LNP™ STAT-KON™ COMPOUND DX05042

DESCRIPTION

LNP STAT-KON DX05042 compound is based on Polycarbonate (PC) resin containing 10% PTFE, 20% carbon fiber, 5% glass fiber. Added features of this grade include: Electrically Conductive, Wear Resistant, Easy Molding.

GENERAL INFORMATION	
Features	Electrically Conductive, Good Processability, Wear resistant, Carbon fiber filled, High stiffness/Strength
Fillers	Carbon Fiber, Glass Fiber, PTFE
Polymer Types	Polycarbonate (PC)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Electrical and Electronics	Electronic Components
Industrial	Material Handling

TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, break, 5 mm/min	167	MPa	ISO 527
Tensile Strain, break, 5 mm/min	2.1	%	ISO 527
Tensile Modulus, 1 mm/min	16400	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	256	MPa	ISO 178
Flexural Modulus, 2 mm/min	14100	MPa	ISO 178
Tensile Stress, brk, Type I, 5 mm/min	169	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	2.4	%	ASTM D638
Tensile Modulus, 5 mm/min	16400	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	248	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	13100	MPa	ASTM D790
IMPACT [1]			
Izod Impact, notched 80*10*4 +23°C	11	kJ/m²	ISO 180/1A
Izod Impact, unnotched 80*10*4 +23°C	45	kJ/m²	ISO 180/1U
Izod Impact, notched, 23°C	100	J/m	ASTM D256
Izod Impact, unnotched, 23°C	640	J/m	ASTM D4812
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	11	kJ/m²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	45	kJ/m²	ISO 179/1eU
THERMAL [1]			
Vicat Softening Temp, Rate B/50	143	°C	ISO 306
Vicat Softening Temp, Rate B/50	143	°C	ASTM D1525
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	144	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	137	°C	ISO 75/Af
HDT, 1.82 MPa, 3.2mm, unannealed	135	°C	ASTM D648

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
CTE, 23°C to 80°C, flow	1.0E-05	1/°C	ISO 11359-2
CTE, 23°C to 80°C, xflow	8.4E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, flow	0.8E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	7.5E-05	1/°C	ASTM E831
PHYSICAL (1)			
Mold Shrinkage, flow (2)	0.2 – 0.4	%	SABIC method
Mold Shrinkage, xflow (2)	0.4	%	SABIC method
Density	1.37	g/cm³	ISO 1183
Moisture Absorption (23°C / 50% RH)	0.08	%	ISO 62
Moisture Absorption, (23°C/50% RH/24 hrs)	0.02	%	ASTM D570
Water Absorption, (23°C/24hrs)	0.15	%	ASTM D570
Water Absorption, (23°C/saturated)	0.27	%	ISO 62-1
Wear Factor Washer	36	10^-10 in^5-min/ft-lb-hr	ASTM D3702 Modified: Manual
Dynamic COF	0.23	-	ASTM D3702 Modified: Manual
Static COF	0.39	-	ASTM D3702 Modified: Manual
ELECTRICAL (1)			
Surface Resistivity (3)	1.E+02 – 1.E+03	Ω	ASTM D257
INJECTION MOLDING (4)			
Drying Temperature	120	°C	
Drying Time	4	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	305 – 325	°C	
Front - Zone 3 Temperature	320 – 330	°C	
Middle - Zone 2 Temperature	310 – 320	°C	
Rear - Zone 1 Temperature	295 – 305	°C	
Mold Temperature	80 – 110	°C	
Back Pressure	0.2 – 0.3	MPa	
Screw Speed	30 – 60	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 article.

(3) Measurement meets requirements as specified in ASTM D4496.

(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.

DISCLAIMER