AsahiKASEI

Thermylene®
Glass Reinforced Polypropylene (GF-PP) for Advanced Lightweight Solutions

Photo Credit: SPE Automotive

Lightweight

Application Areas

- Automotive & heavy truck industry (structural brackets and frames, door panels, instrument panel and console structures, shifter gearbox bases, radiator fan shrouds, radiator fan blades, vapor recovery canisters, electrical and hybrid vehicle components)
- Furniture industry
- Large home appliances (refrigerators, washing machine, etc.)

Solution / Innovation for the Industry

- Advanced lightweight solutions
- Inherent low specific gravity for lighter weight parts
- Optimized for high strength thin-walled parts
- Advanced Cu-stabilization
- Easy to process

	Specification	Unit	P6-40FG Traditional chemically coupled GF-PP	P7-40FG Higher flex modulus	P8-40FG Higher heat & tensile strength	P9-40FG Higher tensile strength	P10-40FG Higher MFR for thin wall	P11-40FG Higher heat & thin wall
Filler		%	40	40	40	40	40	40
Tensile Strength	ISO 527 (5mm / min)	MPa	90	101	105	112	114	125
Flexural Modulus	ISO 178	MPa	7.400	7.900	8.400	8.700	8.800	10.020
Charpy Impact (notched)	ISO 179	kJ/m²	9	10	11	8	9	10
HDT@ 1.8 Mpa	ISO 75	°C	145	148	148	150	152	155

Features of Thermylene® GF-PP

Thermylene® represents Asahi Kasei's family of specialty chemically coupled glass reinforced polypropylenes (GF-PP).

When advanced chemical coupling technology is applied to glass fiber reinforced polypropylene, significant improvements are seen across a number of key physical attributes.

The enhanced properties of these polymers yield an extremely attractive cost/performance balance when compared to traditional engineering thermoplastics.

Key Properties

- Good knit line strength and stiffness
- Improved elevated temperature performance
- Higher creep resistance
- Enhanced toughness
- Excellent chemical resistance
- Superior modulus/weight balance
- Enhanced tensile strength
- Low specific gravity
- Low odor/low-VOC grades available

Creating for Tomorrow

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