

Product Comparison

Technical Data

Product Description

LNP™ THERMOCOMP™ DC0041PQ compound	LNP THERMOCOMP DC0041PQ is a compound based on Polycarbonate resin containing Carbon Fiber. Added feature of this grade is: Flame Retardant. Also known as: LNP* THERMOCOMP* Compound DC0041PQ Product reorder name: DC0041PQ
RTP 387 HEC	Nickel-Coated Carbon Fiber - EMI/RFI Shielding - Electrically Conductive
Clariant PC PC-1100H30	Clariant PC PC-1100H30 is a Polycarbonate (PC) material filled with 30% carbon fiber. It is available in North America for injection molding. Important attributes of Clariant PC PC-1100H30 are: <ul style="list-style-type: none"> • Flame Rated • Chemical Resistant • Corrosion Resistant • Good Dimensional Stability • Good Processability Typical applications include: <ul style="list-style-type: none"> • Business/Office Goods • Military Applications • Sporting Goods
PRL PC-G40	PRL PC-G40 is a Polycarbonate (PC) product filled with 40% glass fiber. It can be processed by injection molding and is available in North America. Characteristics include: <ul style="list-style-type: none"> • RoHS Compliant • Flame Retardant • Heat Resistant
INELEC PCCF30	30% CARBON FIBER REINFORCED POLYCARBONATE

General	LNP™ THERMOCOMP™ DC0041PQ compound	RTP 387 HEC	Clariant PC PC-1100H30	PRL PC-G40	INELEC PCCF30
Manufacturer / Supplier	• SABIC Innovative Plastics	• RTP Company	• Clariant Corporation	• Polymer Resources Ltd.	• Infinity LTL Engineered Compounds
Generic Symbol	• PC	• PC	• PC	• PC	• PC
Material Status	• Commercial: Active	• Commercial: Active	• Commercial: Active	• Commercial: Active	• Commercial: Active



General	LNP™ THERMOCOMP™ DC0041PQ compound	RTP 387 HEC	Clariant PC PC-1100H30	PRL PC-G40	INELEC PCCF30
Literature ¹	<ul style="list-style-type: none"> Technical Datasheet 	--	--	<ul style="list-style-type: none"> Technical Datasheet 	<ul style="list-style-type: none"> Infinity LTL Processing Guide (English) Technical Datasheet (English)
UL Yellow Card ²	<ul style="list-style-type: none"> E121562-101712652 	--	--	--	--
Search for UL Yellow Card	<ul style="list-style-type: none"> SABIC Innovative Plastics LNP™ THERMOCOMP™ 	<ul style="list-style-type: none"> RTP Company RTP 	<ul style="list-style-type: none"> Clariant Corporation 	<ul style="list-style-type: none"> Polymer Resources Ltd. 	<ul style="list-style-type: none"> Infinity LTL Engineered Compounds
Availability	<ul style="list-style-type: none"> North America 	<ul style="list-style-type: none"> Africa & Middle East Asia Pacific Europe Latin America North America 	<ul style="list-style-type: none"> North America 	<ul style="list-style-type: none"> North America 	<ul style="list-style-type: none"> Africa & Middle East Asia Pacific Europe Latin America North America
Filler / Reinforcement	<ul style="list-style-type: none"> Carbon Fiber 	<ul style="list-style-type: none"> Nickel-Coated Carbon Fiber, 40% Filler by Weight 	<ul style="list-style-type: none"> Carbon Fiber, 30% Filler by Weight 	<ul style="list-style-type: none"> Glass Fiber, 40% Filler by Weight 	<ul style="list-style-type: none"> Carbon Fiber, 30% Filler by Weight
Features	<ul style="list-style-type: none"> Flame Retardant 	<ul style="list-style-type: none"> Electrically Conductive Electromagnetic Shielding (EMI) Radio Frequency Shielding (RFI) 	<ul style="list-style-type: none"> Chemical Resistant Corrosion Resistant Good Colorability Good Dimensional Stability Good Processability Good Stiffness Good Toughness High Rigidity High Strength Low to No Water Absorption 	<ul style="list-style-type: none"> Flame Retardant High Heat Resistance Self Extinguishing 	--
Uses	--	--	<ul style="list-style-type: none"> Business Equipment Metal Replacement Military Applications Sporting Goods 	--	--
RoHS Compliance	--	<ul style="list-style-type: none"> Contact Manufacturer 	--	<ul style="list-style-type: none"> RoHS Compliant 	--
Appearance	--	--	<ul style="list-style-type: none"> Colors Available Natural Color 	--	--
Forms	--	--	<ul style="list-style-type: none"> Pellets 	<ul style="list-style-type: none"> Pellets 	--
Processing Method	<ul style="list-style-type: none"> Injection Molding 	<ul style="list-style-type: none"> Injection Molding 	<ul style="list-style-type: none"> Injection Molding 	<ul style="list-style-type: none"> Injection Molding 	<ul style="list-style-type: none"> Injection Molding



Physical	LNP™ THERMOCO MP™ DC0041PQ compound	RTP 387 HEC	Clariant PC PC-1100H30	PRL PC-G40	INELEC PCCF30	Unit	Test Method
Density / Specific Gravity	1.32	1.46	1.33	1.50	1.33		ASTM D792
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	--	--	--	2.0 to 10	--	g/10 min	ASTM D1238
Molding Shrinkage							ASTM D955
Flow	--	--	--	--	5.0E-4 to 1.0E-3	in/in	
Flow : 24 hr	1.0E-3	--	--	--	--	in/in	
Flow : 0.125 in	--	--	1.5E-3	1.0E-3 to 3.0E-3	--	in/in	
Flow : 0.126 in	--	5.0E-4 to 1.5E-3	--	--	--	in/in	
Across Flow : 24 hr	3.6E-3	--	--	--	--	in/in	
Water Absorption							ASTM D570
24 hr	--	--	0.080	--	0.080	%	
Saturation	--	--	0.18	--	--	%	
Mechanical	LNP™ THERMOCO MP™ DC0041PQ compound	RTP 387 HEC	Clariant PC PC-1100H30	PRL PC-G40	INELEC PCCF30	Unit	Test Method
Tensile Modulus							ASTM D638
--	--	3.20E+6	--	--	--	psi	
-- ⁴	3.05E+6	--	--	--	--	psi	
Tensile Strength							ASTM D638
Yield, 0.125 in	--	--	--	24000	--	psi	
Break ⁵	26800	--	--	--	--	psi	
Break, 0.125 in	--	--	--	24000	--	psi	
--	--	25000	24500	--	24000	psi	
Tensile Elongation							ASTM D638
Yield	--	1.0 to 2.0	--	--	1.0 to 2.0	%	
Break	--	--	4.0	--	--	%	
Break ⁵	1.5	--	--	--	--	%	
Flexural Modulus							ASTM D790
--	--	2.80E+6	2.00E+6	--	1.90E+6	psi	
1.97 in Span ⁶	2.61E+6	--	--	--	--	psi	
0.125 in	--	--	--	1.40E+6	--	psi	



Mechanical	LNP™ THERMOCO MP™ DC0041PQ compound	RTP 387 HEC	Clariant PC PC-1100H30	PRL PC-G40	INELEC PCCF30	Unit	Test Method
Flexural Strength							ASTM D790
--	--	31000	36000	--	35000	psi	
0.125 in	--	--	--	27000	--	psi	
Break, 1.97 in Span ⁶	37700	--	--	--	--	psi	
Shear Strength	--	--	--	--	10000	psi	ASTM D732
Impact	LNP™ THERMOCO MP™ DC0041PQ compound	RTP 387 HEC	Clariant PC PC-1100H30	PRL PC-G40	INELEC PCCF30	Unit	Test Method
Notched Izod Impact							ASTM D256
0.125 in	--	--	2.0	--	1.8	ft·lb/in	
0.126 in	--	1.8	--	--	--	ft·lb/in	
73°F, 0.125 in	--	--	--	1.5	--	ft·lb/in	
73°F	1.3	--	--	--	--	ft·lb/in	
Unnotched Izod Impact							
0.125 in	--	--	--	--	10	ft·lb/in	ASTM D256
0.126 in	--	12	--	--	--	ft·lb/in	ASTM D4812
73°F	9.4	--	--	--	--	ft·lb/in	ASTM D4812
Instrumented Dart Impact							ASTM D3763
73°F, Total Energy	88.5	--	--	--	--	in·lb	
Hardness	LNP™ THERMOCO MP™ DC0041PQ compound	RTP 387 HEC	Clariant PC PC-1100H30	PRL PC-G40	INELEC PCCF30	Unit	Test Method
Rockwell Hardness							ASTM D785
M-Scale	--	--	92	--	--		
R-Scale	--	--	110	--	--		



Thermal	LNP™ THERMOCO MP™ DC0041PQ compound	RTP 387 HEC	Clariant PC PC-1100H30	PRL PC-G40	INELEC PCCF30	Unit	Test Method
Deflection Temperature Under Load							ASTM D648
66 psi, Unannealed	--	--	305	--	--	°F	
66 psi, Unannealed, 0.125 in	--	--	--	305	--	°F	
264 psi, Unannealed	--	300	300	--	300	°F	
264 psi, Unannealed, 0.125 in	--	--	--	295	--	°F	
264 psi, Unannealed, 0.126 in	187	--	--	--	--	°F	
CLTE							ASTM D696
Flow	--	--	1.0E-5	--	9.0E-6	in/in/°F	
Flow : -22 to 86°F	7.8E-6	--	--	--	--	in/in/°F	
Transverse : -22 to 86°F	1.9E-5	--	--	--	--	in/in/°F	
Electrical	LNP™ THERMOCO MP™ DC0041PQ compound	RTP 387 HEC	Clariant PC PC-1100H30	PRL PC-G40	INELEC PCCF30	Unit	Test Method
Surface Resistivity							
--	--	< 1.0E+3	--	--	--	ohms	ESD STM11.11
--	--	< 1.0E+4	--	--	--	ohms	ASTM D257
--	--	--	--	--	1.0E+3 to 1.0E+5	ohms	
Volume Resistivity	--	< 1.0	1.0E+3	--	--	ohms-cm	ASTM D257
Flammability	LNP™ THERMOCO MP™ DC0041PQ compound	RTP 387 HEC	Clariant PC PC-1100H30	PRL PC-G40	INELEC PCCF30	Unit	Test Method
Flame Rating							UL 94
0.06 in, ** Values per RTP Company testing.	--	HB	--	--	--		
0.06 in	--	--	--	--	HB		
--	--	--	V-1	--	--		
0.031 in	V-0	--	--	--	--		
Additional Information	LNP™ THERMOCO MP™ DC0041PQ compound	RTP 387 HEC	Clariant PC PC-1100H30	PRL PC-G40	INELEC PCCF30	Unit	Test Method
Moisture Content	--	0.020	--	--	--	%	
Primary Additive	--	40	--	--	--	%	



Additional Information	LNP™ THERMOCO MP™ DC0041PQ compound	RTP 387 HEC	Clariant PC PC-1100H30	PRL PC-G40	INELEC PCCF30	Unit	Test Method
Specific Volume	--	--	--	--	20.8	in³/lb	
Static Decay	--	< 0.5	--	--	--	sec	FTMS 101C 4046.1

Injection	LNP™ THERMOCO MP™ DC0041PQ compound	RTP 387 HEC	Clariant PC PC-1100H30	PRL PC-G40	INELEC PCCF30	Unit
Drying Temperature	158	250	250	245 to 255	250	°F
Drying Time	4.0	4.0	4.0	3.0 to 4.0	4.0	hr
Drying Time, Maximum	--	--	--	8.0	--	hr
Dew Point	--	-20	--	--	--	°F
Suggested Max Moisture	0.050	--	0.020	--	--	%
Rear Temperature	500 to 536	--	580 to 650	560 to 600	--	°F
Middle Temperature	518 to 554	--	580 to 650	580 to 620	--	°F
Front Temperature	536 to 572	--	580 to 650	600 to 640	--	°F
Processing (Melt) Temp	527 to 572	550 to 600	580 to 620	575 to 625	540 to 630	°F
Melt Temperature (Aim)	--	--	600	--	--	°F
Mold Temperature	140 to 185	180 to 250	180 to 250	180 to 240	200	°F
Injection Pressure	--	10000 to 15000	--	--	--	psi
Injection Rate	--	--	Fast	--	--	
Back Pressure	29.0 to 43.5	--	50.0 to 100	--	50.0 to 100	psi
Screw Speed	30 to 63	--	45 to 75	--	40 to 70	rpm
Cushion	--	--	0.125 to 0.250	--	--	in
Vent Depth	--	--	--	--	1.5E-3 to 3.0E-3	in

Injection Notes

RTP 387 HEC	Use a reverse barrel profile. Remove hopper magnets. Allow 4 - 5 shots to properly disperse the conductive fibers. The surface finish should have a silver streaking appearance, not clumps. Remove hopper magnets. Desiccant Type Dryer Required.
Clariant PC PC-1100H30	The minimum injection pressure required to fill the part should be used for the first stage. The hold pressure should be set between 50% and 75% of the injection pressure.



Notes

¹ These links provide you with access to supplier literature. We work hard to keep them up to date; however you may find the most current literature from the supplier.

² A UL Yellow Card contains UL-verified flammability and electrical characteristics. UL Prospector continually works to link Yellow Cards to individual plastic materials in Prospector, however this list may not include all of the appropriate links. It is important that you verify the association between these Yellow Cards and the plastic material found in Prospector. For a complete listing of Yellow Cards, visit the UL Yellow Card Search.

³ Typical properties: these are not to be construed as specifications.

⁴ 0.20 in/min

⁵ Type I, 0.20 in/min

⁶ 0.051 in/min



Where to Buy

Supplier	
LNP™ THERMOCOMP™ DC0041PQ compound	SABIC Innovative Plastics Pittsfield, MA USA Telephone: 800-845-0600 Web: http://www.sabic-ip.com/
RTP 387 HEC	RTP Company Winona, MN USA Telephone: 800-433-4787 Web: http://www.rtpcompany.com/
Clariant PC PC-1100H30	Clariant Corporation Charlotte, NC USA Telephone: 704-331-7000 Web: http://www.clariant.com/
PRL PC-G40	Polymer Resources Ltd. Farmington, CT USA Telephone: 800-243-5176 Web: http://www.prlresins.com/
INELEC PCCF30	Infinity LTL Engineered Compounds Logan Township, NJ USA Telephone: 856-467-3030 Web: http://www.americheminfinity.com/

Distributor	
LNP™ THERMOCOMP™ DC0041PQ compound	Nexeo Solutions Telephone: 800-531-7106 Web: http://www.nexeosolutions.com/ Availability: North America
RTP 387 HEC	GAZECHIM PLASTIQUES <i>GAZECHIM PLASTIQUES is a Pan European distribution company. Contact GAZECHIM PLASTIQUES for availability of individual products by country.</i> Telephone: +33-4-67-49-55-37 Web: http://www.gazechim.com/ Availability: France, United Kingdom
Clariant PC PC-1100H30	Plastic Service Centers Telephone: 586-307-3900 Web: http://www.plasticservice.com/ Availability: North America Resin Resource, Inc. Telephone: 877-652-3431 Web: http://www.resinresourceinc.com/ Availability: North America Tex-Co Resin Distribution, Inc. Telephone: 877-908-3926 Web: http://www.texcoresin.com/ Availability: North America



PRL PC-G40

Chase Plastic Services, Inc.

Chase Plastics Services is a North American distributor with representatives throughout the region. Please find your rep here:

http://www.chaseplastics.com/contact/locations

Telephone: 800-232-4273

Web: <http://www.chaseplastics.com/>

Availability: North America

INELEC PCCF30

Please contact the supplier to find a distributor for INELEC PCCF30

Reseller

A Reseller is not a distributor authorized by the Supplier.

LNP™
THERMOCOMP™ DC0041PQ
compound

Guangzhou Huaxiu Plastics Co., Ltd.

Telephone: +86-20-82582555

Web: <http://www.va-so.com>

Availability: China

RTP 387 HEC

Clariant PC PC-1100H30

PRL PC-G40

INELEC PCCF30

