

## Chemically Coupled Glass-Reinforced Polypropylene

**Polifil® GFPPCC** series compounds are homopolymer polypropylenes reinforced with chemically coupled glass fibers. These compounds offer superior strength and stiffness, improved elevated temperature performance, better creep resistance, higher impact strength and higher resistance to high temperature water than conventional glass fiber reinforced polypropylenes. Polifil® GFPPCC products are UL94 HB rated. These compounds are used in chemical resistance applications, appliances, electrical components, automotive, irrigation 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.

<b>PHYSICAL</b>	<b>ASTM/ Method</b>	<b>Polifil® GFPPCC-10</b>	<b>Polifil® GFPPCC-20</b>	<b>Polifil® GFPPCC-30</b>	<b>Polifil® GFPPCC-40</b>
Reinforcement content (%)	TPG WI	10	20	30	40
Specific gravity	D 792	0.98	1.04	1.13	1.22
Melt flow 230/2.16 (g/10 min)	D 1238	4-10*	4-10*	4-10*	4-10*
Water absorption, 24 hours (%)	D 570	nil	nil	nil	nil
Mold shrinkage – 1/8" specimen (in/in)	D 955	0.006	0.004	0.0035	0.003

### MECHANICAL @ 73°F

Tensile strength (psi)	D 638	6,600	9,500	11,600	13,800
Elongation @ yield (%)	D 638	5.1	4.9	4.2	4.0
Elongation @ break (%)	D 638	6.8	5.5	4.5	4.0
Tensile modulus (kpsi)	D 638	330	440	530	700
Flexural modulus, tangent (kpsi)	D 790	390	510	790	980
Flexural strength (psi)	D 790	9,500	13,500	15,400	17,800
Izod impact, notched (ft-lbs/in)	D 256	1.2	1.5	1.6	1.9
Gardner impact, 1/2" tup (in-lbs)	D 5420	8	6	4	4
Rockwell hardness (R-scale)	D 785	85	90	96	102

### THERMAL

Deflection temperature, 66psi (°F)	D 648	285	300	310	315
Deflection temperature, 264psi (°F)	D 648	255	270	290	300
Flammability** (Rating)	UL94	HB	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 property values listed above have been obtained using laboratory controlled test methods. They are offered without guarantee since conditions under which the product is used are beyond our control. Mold shrinkage is intended as a guide only, as specific shrinkage is affected by part design, mold design and molding conditions. Therefore, The Plastics Group disclaims any liability for loss or damage incurred in connection with the use of this product.