

2D Shapes & EPS Sheets (CNC Hotwire Cut)

Custom CNC hotwire-cut EPS shapes and cut-to-size sheets — clean, precise profiles cut to order



Overview

Technopol SA supplies standard EPS boards and custom 2D shapes cut on CNC hotwire equipment. A heated thin wire slices cleanly through expanded polystyrene with minimal resistance, holding exact measurements while producing precise profiles, curves and intricate letterforms with no tearing or crumbling — from simple insulation sheets to signage, cornices, packaging void-fill, decorative features and geofoam void-formers. Everything is cut to order in a choice of flame-retardant EPS grades and densities, to a supplied drawing or brief, with fast turnaround (Technopol does not stock pre-cut sheets). The working envelope is up to 3000 mm long × 1240 mm wide and 10–1030 mm thick; parts larger than the bed are produced as segments and joined. Enclosed letterforms (A, D, O, P, R) carry a small deliberate break for the single continuous-pass cut, easily glued closed on installation for a seamless closed form.

Applications

- Protective EPS packaging and void fill
- Construction insulation boards and cut-to-size EPS sheets
- Hotwire-cut pipe insulation and lagging profiles
- Cornices and 2D architectural mouldings
- 2D letters, signage and display shapes
- Decorative shapes — tapered cones, pillars, cake dummies and "Buddha" blocks
- Refractory products and bushes
- Geofoam void-formers, 2D slopes and slabs

Benefits

- Clean, precise edges — low cutting resistance means no tearing or crumbling
- Any 2D profile cut to exact measurement from a supplied drawing or brief
- Choice of FR-EPS grades and densities matched to the application
- Cut to order with fast turnaround; oversized parts segmented and joined
- Lightweight, moisture-resistant and thermally insulating

Specifications

Cutting method	CNC hotwire cutting
Material	Expanded polystyrene (EPS), flame-retardant grades
Maximum cut size	3000 mm long × 1240 mm wide
Thickness range	10 mm (MOQ 10 sheets) to 1030 mm
Standard densities	15, 18, 20, 30 kg/m ³
Thermal conductivity λ	EPS 15 ≈ 0.040, EPS 20 ≈ 0.035, EPS 30 ≈ 0.033 W/m-K
Compressive stress @10% strain	EPS 15 ≈ 65, EPS 20 ≈ 110, EPS 30 ≈ 200 kPa
Reaction to fire	SANS 53501-1 Class B-s1,d0 (rigid FR EPS); oxygen index ≥24%
Custom shapes	Yes — supply drawing / brief
Bulk orders	Available

Fire & compliance: Shapes and sheets are made from flame-retardant (FR) EPS, which carries a SANS 53501-1 / EN 13501-1 reaction-to-fire classification of B-s1,d0 (oxygen index ≥24%). This is a reaction-to-fire rating only, not a fire-resistance (integrity/insulation) rating — EPS remains combustible and must be kept away from open flame and hot works.

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