



LNP™ COLORCOMP™ Compound HF1140RC

Americas: COMMERCIAL

COLORCOMP* HF1140RC is a compound based on Polycarbonate Resin. Added features include: High Flow, Heat Stabilized, Mold Release, FDA Food Contact Compliant. Not to be used for medical applications which require biocompatibility.

TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	630	kgf/cm ²	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	660	kgf/cm ²	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	6	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	120	%	ASTM D 638
Tensile Modulus, 50 mm/min	24100	kgf/cm ²	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	940	kgf/cm ²	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	23400	kgf/cm ²	ASTM D 790
Hardness, Rockwell M	70	-	ASTM D 785
Hardness, Rockwell R	118	-	ASTM D 785
Taber Abrasion, CS-17, 1 kg	10	mg/1000cy	ASTM D 1044
Tensile Stress, yield, 50 mm/min	63	MPa	ISO 527
Tensile Stress, break, 50 mm/min	50	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	6	%	ISO 527
Tensile Strain, break, 50 mm/min	70	%	ISO 527
Tensile Modulus, 1 mm/min	2350	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	90	MPa	ISO 178
Flexural Modulus, 2 mm/min	2300	MPa	ISO 178
IMPACT			
Izod Impact, unnotched, 23°C	326	cm-kgf/cm	ASTM D 4812
Izod Impact, notched, 23°C	65	cm-kgf/cm	ASTM D 256
Izod Impact, notched (natural, tints)	65	cm-kgf/cm	ASTM D 256
Tensile Impact, Type S	385	cm-kgf/cm ²	ASTM D 1822



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IMPACT			
Falling Dart Impact (D 3029), 23°C	1723	cm-kgf	ASTM D 3029
Instrumented Impact Energy @ peak, 23°C	550	cm-kgf	ASTM D 3763
Izod Impact, unnotched 80*10*4 +23°C	NA	kJ/m ²	ISO 180/1U
Izod Impact, unnotched 80*10*4 -30°C	NA	kJ/m ²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	12	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	10	kJ/m ²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	12	kJ/m ²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm	10	kJ/m ²	ISO 179/1eA
THERMAL			
HDT, 1.82 MPa, 3.2mm, unannealed	126	°C	ASTM D 648
HDT, 0.45 MPa, 6.4 mm, unannealed	137	°C	ASTM D 648
HDT, 1.82 MPa, 6.4 mm, unannealed	126	°C	ASTM D 648
CTE, -40°C to 95°C, flow	6.84E-05	1/°C	ASTM E 831
Specific Heat	1.25	J/g-°C	ASTM C 351
Thermal Conductivity	0.19	W/m-°C	ASTM C 177
Thermal Conductivity	0.2	W/m-°C	ISO 8302
CTE, 23°C to 80°C, flow	7.E-05	1/°C	ISO 11359-2
Ball Pressure Test, 125°C +/- 2°C	PASSES	-	IEC 60695-10-2
Vicat Softening Temp, Rate A/50	145	°C	ISO 306
Vicat Softening Temp, Rate B/50	139	°C	ISO 306
Vicat Softening Temp, Rate B/120	140	°C	ISO 306
HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm	133	°C	ISO 75/Be
HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm	121	°C	ISO 75/Ae
Relative Temp Index, Elec	130	°C	UL 746B



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THERMAL			
Relative Temp Index, Mech w/impact	130	°C	UL 746B
Relative Temp Index, Mech w/o impact	130	°C	UL 746B
PHYSICAL			
Specific Gravity	1.2	-	ASTM D 792
Specific Volume	0.83	cm ³ /g	ASTM D 792
Density	1.19	g/cm ³	ASTM D 792
Water Absorption, 24 hours	0.15	%	ASTM D 570
Water Absorption, equilibrium, 23C	0.35	%	ASTM D 570
Water Absorption, equilibrium, 100°C	0.58	%	ASTM D 570
Mold Shrinkage, flow, 3.2 mm (5)	0.5 - 0.7	%	SABIC Method
Melt Flow Rate, 300°C/1.2 kgf	25	g/10 min	ASTM D 1238
Melt Volume Rate, MVR at 300°C/1.2 kg	23	cm ³ /10 min	ISO 1133
OPTICAL			
Light Transmission, 2.54 mm	88	%	ASTM D 1003
Haze, 2.54 mm	1	%	ASTM D 1003
Refractive Index	1.586	-	ASTM D 542
ELECTRICAL			
Volume Resistivity	>1.E+17	Ohm-cm	ASTM D 257
Dielectric Strength, in air, 3.2 mm	14.9	kV/mm	ASTM D 149
Relative Permittivity, 50/60 Hz	3.17	-	ASTM D 150
Relative Permittivity, 1 MHz	2.96	-	ASTM D 150
Dissipation Factor, 50/60 Hz	0.0009	-	ASTM D 150
Dissipation Factor, 1 MHz	0.01	-	ASTM D 150
Hot Wire Ignition {PLC}	2	PLC Code	UL 746A
High Voltage Arc Track Rate {PLC}	2	PLC Code	UL 746A
High Ampere Arc Ign, surface {PLC}	1	PLC Code	UL 746A
Comparative Tracking Index (UL) {PLC}	2	PLC Code	UL 746A
Volume Resistivity	>1.E+15	Ohm-cm	IEC 60093
Surface Resistivity, ROA	>1.E+15	Ohm	IEC 60093



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ELECTRICAL			
Dielectric Strength, in oil, 0.8 mm	35	kV/mm	IEC 60243-1
Dielectric Strength, in oil, 1.6 mm	27	kV/mm	IEC 60243-1
Dielectric Strength, in oil, 3.2 mm	17	kV/mm	IEC 60243-1
Relative Permittivity, 1 MHz	2.7	-	IEC 60250
Dissipation Factor, 50/60 Hz	0.001	-	IEC 60250
Dissipation Factor, 1 MHz	0.01	-	IEC 60250
Relative Permittivity, 50/60 Hz	2.7	-	IEC 60250
FLAME CHARACTERISTICS			
UL Recognized, 94V-2 Flame Class Rating (3)	1.09	mm	UL 94
Oxygen Index (LOI)	25	%	ISO 4589



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PROCESSING PARAMETERS	TYPICAL VALUE	Unit
Injection Molding		
Drying Temperature	120	°C
Drying Time	3 - 4	hrs
Drying Time (Cumulative)	48	hrs
Maximum Moisture Content	0.02	%
Melt Temperature	270 - 295	°C
Nozzle Temperature	265 - 290	°C
Front - Zone 3 Temperature	270 - 295	°C
Middle - Zone 2 Temperature	260 - 280	°C
Rear - Zone 1 Temperature	250 - 270	°C
Mold Temperature	70 - 95	°C
Back Pressure	0.3 - 0.7	MPa
Screw Speed	40 - 70	rpm
Shot to Cylinder Size	40 - 60	%
Vent Depth	0.025 - 0.076	mm