TECHNICAL DATA SHEET (TDS)

IVE GLASSFORCE rABS

Recycled ABS – 15% glass fiber reinforced pellet for FGF 3D printing.



01 Product description & applications

This material is a recycled acrylonitrile-butadiene-styrene (rABS) compound reinforced with 15% glass fibers. The compound is engineered for pellet extrusion and optimized for large-format FGF (pellet-based) 3D printing. Glass fiber reinforcement enhances stiffness, dimensional stability, heat resistance and impact performance. Typical applications include functional prototypes, industrial components, housings, fixtures and load-bearing parts.

02 Pellet properties

PELLET DIAMETER	PELLET LENGTH	PELLET SHAPE	AVAILABLE COLORS
Approx. 2.8 mm	Approx. 3 mm	Cylindrical, cold cut	Gray

Source – PIR Post-Industrial Recycled

03 Packaging

Available in **10 kg bags** **20 kg bags** **1000 kg big bags**

04 Recommended 3D printing conditions

NOZZLE TEMPERATURE 240–270 °C	BED TEMPERATURE 50–80 °C	LAYER HEIGHT Layer width / height ratio 3:1
BED SURFACE / ADHESION ABS slurry / PEI / Kapton tape	NOZZLE DIAMETER ≥ 0.8 mm	PRINT SPEED 20–80 mm/s

05 Drying recommendations

RECOMMENDED	MINIMUM	TIME	MOISTURE
75 °C	65 °C	6–12 h	Drying conditions depend on the hardware setup. Ideally, the moisture content should be reduced to **below 0.1%** before use.

06 Physical & general properties

GENERAL	STANDARD	AVERAGE VALUE	
Specific mass	ISO 1183-1	**1.08 g/cm³**	
Bulk density	ISO 60	**1.02 g/cm³**	
THERMAL	**STANDARD**	**AVERAGE VALUE**	
Glass transition temperature	ISO 11357-2	**98 °C**	
Heat deflection temperature	ISO 75-2	**93 °C**	
MFR	ISO 1133-1 (2.16 kg, 230 °C)	**0.95 g/10 min**	
TENSILE	**STANDARD**	**XZ DIRECTION (1)**	**ZX DIRECTION (2)**
Tensile strength	ISO 527 (50 mm/min)	**25.16 MPa**	**12.3 MPa**
Elongation at break	ISO 527 (50 mm/min)	**1.72%**	**1.65%**
Young's modulus	ISO 527-1, -2	**3091 MPa**	**1272 MPa**
FLEXURAL	**STANDARD**	**XZ DIRECTION (1)**	**ZX DIRECTION (2)**
Flexural strength	ISO 178 (2 mm/min)	**38.7 MPa**	–
Flexural modulus	ISO 178	**2835 MPa**	–
IMPACT	**STANDARD**	**XZ DIRECTION (1)**	**ZX DIRECTION (2)**
Impact strength (Charpy, unnotched)	ISO 179-2	**12.83 kJ/m²**	–

07 Storage & handling

Store in sealed, moisture-proof packaging between 10 °C and 25 °C in a clean, dry area. Avoid direct sunlight, moisture exposure and dust. To prevent damage to the extrusion system and possible clogging with smaller nozzle sizes, avoid contamination with solids or other thermoplastic materials. The shelf life is 12 months under recommended storage conditions. **Dry the material before processing** to ensure consistent print quality.

3D PRINT EXAMPLE



SAMPLE ORIENTATION

