

## Flame Retardant rPETG EN13501-1 (B-s1, d0)

Date of issue: 09-10-2025 / Date of update: 09-10-2025

### Flame Retardant rPETG EN13501-1 (B-s1, d0) Pellets for LFAM

Flame Retardant rPETG EN13501-1 (B-s1, d0) Pellets for LFAM is a flame-retardant recycled PETG granulate engineered specifically for large-format additive manufacturing (LFAM). This advanced material delivers exceptional light transmission while the materials used in this formulation achieve a B-s1, d0 rating under the EN 13501-1 fire classification standard for construction materials.

Thanks to its unique combination of flame retardancy, and durability, Flame Retardant rPETG EN13501-1 (B-s1, d0) is ideal for a wide range of indoor architectural applications, including lighting components, signage, office furniture, exhibition displays, and interior design elements.

In addition to its outstanding fire safety performance and high transparency, the material offers excellent impact strength, crack resistance, and ease of post-processing, making it an excellent choice for demanding industrial and design projects. Printed parts can easily be drilled, sawed, screwed, or adhesive bonded, offering maximum flexibility for post-processing and integration.

Choose Flame Retardant rPETG EN13501-1 (B-s1, d0) for 3D printing functional and aesthetic applications that require strength and fire safety.

### Key Features of Flame Retardant rPETG EN13501-1 (B-s1, d0)

- **Flame-Retardant Performance** – Meets EN 13501-1 (B-s1, d0) fire classification standards, offering excellent fire resistance and low smoke emission for safe indoor use.
- **Ultra-Transparent Finish (Transparent)** – Delivers exceptional light transmission and optical clarity, making it ideal for diverse functional and aesthetic applications.
- **High Impact Strength & Crack Resistance** – Ensures durability and reliability even in demanding large-format 3D printing projects.
- **Sustainable & Efficient** – Produced with recycled PETG feedstock as part of our Flame Retardant PETG EN13501-1 (B-s1, d0) initiative, reducing material waste and environmental impact.
- **European-Made Quality Compound** – Manufactured in Europe using high-grade recycled PETG, ensuring consistent quality, reliability, and traceability throughout the production process.
- **Good Chemical Resistance** – Good resistance to cleaning agents, various chemicals, and environmental factors, extending the printed part's lifetime and maintaining surface quality.

### Suitable Applications for Flame Retardant rPETG EN13501-1 (B-s1, d0)

- **Architectural Interiors** – Wall panels, partitions, and decorative structural elements.
- **Lighting Solutions** – Luminaires, diffusers, light guides, and illuminated signage.
- **Signage & Displays** – Retail and exhibition displays, information panels, and design installations.
- **Office & Commercial Furniture** – Furniture components with enhanced fire safety.
- **Industrial & Technical Parts** – Flame-retardant covers, protective shields, and functional prototypes.
- **Transportation & Public Spaces** – Components requiring both clarity and EN 13501-1 fire compliance.

# Flame Retardant rPETG

EN13501-1 (B-s1, d0)

## DATA SHEET



| PHYSICAL PROPERTIES                                                                       | AVERAGE VALUES | UNITS | STANDARDS  |
|-------------------------------------------------------------------------------------------|----------------|-------|------------|
|  DENSITY | 1,27           | g/cm3 | ISO 1183-1 |

| MECHANICAL PROPERTIES                                                                                                      | AVERAGE VALUES | UNITS             | STANDARDS |
|----------------------------------------------------------------------------------------------------------------------------|----------------|-------------------|-----------|
|  Tensile modulus                          | 2244           | MPa               | ISO 527   |
|  Flexural strength                        | 71.4           | MPa               | ISO 178   |
|  Elongation at yield                      | 5              | %                 | ISO 527   |
|  Elongation at break                      | 37             | %                 | ISO527    |
|  Charpy impact strength (23 °C unnotched) | No break       |                   | ISO 179   |
|  Charpy impact strength (23 °C notched)   | Ca. 8          | kJ/m <sup>2</sup> | ISO 179   |

| THERMAL PROPERTIES                                                                                              | AVERAGE VALUES | UNITS | STANDARDS |
|-----------------------------------------------------------------------------------------------------------------|----------------|-------|-----------|
|  HDT A                         | 64             | °C    | ISO 75    |
|  HDT B                         | 71             | °C    | ISO 75    |
|  Vicat softening temperature | 82             | °C    | ISO 306   |

| FLAMMABILITY PROPERTIES                                                                             | AVERAGE VALUES | UNITS | STANDARDS                           |
|-----------------------------------------------------------------------------------------------------|----------------|-------|-------------------------------------|
|  Fire resistance | B-s1, d0       |       | EN13501-1<br>material<br>assessment |

### Processing Flame Retardant rPETG EN13501-1 (B-s1, d0)

**Drying:** 6-10hrs at 65 °C (<40ppm)

**Zone 1:** 210°C ±20°C

**Zone 2:** 220°C ±20 °C

**Zone 3:** 230°C ±20 °C

**Max temp:** 240 °C

**Die temp:** 240°C ±20 °C

### Storage and handling of Flame Retardant rPETG EN13501-1 (B-s1, d0)

Flame Retardant rPETG EN13501-1 (B-s1, d0) is an inert and safe material under standard storage conditions, presenting no significant hazards. To ensure maximum quality, stability, and long-term performance, proper storage practices are recommended.

For best results:

- Store in a tightly sealed container to protect against moisture absorption.
- Keep in a dry, cool, and well-ventilated environment.
- Avoid direct exposure to sunlight or intense artificial light to preserve material integrity.

By following these guidelines, Flame Retardant rPETG EN13501-1 (B-s1, d0) will maintain its reliability and print performance over time.

### Product export information

HS code: 39079980

Description: PETG resin in primary form

Origin: European Union

### Disclaimer

The product and technical data provided in this datasheet are correct to the best of WINKLE knowledge and are intended solely for reference and comparison purposes. Actual values may vary depending on printing conditions, model complexity, environmental factors, and other variables. Typical values are indicative only and do not constitute binding specifications.

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