTM D256 Izod Impact, notched, 30°C 120	PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Tensile Stress, break, 5 mm/min 168 MPa ISO 527 Tensile Strain, break, 5 mm/min 2.0 % ISO 527 Tensile Modulus, 1 mm/min 15700 MPa ISO 527 Tensile Modulus, 2 mm/min 15500 MPa ISO 178 Flexural Modulus, 2 mm/min 15500 MPa ASTM DG38 Tensile Stress, brk, Type I, 5 mm/min 164 MPa ASTM DG38 Tensile Stress, brk, Type I, 5 mm/min 14700 MPa ASTM DG38 Tensile Modulus, 2 mm/min, 50 mm span 14700 MPa ASTM DG38 Tensile Modulus, 1, 3 mm/min, 50 mm span 14000 MPa ASTM DG38 Tensile Modulus, 2 mm/min 14000 MPa ASTM DG38 Tensile Stream, John Mymin, 50 mm span 14000 MPa ASTM DG38 Tensile Stream, John Mymin, 50 mm span 14000 MPa ASTM DG38 Tensile Stream, John Mymin, 50 mm span 14000 MPa ASTM DG38 Light MpACT 15000 MPa ASTM DG38 Light MpACT 15000 MPa ASTM DG38	(1)			
Tensile Strain, break, 5 mm/min 2.0 % ISO 527 Tensile Modulus, 1 mm/min 15700 MPa ISO 527 Flexural Stress, break, 2 mm/min 2510 MPa ISO 178 Tensile Stress, break, 2 mm/min 15500 MPa ISO 178 Tensile Stress, brk, Type I, 5 mm/min 164 MPa ASTM D638 Tensile Modulus, 5 mm/min 14700 MPa ASTM D638 Tensile Modulus, 1.3 mm/min, 50 mm span 15000 MPa ASTM D638 Flexural Modulus, 3.3 mm/min, 50 mm span 16000 MPa ASTM D638 Flexural Modulus, 1.3 mm/min, 50 mm span 16000 MPa ASTM D638 Flexural Modulus, 1.3 mm/min, 50 mm span 16000 MPa ASTM D638 Flexural Modulus, 1.3 mm/min, 50 mm span 16000 MPa ASTM D638 Flexural Modulus, 1.3 mm/min, 50 mm span 16000 MPa ASTM D638 Flexural Modulus, 1.3 mm/min, 50 mm span 16000 MPa ASTM D638 Flexural Modulus, 1.3 mm/min, 50 mm span 16000 MPa ASTM D638 Breat March 1014 + 23°C <td></td> <td></td> <td></td> <td></td>				
Tensile Modulus, 1 mm/min 15700 MPa ISO 527 Flexural Stress, break, 2 mm/min 251 MPa ISO 178 Flexural Modulus, 2 mm/min 15500 MPa ISO 178 Tensile Stress, brk, Type I, 5 mm/min 164 MPa ASTM D638 Tensile Stress, brk, Type I, 5 mm/min 14700 MPa ASTM D638 Tensile Modulus, 5 mm/min 14700 MPa ASTM D638 Flexural Modulus, 1.3 mm/min, 50 mm span 15000 MPa ASTM D638 MPACT ¹¹ ISO 180/104 MPa ASTM D638 Impact of Impact, notiched 80°10°4 +23°C 14 Iso 180/104 Iso 180/104 Izod Impact, unnotched 80°10°4 -23°C 42 Id/m² ISO 180/104 Izod Impact, unnotched 80°10°4 -23°C 46 IJ/m² ASTM D4812 Izod Impact, unnotched, 23°C 46 IJ/m² ASTM D4812 Izod Impact, notched, 23°C 130 IJ/m² ASTM D256 Izod Impact, notched, 23°C 20 IJ/m² ASTM D256 Izod Impact, notched, 23°C 20 IJ/m² <t< td=""><td>Tensile Stress, break, 5 mm/min</td><td>168</td><td>MPa</td><td>ISO 527</td></t<>	Tensile Stress, break, 5 mm/min	168	MPa	ISO 527
Flexural Stress, break, 2 mm/min 251 MPa ISO 178 Flexural Modulus, 2 mm/min 15500 MPa ISO 178 Tensile Stress, brk, Type I, 5 mm/min 164 MPa ASTM D638 Tensile Stress, brk, Type I, 5 mm/min 2.1 % ASTM D638 Tensile Modulus, 5 mm/min 14700 MPa ASTM D638 Elexural Modulus, 1.3 mm/min, 50 mm span 15000 MPa ASTM D638 Impact Till W W ASTM D638 Impact Total Elexural Modulus, 1.3 mm/min, 50 mm span 15000 MPa ASTM D638 Impact Total Elexural Modulus, 1.3 mm/min, 50 mm span 15000 MPa ASTM D638 Impact Total Elexural Modulus, 1.3 mm/min, 50 mm span 15000 MPa ASTM D638 Impact Total Elexural Modulus, 1.3 mm/min, 50 mm span 15000 MPa ASTM D638 Impact Total Elexural Modulus, 1.3 mm/min, 50 mm span 164 MI/m² ISO 180/1A Izod Impact, notched 80*10*4 +23*C 42 MI/m² ISO 180/1A Izod Impact, notched 80*10*4-30*C 46 MI/m² ASTM D4812	Tensile Strain, break, 5 mm/min	2.0	%	ISO 527
Flexural Modulus, 2 mm/min 15500 MPa ISO 178 Tensile Stress, brk, Type I, 5 mm/min 164 MPa ASTM D638 Tensile Strain, brk, Type I, 5 mm/min 2.1 % ASTM D638 Tensile Modulus, 5 mm/min 14700 MPa ASTM D638 Elexural Modulus, 1.3 mm/min, 50 mm span 15000 MPa ASTM D638 IMPACT **** ***** ****** ASTM D638 IMPACT **** ***** ASTM D638 ***** IMPACT **** ***** ***** ASTM D638 IMPACT **** ***** ***** ***** ****** IMPACT **** **** ISO 180/1A ***** ***** ***** IMPACT **** **** ISO 180/1A **** ISO 180/1A **** **** **** **** ISO 180/1A **** *** ISO 180/1A *** *** ISO 180/1A	Tensile Modulus, 1 mm/min	15700	MPa	ISO 527
Tensile Stress, brk, Type I, 5 mm/min 164 MPa ASTM D638 Tensile Strain, brk, Type I, 5 mm/min 2.1 % ASTM D638 Tensile Modulus, 5 mm/min 14700 MPa ASTM D638 Elexaral Modulus, 1.3 mm/min, 50 mm span 15000 MPa ASTM D638 IMPACT. ¹¹ VISCALIAN MERITA MERIT	Flexural Stress, break, 2 mm/min	251	MPa	ISO 178
Tensile Strain, brk, Type I, 5 mm/min 2.1 % ASTM D638 Tensile Modulus, 5 mm/min 14700 MPa ASTM D638 Flexural Modulus, 1.3 mm/min, 50 mm span 15000 MPa ASTM D790 IMPACT ⁽¹⁾ SUBMEAT SUBMEAT SUBMEAT Izod Impact, notched 80°10°4 +23°C 14 kl/m² ISO 180/1A Izod Impact, unnotched 80°10°4 -30°C 42 kl/m² ISO 180/1U Izod Impact, unnotched 80°10°4 -30°C 42 kl/m² ISO 180/1U Izod Impact, unnotched 80°10°4 -30°C 640 kl/m² SIN 180/1U Izod Impact, unnotched, -30°C 740 l/m ASTM D4812 Izod Impact, unnotched, -30°C 130 l/m ASTM D256 Izod Impact, notched, -30°C 22 J ASTM D256 Izod Impact, notched, 30°C 120 J/m² ASTM D256 Izod Impact, notched, 30°C 22 J ASTM D256 Izod Impact, notched, 30°C 12 kl/m² ISO 179/1eA Charpy 33°C, V-notch Edgew 80°10°4 sp=62mm 14 kl/m² I	Flexural Modulus, 2 mm/min	15500	MPa	ISO 178
Tensile Modulus, 5 mm/min 14700 MPa ASTM D638 Flexural Modulus, 1,3 mm/min, 50 mm span 15000 MPa ASTM D790 IMPACT (¹) IMPAC	Tensile Stress, brk, Type I, 5 mm/min	164	MPa	ASTM D638
Flexural Modulus, 1.3 mm/min, 50 mm span 15000 MPa ASTM D790 MPACT (1) Izod Impact, notched 80*10*4+23°C 14 16 16 17 18 18 18 18 18 18 18	Tensile Strain, brk, Type I, 5 mm/min	2.1	%	ASTM D638
Italian Ital	Tensile Modulus, 5 mm/min	14700	MPa	ASTM D638
Izod Impact, notched 80°10°4 +23°C 14 kJ/m² ISO 180/1A Izod Impact, notched 80°10°4 -30°C 12 kJ/m² ISO 180/1A Izod Impact, unnotched 80°10°4 -23°C 42 kJ/m² ISO 180/1U Izod Impact, unnotched 80°10°4 -30°C 660 J/m ASTM D4812 Izod Impact, unnotched, 23°C 740 J/m ASTM D256 Izod Impact, notched, 23°C 130 J/m ASTM D256 Izod Impact, notched, -30°C 120 J/m ASTM D256 Instrumented Impact Total Energy, 23°C 22 J ASTM D3763 Charpy 23°C, V-notch Edgew 80°10°4 sp=62mm 14 kJ/m² ISO 179/1eA Charpy -30°C, V-notch Edgew 80°10°4 sp=62mm 12 kJ/m² ISO 179/1eA Charpy -30°C, Unnotch Edgew 80°10°4 sp=62mm 43 kJ/m² ISO 179/1eU Charpy -30°C, Unnotch Edgew 80°10°4 sp=62mm 50 kJ/m² ISO 179/1eU THERMAL (1) L KJ/m² ISO 179/1eU THERMAL (1) L C ISO 75/Bf HDT/Af, 1.8 MPa Flatw 80°10°4 sp=64mm 111	Flexural Modulus, 1.3 mm/min, 50 mm span	15000	MPa	ASTM D790
Izod Impact, notched 80°10°4 -30°C 12 Izod Ixim² Iso 180/1A Izod Impact, unnotched 80°10°4 -23°C 42 Ixim² Iso 180/1U Izod Impact, unnotched 80°10°4 -30°C 46 Ixim² Iso 180/1U Izod Impact, unnotched, 23°C 50 180/1U Izod Impact, unnotched, 23°C 740 I/m ASTM D4812 Izod Impact, unnotched, 23°C 130 I/m ASTM D4812 Izod Impact, notched, 23°C 120 I/m ASTM D256 Izod Impact, notched, -30°C 120 I/m ASTM D256 Izod Impact, notched, -30°C 120 I/m ASTM D256 Ixim² ASTM D256 Ixim² Iso 179/1eA Iso 179/1eU Ito 179/1eU Ito 179/1eA Iso 179/1eA Iso 179/1eU Ito 179/1eA Iso 179/1eA Iso 179/1eA Iso 179/1eU Ito 179/1eA Iso 179/1eA Iso 179/1eU Ito 179/1eA Iso 179/1eA Is	IMPACT (1)			
Izod Impact, unnotched 80°10°4 +23°C 42 kl/m² ISO 180/1U Izod Impact, unnotched 80°10°4 -30°C 46 kl/m² ISO 180/1U Izod Impact, unnotched, 23°C 640 J/m ASTM D4812 Izod Impact, unnotched, -30°C 740 J/m ASTM D4812 Izod Impact, notched, -30°C 130 J/m ASTM D256 Izod Impact, notched, -30°C 120 J/m ASTM D256 Instrumented Impact Total Energy, 23°C 22 J ASTM D3763 Charpy 23°C, V-notch Edgew 80°10°4 sp=62mm 14 kl/m² ISO 179/1eA Charpy -30°C, V-notch Edgew 80°10°4 sp=62mm 43 kl/m² ISO 179/1eA Charpy -30°C, Unnotch Edgew 80°10°4 sp=62mm 43 kl/m² ISO 179/1eU Charpy -30°C, Unnotch Edgew 80°10°4 sp=62mm 50 Kl/m² ISO 179/1eU Charpy -30°C, Unnotch Edgew 80°10°4 sp=62mm 50 Kl/m² ISO 179/1eU Charpy -30°C, Unnotch Edgew 80°10°4 sp=64mm 111 °C ISO 75/Bf HDT/Bf, 0.45 MPa Flatw 80°10°4 sp=64mm 104 °C ISO 75/Bf HDT/Af, 1.8 MPa Flatw 80°10°4 sp=64mm 104 °C ASTM D1525 Vicat Softening Temp, Rate B/120 114 °C ASTM D1525 Vicat Softening Temp, Rate B/120 114 °C ASTM D1525 Vicat Softening Temp, Rate B/120 114 °C ASTM D1525 Vicat Softening Temp, Rate B/120 114 °C ASTM D1525 Vicat Softening Temp, Rate B/120 114 °C ASTM D1525 Vicat Softening Temp, Rate B/120 114 °C ASTM D1525 Vicat Softening Temp, Rate B/120 114 °C ASTM D1525 Vicat Softening Temp, Rate B/120 114 °C ASTM D1525 Vicat Softening Temp, Rate B/120 114 °C ASTM D1525 Vicat Softening Temp, Rate B/120 114 °C ASTM D1525 Vicat Softening Temp, Rate B/120 114 °C ASTM D1525 Vicat Softening Temp, Rate B/120 114 °C ASTM D1525 Vicat Softening Temp, Rate B/120 114 °C ASTM D1525 Vicat Softening Temp, Rate B/120 114 °C ASTM D1525 Vicat Softening Temp, Rate B/120 114 °C ASTM D1525 Vicat Softening Temp, Rate B/120 114 Vicat Softening Temp, Rate B/120 114 Vicat Softening Temp, Rate B/120 114 V	Izod Impact, notched 80*10*4 +23°C	14	kJ/m²	ISO 180/1A
Izod Impact, unnotched 80*10*4 -30°C 46 kJ/m² ISO 180/1U Izod Impact, unnotched, 23°C 640 J/m ASTM D4812 Izod Impact, unnotched, -30°C 740 J/m ASTM D4812 Izod Impact, notched, -30°C 130 J/m ASTM D256 Izod Impact, notched, -30°C 120 J/m ASTM D256 Instrumented Impact Total Energy, 23°C 22 J ASTM D3763 Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm 14 kJ/m² ISO 179/1eA Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm 12 kJ/m² ISO 179/1eA Charpy -30°C, Unnotch Edgew 80*10*4 sp=62mm 43 kJ/m² ISO 179/1eU Charpy -30°C, Unnotch Edgew 80*10*4 sp=62mm 50 kJ/m² ISO 179/1eU THERMAL (1) L L L L HDT/8f, 0.45 MPa Flatw 80*10*4 sp=64mm 111 °C ISO 75/8f HDT/8f, 1.8 MPa Flatw 80*10*4 sp=64mm 104 °C ASTM D1525 Vicat Softening Temp, Rate B/50 111 °C ASTM D1525	Izod Impact, notched 80*10*4 -30°C	12	kJ/m²	ISO 180/1A
Izod Impact, unnotched, 23°C 640 J/m ASTM D4812 Izod Impact, unnotched, -30°C 740 J/m ASTM D4812 Izod Impact, notched, 23°C 130 J/m ASTM D256 Izod Impact, notched, -30°C 120 J/m ASTM D256 Instrumented Impact Total Energy, 23°C 22 J ASTM D3763 Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm 14 KJ/m² ISO 179/1eA Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm 12 KJ/m² ISO 179/1eU Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm 43 KJ/m² ISO 179/1eU Charpy 30°C, Unnotch Edgew 80*10*4 sp=62mm 50 KJ/m² ISO 179/1eU THERMAL (1) ** ** ** ISO 179/1eU THERMAL (1) ** ** ISO 75/8f ** HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm 104 ** ** ISO 75/Af HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm 104 ** ** ISO 75/Af HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm 104 ** ** ASTM D1525	Izod Impact, unnotched 80*10*4 +23°C	42	kJ/m²	ISO 180/1U
Izod Impact, unnotched, -30°C 740 74	Izod Impact, unnotched 80*10*4 -30°C	46	kJ/m²	ISO 180/1U
Izod Impact, notched, 23°C 130 J/m ASTM D256 Izod Impact, notched, -30°C 120 J/m ASTM D256 Instrumented Impact Total Energy, 23°C 22 J ASTM D3763 Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm 14 kJ/m² ISO 179/1eA Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm 12 kJ/m² ISO 179/1eU Charpy -30°C, Unnotch Edgew 80*10*4 sp=62mm 43 kJ/m² ISO 179/1eU Charpy -30°C, Unnotch Edgew 80*10*4 sp=62mm 50 kJ/m² ISO 179/1eU THERMAL (1) HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm 111 °C ISO 75/Bf HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm 104 °C ISO 75/Af Vicat Softening Temp, Rate B/50 111 °C ASTM D1525 Vicat Softening Temp, Rate B/120 114 °C ASTM D1525	Izod Impact, unnotched, 23°C	640	J/m	ASTM D4812
Izod Impact, notched, -30°C 120 J/m ASTM D256 Instrumented Impact Total Energy, 23°C 22 J ASTM D3763 Charpy 23°C, V-notch Edgew 80°10°4 sp=62mm 14 kJ/m² ISO 179/1eA Charpy -30°C, V-notch Edgew 80°10°4 sp=62mm 12 kJ/m² ISO 179/1eU Charpy -30°C, Unnotch Edgew 80°10°4 sp=62mm 43 kJ/m² ISO 179/1eU Charpy -30°C, Unnotch Edgew 80°10°4 sp=62mm 50 kJ/m² ISO 179/1eU THERMAL (¹¹) ** ** ISO 179/1eU HDT/Bf, 0.45 MPa Flatw 80°10°4 sp=64mm 111 **C ISO 75/Bf HDT/Af, 1.8 MPa Flatw 80°10°4 sp=64mm 104 **C ASTM D1525 Vicat Softening Temp, Rate B/50 111 **C ASTM D1525	Izod Impact, unnotched, -30°C	740	J/m	ASTM D4812
Instrumented Impact Total Energy, 23°C 22 J ASTM D3763 Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm 14 kJ/m² ISO 179/1eA Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm 12 kJ/m² ISO 179/1eA Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm 43 kJ/m² ISO 179/1eU Charpy -30°C, Unnotch Edgew 80*10*4 sp=62mm 50 kJ/m² ISO 179/1eU THERMAL (¹¹) HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm 111 °C ISO 75/Bf HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm 104 °C ISO 75/Af Vicat Softening Temp, Rate B/50 111 °C ASTM D1525 Vicat Softening Temp, Rate B/120 114 °C ASTM D1525	Izod Impact, notched, 23°C	130	J/m	ASTM D256
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm 14 kJ/m² ISO 179/1eA Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm 12 kJ/m² ISO 179/1eA Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm 43 kJ/m² ISO 179/1eU Charpy -30°C, Unnotch Edgew 80*10*4 sp=62mm 50 kJ/m² ISO 179/1eU THERMAL ⁽¹⁾ HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm 111 °C ISO 75/Bf HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm 104 °C ISO 75/Af Vicat Softening Temp, Rate B/50 111 °C ASTM D1525 Vicat Softening Temp, Rate B/120 114 °C ASTM D1525	Izod Impact, notched, -30°C	120	J/m	ASTM D256
Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm 12 kJ/m² ISO 179/1eA Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm 43 kJ/m² ISO 179/1eU Charpy -30°C, Unnotch Edgew 80*10*4 sp=62mm 50 kJ/m² ISO 179/1eU THERMAL (¹) HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm 111 °C ISO 75/Bf HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm 104 °C ISO 75/Af Vicat Softening Temp, Rate B/50 111 °C ASTM D1525 Vicat Softening Temp, Rate B/120 114 °C ASTM D1525	Instrumented Impact Total Energy, 23°C	22	J	ASTM D3763
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm 43 kJ/m² ISO 179/1eU Charpy -30°C, Unnotch Edgew 80*10*4 sp=62mm 50 kJ/m² ISO 179/1eU THERMAL (¹) HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm 111 °C ISO 75/Bf HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm 104 °C ISO 75/Af Vicat Softening Temp, Rate B/50 111 °C ASTM D1525 Vicat Softening Temp, Rate B/120 114 °C ASTM D1525	Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	14	kJ/m²	ISO 179/1eA
Charpy -30°C, Unnotch Edgew 80°10°4 sp=62mm 50 kJ/m² ISO 179/1eU THERMAL ⁽¹⁾ HDT/Bf, 0.45 MPa Flatw 80°10°4 sp=64mm 111 °C ISO 75/Bf HDT/Af, 1.8 MPa Flatw 80°10°4 sp=64mm 104 °C ISO 75/Af Vicat Softening Temp, Rate B/50 111 °C ASTM D1525 Vicat Softening Temp, Rate B/120 114 °C ASTM D1525	Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm	12	kJ/m²	ISO 179/1eA
THERMAL (1) HDT / Bf, 0.45 MPa Flatw 80*10*4 sp=64mm 111 °C ISO 75 / Bf HDT / Af, 1.8 MPa Flatw 80*10*4 sp=64mm 104 °C ISO 75 / Af Vicat Softening Temp, Rate B / 50 111 °C ASTM D1525 Vicat Softening Temp, Rate B / 120 114 °C ASTM D1525	Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	43	kJ/m²	ISO 179/1eU
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm 111 °C ISO 75/Bf HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm 104 °C ISO 75/Af Vicat Softening Temp, Rate B/50 111 °C ASTM D1525 Vicat Softening Temp, Rate B/120 114 °C ASTM D1525	Charpy -30°C, Unnotch Edgew 80*10*4 sp=62mm	50	kJ/m²	ISO 179/1eU
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm 104 °C ISO 75/Af Vicat Softening Temp, Rate B/50 111 °C ASTM D1525 Vicat Softening Temp, Rate B/120 114 °C ASTM D1525	THERMAL (1)			
Vicat Softening Temp, Rate B/50 111 °C ASTM D1525 Vicat Softening Temp, Rate B/120 114 °C ASTM D1525	HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	111	°C	ISO 75/Bf
Vicat Softening Temp, Rate B/120 114 °C ASTM D1525	HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	104	°C	ISO 75/Af
	Vicat Softening Temp, Rate B/50	111	°C	ASTM D1525
HDT, 0.45 MPa, 3.2 mm, unannealed 110 °C ASTM D648	Vicat Softening Temp, Rate B/120	114	°C	ASTM D1525
	HDT, 0.45 MPa, 3.2 mm, unannealed	110	°C	ASTM D648



PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
HDT, 1.82 MPa, 3.2mm, unannealed	104	°C	ASTM D648
CTE, -40°C to 40°C, flow	1.4E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	5.4E-05	1/°C	ASTM E831
PHYSICAL (1)			
Density	1.64	g/cm³	ISO 1183
Moisture Absorption (23°C / 50% RH)	0.01	%	ISO 62
Melt Volume Rate, MVR at 300°C/2.16 kg	11	cm³/10 min	ISO 1133
Melt Volume Rate, MVR at 300°C/5.0 kg	45	cm³/10 min	ISO 1133
Specific Gravity	1.65	-	ASTM D792
Mold Shrinkage, flow ⁽²⁾	0.1 – 0.3	%	SABIC method
Mold Shrinkage, xflow (2)	0.1 – 0.3	%	SABIC method
Melt Flow Rate, 300°C/2.16 kgf	14	g/10 min	ASTM D1238
Melt Flow Rate, 300°C/5.0 kgf	50	g/10 min	ASTM D1238
ELECTRICAL (1)			
Dielectric Constant			
2.5 GHz	3.91	-	SABIC method
5 GHz	3.93	-	SABIC method
Dissipation Factor			
2.5 GHz	0.008	-	SABIC method
5 GHz	0.008	-	SABIC method
FLAME CHARACTERISTICS (3)			
UL Yellow Card Link	<u>E207780</u>	-	-
UL Recognized, 94V-0 Flame Class Rating	1.5	mm	UL 94
UL Recognized, 94V-1 Flame Class Rating	0.6	mm	UL 94
INJECTION MOLDING (4)			
Drying Temperature	110	°C	
Drying Time (Cumulative)	12	Hrs	
Drying Time	3 – 6	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	285 – 310	°C	
Rear - Zone 1 Temperature	260 – 280	°C	
Middle - Zone 2 Temperature	270 – 290	°C	
Front - Zone 3 Temperature	280 – 300	°C	
Nozzle Temperature	285 – 305	°C	
Mold Temperature	80 – 110	°C	
Back Pressure	0.1 – 0.3	MPa	
Screw Speed	50 – 90	rpm	

⁽¹⁾ The information stated on Technical Datasheets should be used as indicative only for material selection purposes and not be utilized as specification or used for part or tool design.

⁽²⁾ Measurements made from laboratory test coupon. Actual shrinkage may vary outside of range due to differences in processing conditions, equipment, part geometry and tool design. It is recommended that mold shrinkage studies be performed with surrogate or legacy tooling prior to cutting tools for new molded articles.

⁽³⁾ UL Ratings shown on the technical datasheet might not cover the full range of thicknesses and colors. For details, please see the UL Yellow Card.

⁽⁴⁾ Injection Molding parameters are only mentioned as general guidelines. These may not apply or may need adjustment in specific situations such as low shot sizes, large part molding, thin wall molding and gas-assist molding.



ADDITIONAL PRODUCT NOTES

No PFAS intentionally added: The grade listed in this document does not contain PFAS intentionally added during Seller's manufacturing process and is not expected to contain unintentionally PFAS impurities. Each user is responsible for evaluating the presence of unintentional PFAS impurities.

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