

LNP™ THERMOCOMP™ UCF22S compound

Polyphthalamide

SABIC Innovative Plastics

Message:

LNP THERMOCOMP UCF22S is a compound based on Polyphthalamide resin containing 20% Glass Fiber, 10% Carbon Fiber. Added features of this material include: Heat Stabilized, Electrically Conductive.

Also known as: LNP* THERMOCOMP* Compound UCF-1004 HS

Product reorder name: UCF22S

General Information			
Filler / Reinforcement	Carbon Fiber,10% Filler by Weight		
	Glass Fiber,20% Filler by Weight		
Additive	Heat Stabilizer		
Features	Electrically Conductive		
	Heat Stabilized		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.31	g/cm ³	ASTM D792
Molding Shrinkage			ASTM D955
Flow : 24 hr	0.10 to 0.30	%	
Across Flow : 24 hr	0.50 to 0.70	%	
Water Absorption			
24 hr, 50% RH	0.34	%	ASTM D570
Equilibrium, 23°C, 50% RH	0.56	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	13000	MPa	ASTM D638
--	12800	MPa	ISO 527-2/1
Tensile Strength			
Break ²	188	MPa	ASTM D638
Break	178	MPa	ISO 527-2/5
Tensile Elongation			
Break ³	1.7	%	ASTM D638
Break	1.6	%	ISO 527-2/5
Flexural Modulus			
50.0 mm Span ⁴	10800	MPa	ASTM D790
-- ⁵	10400	MPa	ISO 178
Flexural Stress			
--	249	MPa	ISO 178

Break, 50.0 mm Span ⁶	264	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			
23°C	52	J/m	ASTM D256
23°C ⁷	5.5	kJ/m ²	ISO 180/1A
Unnotched Izod Impact			
23°C	420	J/m	ASTM D4812
23°C ⁸	28	kJ/m ²	ISO 180/1U
Instrumented Dart Impact			
23°C, Total Energy	5.00	J	ASTM D3763
--	1.80	J	ISO 6603-2
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, Unannealed, 3.20 mm	280	°C	ASTM D648
0.45 MPa, Unannealed, 64.0 mm Span ⁹	275	°C	ISO 75-2/Bf
1.8 MPa, Unannealed, 3.20 mm	262	°C	ASTM D648
1.8 MPa, Unannealed, 64.0 mm Span ¹⁰	255	°C	ISO 75-2/Af
CLTE			ASTM D696
Flow : -30 to 30°C	4.7E-5	cm/cm/°C	
Transverse : -30 to 30°C	7.4E-5	cm/cm/°C	
Injection	Nominal Value	Unit	
Drying Temperature	121 to 149	°C	
Drying Time	4.0	hr	
Suggested Max Moisture	0.15	%	
Rear Temperature	310 to 321	°C	
Middle Temperature	316 to 327	°C	
Front Temperature	327 to 338	°C	
Processing (Melt) Temp	316 to 332	°C	
Mold Temperature	138 to 166	°C	
Back Pressure	0.172 to 0.344	MPa	
Screw Speed	30 to 60	rpm	
NOTE			
1.	5.0 mm/min		
2.	Type I, 5.0 mm/min		
3.	Type I, 5.0 mm/min		
4.	1.3 mm/min		
5.	2.0 mm/min		
6.	1.3 mm/min		
7.	80*10*4		
8.	80*10*4		
9.	80*10*4 mm		
10.	80*10*4 mm		

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