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REINFORCED GLASS FIBER FILLED POLYPROPYLENE – GFP 304

PRODUCT DATA

A) INTRODUCTION

PP GFP 304 is a 30% Glass Fiber reinforced polypropylene compound. It is a medium flow injection-molding grade developed for components required high rigidity and high heat deflection temperatures with improve creep resistance. GFP 304 was compounded with UV-resistance for certain application.

B) PROCESSING

Pre-Drying

It is essential for good molding and surface appearance that GFP 304 grade is pre-dried. Drying times will depend upon degree of exposure to moisture, however the standard drying time recommended was 2 – 4 hours and the temperature at 100 – 120°C in conventional forced air dryers.

Injection Molding

It can be processed on most types of screw of injection molding machines. The processing temperature as the melt leaves the nozzle should be between 200 – 260°C with 230°C being a common melt temperature.

Mould temperatures are usually between 20 – 60°C with the higher temperatures producing a better surface finish.

High injection pressures and holds pressures for minimum shrinkage; medium injection speeds with minimum backpressures are generally employed.

Avoid rapid injection speed or high backpressure, as excessive shear will result in glass fiber damage and a reduction in properties.

It is recommended to use 10% regrinds in virgin material under inevitable condition.

C) SAFETY ASPECT

Handling

Glass Fiber compounds may generally be regarded as chemically un-reactive and present no toxic hazard either from skin contact or inhalation, under normal conditions. Glass fibers may be released during handling and can cause skin irritation. Appropriate pre-caution are recommended. Contact with molten polymer should be avoided.

Processing

When compounds are heated during processing, small amount of fumes may be produced from decomposition or oxidation. Ensuring adequate fume removal can eliminate any hazard. All work areas must be properly ventilate d.

Fire pre-caution

In common with most other organic polymers used in manufacture or construction can be burn. They are difficult to ignite, however its defined as combustible but not highly inflammable. We strongly recommended keeping away from fire.

PHYSICAL & MECHANICAL PROPERTIES

PROPERTIES	UNIT	VALUE
MFR (230°C / 2.16 kg)	g /10 min	9
DENSITY	g/cm ³	1.13
TENSILE STRENGTH (AT YIELD)	Kgf/cm ² (MPa)	705 (69)
ELONGATION (AT BREAK)	%	4
FLEXURAL STRENGTH	Kgf/cm ² (MPa)	992 (97)
FLEXURAL MODULUS	Kgf/cm ² (MPa)	46,600 (4567)
IZOD IMPACT STRENGTH (23°C)	(NOTCHED) Kgf.cm/cm (J/m)	12 (117)
	(UNNOTCHED) Kgf.cm/cm (J/m)	47 (460)
HEAT DISTORTATION TEMPERATURE (0.455 Mpa; 0.25 mm Deflection)	° C	155
ROCKWELL HARDNESS	R-Scale	100
MOULD SHRINKAGE	MD	0.3 – 0.6
	TD	0.3 – 0.6

* Those values given are typical laboratory average and intended to serve as guide only. They are not to be considered as sale specification limits or guaranteed value.

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