

MATERIALS CERTIFICATIONS

Technical data sheet and Material Certifications

This document attests to the technical characteristics and compliance of the polymers used by the **MATERIKA** 3D printing service. Our materials are selected to ensure high performance in terms of thermal resistance, environmental durability, and fire safety

1. PETG (Polyethylene Terephthalate Glycol)

Ideal for applications requiring a balance between mechanical strength and ease of post-processing. Two versions are available: **Opaque** and **Translucent**.

- **Thermal Resistance:** stable up to +70 °C.
- **Working environment:** optimal for indoor applications.
- **Characteristics:** high chemical and impact resistance. The Translucent version maintains structural properties while ensuring light transmission.

2. ASA (Acrylonitrile Styrene Acrylate)

ASA is the technical polymer of choice for metal replacement in demanding contexts and direct exposure to weatherin.

- **Thermal Resistance:** stable up to +86 °C.
- **UV & Aging Resistance:** thanks to its molecular structure, it does not yellow or become brittle when constantly exposed to sunlight.
- **Working environment:** specifically for outdoor and automotive use.

3. 3. Safety Certifications: Flame Retardancy (UL94)

Safety is a priority in **MATERIKA**'s workflows. For components requiring protection against flame propagation, we use **V0 certified** materials.

- **Reference standard:** **UL94** (Underwriters Laboratories).
- **Properties:** self-extinguishing and flame-retardant material.
- **Applications:** electrical panels, industrial automation components, and prototyping for product certification.

Quick comparison table

Material	Thermal resistance	UV / Outdoor	Fire Cert.
PETG (Opaque/Translucent)	+70 °C	Limited	Standard
ASA	+86 °C	Excellent	Optional
Special flame retardant	Variable	Good	V0 (UL94)

Technical note

The final performance of the produced part may vary slightly based on geometry and printing parameters (infill and layer orientation). **MATERIKA** guarantees the use of certified virgin raw materials from leading European manufacturers.

Validity of Certifications and Liability Limits

The technical certifications and resistance classes (thermal, UV, fire-retardant) declared by **MATERIKA** refer exclusively to the component as delivered, manufactured according to the optimal printing parameters for the chosen polymer.

Voiding of Technical Validity

The validity of certifications and declarations of conformity is automatically voided if the product is subject to:

- **Tampering or Post-Processing:** unauthorized drilling, milling, chemical smoothing, or application of coatings (paints, adhesives, protectants) that may alter the molecular properties or fire reaction of the material.
- **Improper Installation:** mechanical or torsional stress resulting from incorrect mounting that compromises the structural integrity of the part.
- **Misuse:** exposure to environmental conditions (temperatures, chemical agents, loads) exceeding the technical limits specified for PETG, ASA, or flame-retardant materials.

User Responsibility

It is the buyer's responsibility to verify that the final application is compatible with the technical characteristics provided. **MATERIKA** is not liable for degraded performance following modifications made by third parties after delivery.