

3D Milling

FROGMILL CNC POLYSTYRENE CARVING

PRODUCT DESCRIPTION

3D Milling is a fabrication service, not a stock product. Technopol's FROGMill heavy-duty 4th-axis CNC router carves full three-dimensional forms from expanded-polystyrene (EPS) blocks, working either flatbed (XY, up to 2650 x 1250 x 254 mm) or on a rotary lathe (up to 1800 mm long x diameter 488 mm) per single segment. Larger forms are milled as segments and joined with interlocking puzzle joints. What you receive is a decorative, non-structural form: it is not load-bearing, it is not a fire-rated element, and the EPS grade it is cut from is chosen for the job and must be named on the order.

3D MILLING PROPERTIES

PROPERTY	VALUE
Process / machine	FROGMill heavy-duty 4th-axis CNC milling router; worked flatbed (XY) or on a rotary lathe
Flatbed (XY) envelope, maximum single segment	2650 x 1250 x 254 mm (L x W x thickness)
Lathe / rotary (4th axis) envelope, maximum single segment	1800 mm long x diameter 488 mm
Oversized forms	Milled as several segments and joined with interlocking puzzle joints, which can be pre-cut for customer assembly.
Base material and grade	Expanded polystyrene (EPS).
Nominal density, grade ladder	12SD 12 15SD 15 16DV 16 20DV 20 24DV 24 30DV 30 kg/m ³ .
Thermal conductivity (10 C, max), grade ladder	0.033 (30DV) to 0.045 (12SD) W/m.K - it follows whichever grade you order
Compressive stress at 10% compression (min), grade ladder	200 (30DV) to 60 (12SD) kPa - a material-quality figure, not a design bearing capacity for a carving



Summary only — 9 further properties are given in the 3D Milling datasheet.

APPLICATIONS AND SCOPE

APPLICATIONS

- 3D relief carvings and architectural foam features
- Set design, scenic design and special events
- Characters, busts, sculptures and figures
- Props and display pieces

WHERE NOT TO USE IT

- Not for use as the final exposed surface outdoors - statuary, facade features, park pieces, anything the public can touch
- Not for use as a single monolithic piece larger than the machine envelope - flatbed 2650 x 1250 x 254 mm, lathe 1800 mm long x diameter 488 mm
- Not for use as a pattern or mould for hot casting, or against any hot surface
- Not for use as a load-bearing or load-sharing element, or as a core carrying sustained load