

# Technical Brush Filaments



## PBT Metal Detectable (MD)



### Perlon® – The Filament Company

Perlon® – The Filament Company – is an innovative and global group of companies specialising in the production of synthetic filaments. We produce at sites in Germany, Poland, China, India and the USA. We offer an extremely diverse product portfolio for almost every technical application. We are constantly creating new solutions for unique products – Our Engineering. Your success.

### For Added Food Safety

Polyester PBT filaments are used in many different fields, but due to their high wet stiffness, properties are mainly used in cleaning and washing applications in the food industry.

Metal detection equipment has been used in the food industry for many years. Food safety for consumers is of paramount importance for food manufacturers and supermarkets and this has led to a widespread introduction of detectable versions of products used in food processing, including detectable brushes.

Brushes are used in food processing in many areas – and whilst they seldom come into contact with foodstuffs, must also fulfil certain criteria for “all due diligence”.

PBT Metal Detectable filaments are manufactured from a specially developed PBT raw material, compounded with a food safe metal additive this ensures homogeneous distribution and the best possible detectability.

### Technical Data

- Max. Continuous working temperature 80 – 100 °C
- Min. Continuous working temperature -20 °C
- Can be autoclaved at temperatures up to 134 °C
- Density ca. 1.51 g/cm<sup>3</sup>
- Excellent resistance to acidic solutions (pH<7)
- Moisture absorption 0.5 %
- Magnetic
- Increased bending stiffness versus polyamide
- Conforms to EU10/2011 and FDA regulations

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### Product Range

- Standard stock item in 0.35 mm and 0.60 mm diameter
- Distinctive anthracite colour
- Other diameters available on request

### Our testing

Our PBT MD material was tested on a MD606-250 detector manufactured by Detectronic A/S.

**[www.detectronic.dk](http://www.detectronic.dk)**

- Search Aperture: H 150 mm x W 350 mm
- Settings: Typical food industry setting

### Method

Single filament strands of 0.60 mm diameter were sent through the middle of the detector on a conveyor belt with the shortest possible detectable length recorded.

### Results

- Longitudinal direction: 6 mm long filament was detected
- Transverse direction: 12 mm long filament was detected

### Detectability

There are several manufacturers of metal detection equipment. This equipment is then calibrated to the appropriate sensitivity setting, depending on what type of foodstuff is to be scanned. These settings vary for wet, dry, warm and cold food products.

Further variables in the process include speed of transportation of the food and the orientation of foreign body you wish to detect.

This leads to hundreds of possible variables to consider and therefore it is important to state that Perlon® can issue no guarantee for detectability under individual detector settings. Confirming suitability for use remains the responsibility of the end user.



This product information has been compiled to the best of our knowledge and with the greatest of care. We cannot, however, assume any liability for the accuracy, integrity or timeliness of its content. The technical parameters and the behaviour of the filament can vary depending on diameter and production technique.