

Calcium Carbonate Reinforced Polypropylene

Polifil® C series compounds are homopolymer polypropylene resins reinforced with fine particle size calcium carbonate. They combine high impact with stiffness, good colorability, resistance to environmental stress-cracking, good surface, and low mold shrinkage. Polifil® C products in the 20 to 40% range are UL94 HB rated. These compounds are used in appliances, electrical components, housewares, toys, automotive, and utility products. Standard processing techniques are applicable. Use this information as a guide to aid you in selecting the proper resin for your application. TPG will custom compound and fine-tune our formulations for your application.

PHYSICAL	ASTM/ Method	Polifil® C-10	Polifil® C-20	Polifil® C-30	Polifil® C-40
Reinforcement content (%)	TPG WI	10	20	30	40
Specific gravity	D 792	0.98	1.05	1.15	1.24
Melt flow 230/2.16 (g/10 min)	D 1238	8-12*	8-12*	8-12*	8-12*
Water absorption, 24 hours (%)	D 570	nil	nil	nil	nil
Mold shrinkage – 1/8" specimen (in/in)	D 955	0.015	0.013	0.012	0.010

MECHANICAL @ 73°F

Tensile strength (psi)	D 638	4,400	4,100	3,600	3,400
Elongation @ yield (%)	D 638	8.0	7.0	6.0	5.0
Elongation @ break (%)	D 638	30	40	50	60
Tensile modulus (kpsi)	D 638	210	240	270	300
Flexural modulus, tangent (kpsi)	D 790	230	270	300	320
Flexural strength (psi)	D 790	5,100	5,500	5,800	6,000
Izod impact, notched (ft-lbs/in)	D 256	0.55	0.57	0.60	0.70
Gardner impact, 1/2" tup (in-lbs)	D 5420	24	40	60	60
Hardness, shore (D-scale)	D 1415	72	74	75	76

THERMAL

Deflection temperature, 66psi (°F)	D 648	200	210	220	235
Deflection temperature, 264psi (°F)	D 648	130	135	140	145
Flammability** (Rating)	UL94	–	HB	HB	HB

*melt flow may be specified

** TPG UL File# E84888. This rating is not intended to reflect hazards of this or any other material under actual fire conditions.

The Plastics Group of America

