

## DATASHEET

### Technical specifications

The following specifications represent the standard Beki-Shield® GR75 range. Contact Bekaert to discuss application specific requirements like coatings and compatibility.

Composition of grain	75 % SUS302 (EN 10088-1 : 1.4310)	
	10 % Thermoplastic polyester sizing	
	15 % PP coating	
Diameter of fibers	8 µm	±10 %
Length of fibers	5 mm	±10 %
Processing temperature	230 - 250°C	
Compatible with	Polyolefins, Styrenics	



#### GENERAL DESCRIPTION

Beki-Shield® is a stainless steel filler material used in plastic compounds to provide electrical conductive properties. They can be used as a master-batch and have been designed for easy dispersion into the polymer matrix for both injection molding (dry blend) and for compounding. Beki-Shield® is also available in rovings.

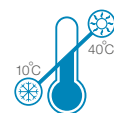
### Dosage information

Volume % fibers	Weight % GR75	Bulk resistivity (Ohm.cm)	Performance <sup>(**)</sup>
0,25 - 0,50	5	10 <sup>8</sup> -10 <sup>3</sup>	ESD protection
1	11	70	30-50 dB EMI Shielding
1,5	15	15	50-60 dB EMI shielding
> 1,5	> 15	< 1	> 60 dB EMI Shielding

(\*) resin density: ± 1 g/cm<sup>3</sup> - stainless steel fiber density: ± 8 g/cm<sup>3</sup>

(\*\*) 30-1000 MHz shielding range

### Storage instructions



## Pre-drying conditions

### Master Batch (Bekishield®)

- Pre-drying is not required for the GR75 when storage conditions are respected.
- The drying temperature should be at room temperature (max. 40°C).

### BASE Polymer and dry blend

Mix the master batch after the virgin polymer has dried.

## Processing conditions

Magnets for metal-separation in the hopper and other places should be removed. Avoid fiber breakage during processing by maintaining a high level of conductivity.

### Injection molding

This can be achieved by fine-tuning the injection pressure, screw speed, temperature and injection speed.

- The processing temperature should be set in the upper range of the recommended processing temperature of the virgin polymer.
- Preferable the injection pressure is as low as possible or at least below 850 bar.
- Sharp corners should be avoided (also for the gate).
- Ideally central injection is used, to obtain equal flow lengths.
- Preferable open gates are used.
- Screw speed and back pressure should be adapted to aim for good dispersion.
- Do not use a higher screw speed and back pressure than needed.

### Compounding

This can be achieved by fine-tuning the specific mechanical energy and the screw configuration.

- Avoid the use of flow back elements.
- Avoid the use of additional mixing elements.
- Add the GR75 at the end of the screw to limit the exposure to shear forces.
- Limit the specific mechanical energy as much as possible.

For additional information on processing parameters, do not hesitate to contact Bekaert.



Contact us

More  
Information?

bftinfo@bekaert.com  
metalfibers.bekaert.com

**Modifications reserved**  
All details describe our products in general form only. For ordering and design only use official specifications and documents. Unless otherwise indicated, all trademarks mentioned in this brochure are registered trademarks of NV Bekaert SA or its subsidiaries. © Bekaert 2018

Responsible editor: Tom Daniëls - 10 2018