

LNPTM STAT-KONTM COMPOUND DEL33EC

DCL-4033 EM CCS

DESCRIPTION

LNP STAT-KON DEL33EC compound is based on Polycarbonate (PC) resin containing 15% carbon fiber, 15% PTFE. Added features of this grade include: LNP Clean Compounding Technology, Electrically Conductive, Wear Resistant, Easy Molding.

GENERAL INFORMATION

Features	Electrically Conductive, Good Processability, Wear resistant, Low ionics/Outgassing/Liquid particle count, Carbon fiber filled, High stiffness/Strength
Fillers	Carbon Fiber, PTFE
Polymer Types	Polycarbonate (PC)
Processing Techniques	Injection Molding

INDUSTRY

Electrical and Electronics
Industrial

SUB INDUSTRY

Electronic Components, Mobile Phone - Computer - Tablets
Electrical, Material Handling

TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL ⁽¹⁾			
Tensile Stress, break	97	MPa	ASTM D638
Tensile Strain, break	3.2	%	ASTM D638
Tensile Modulus, 50 mm/min	8480	MPa	ASTM D638
Flexural Stress	159	MPa	ASTM D790
Flexural Modulus	7300	MPa	ASTM D790
Tensile Stress, break	96	MPa	ISO 527
Tensile Strain, break	3.4	%	ISO 527
Tensile Modulus, 1 mm/min	7890	MPa	ISO 527
Flexural Stress	160	MPa	ISO 178
Flexural Modulus	7840	MPa	ISO 178
IMPACT ⁽¹⁾			
Izod Impact, unnotched, 23°C	415	J/m	ASTM D4812
Izod Impact, notched, 23°C	84	J/m	ASTM D256
Instrumented Dart Impact Energy @ peak, 23°C	15	J	ASTM D3763
Multiaxial Impact	4	J	ISO 6603
Izod Impact, unnotched 80°10°4 +23°C	33	kJ/m²	ISO 180/1U
Izod Impact, notched 80°10°4 +23°C	8	kJ/m²	ISO 180/1A
THERMAL ⁽¹⁾			
HDT, 0.45 MPa, 3.2 mm, unannealed	145	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	141	°C	ASTM D648
CTE, -40°C to 40°C, flow	1.8E-05	1/°C	ASTM E831

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
CTE, -40°C to 40°C, xflow	4.64E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, flow	1.8E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	4.68E-05	1/°C	ISO 11359-2
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	146	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	141	°C	ISO 75/Af
Relative Temp Index, Elec ⁽²⁾	80	°C	UL 746B
Relative Temp Index, Mech w/impact ⁽²⁾	80	°C	UL 746B
Relative Temp Index, Mech w/o impact ⁽²⁾	80	°C	UL 746B
PHYSICAL ⁽¹⁾			
Density	1.34	g/cm ³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.15	%	ASTM D570
Mold Shrinkage, flow, 24 hrs ⁽³⁾	0.1	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs ⁽³⁾	0.5	%	ASTM D955
Mold Shrinkage, flow, 24 hrs ⁽³⁾	0.14	%	ISO 294
Mold Shrinkage, xflow, 24 hrs ⁽³⁾	0.46	%	ISO 294
Moisture Absorption (23°C / 50% RH)	0.21	%	ISO 62
ELECTRICAL ⁽¹⁾			
Surface Resistivity ⁽⁴⁾	1.E+02 – 1.E+06	Ω	ASTM D257
FLAME CHARACTERISTICS ⁽²⁾			
UL Yellow Card Link	E207780-101977558	-	-
UL Recognized, 94HB Flame Class Rating	≥1	mm	UL 94
INJECTION MOLDING ⁽⁵⁾			
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) 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.

(3) 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.

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

(5) 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

Any sale by SABIC, its subsidiaries and affiliates (each a "seller"), is made exclusively under seller's standard conditions of sale (available upon request) unless agreed otherwise in writing and signed on behalf of the seller. While the information contained herein is given in good faith, SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, INCLUDING MERCHANTABILITY AND NON-INFRINGEMENT OF INTELLECTUAL PROPERTY, NOR ASSUMES ANY LIABILITY, DIRECT OR INDIRECT, WITH RESPECT TO THE PERFORMANCE, SUITABILITY OR FITNESS FOR INTENDED USE OR PURPOSE OF THESE PRODUCTS IN ANY APPLICATION. Each customer must determine the suitability of seller materials for the customer's particular use through appropriate testing and analysis. No statement by seller concerning a possible use of any product, service or design is intended, or should be construed, to grant any license under any patent or other intellectual property right.

© 2023 Copyright by SABIC. All rights reserved

CHEMISTRY THAT MATTERS™