

2D Shapes & EPS Sheets

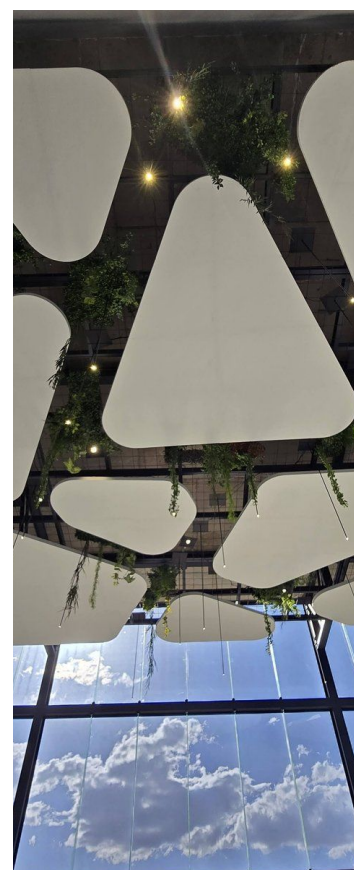
CNC HOT-WIRE CUT

PRODUCT DESCRIPTION

2D Shapes & EPS Sheets is a made-to-order cutting service. A heated wire melts a narrow kerf through a block of flame-retardant EPS, so profiles, curves, letterforms and cut-to-size sheets come off the bed to measurement, with no tearing and no crumbling. Three choices define what you get: the EPS grade, the thickness, and the cut profile.

2D SHAPES & EPS SHEETS PROPERTIES

PROPERTY	VALUE
Cutting method	CNC hot-wire cutting, single continuous pass. Any 2D profile from a supplied drawing or brief.
Material	Expanded polystyrene (EPS), fire-retardant grades
Nominal density grades	12, 15, 16, 20, 24 and 30 kg/m ³ , plus a 27 kg/m ³ cornice grade. Specify the grade explicitly on the order (for example 'EPS20 (20DV), 100 mm').
Thermal conductivity, lambda at 10 C (maximum)	0.045 (EPS12) / 0.040 (EPS15) / 0.038 (EPS16) / 0.035 (EPS20) / 0.034 (EPS24) / 0.033 (EPS30) W/m.K.
Compressive stress at 10% strain	60 / 65 / 80 / 110 / 160 / 200 kPa (min) for EPS12 / 15 / 16 / 20 / 24 / 30. This is a material classification figure, not a working load.
Safe working load at 1% strain	15 / 17 / 21 / 45 / 70 / 100 kPa (min) for EPS12 / 15 / 16 / 20 / 24 / 30. This is the limit to design sustained load against.
Reaction to fire	B-s1,d0 to SANS 53501-1, from the SBI test (SANS 53823) and the ignitability test (SANS 11925-2).
Fire resistance (REI, in minutes)	None. Cut EPS carries no fire-resistance rating.



Summary only — 7 further properties are given in the 2D Shapes & EPS Sheets datasheet.

APPLICATIONS AND SCOPE

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- Cut-to-size EPS insulation sheets and boards - price-list sizes: widths 1200 / 1220 mm, lengths to 7500 mm, thickness 5 to 600 mm
- Tapered, cut-to-falls boards and upstand fillets for a warm-roof build-up (insulation above the deck, below the membrane)
- Hot-wire-cut pipe insulation and lagging profiles
- EPS cornices and 2D architectural mouldings
- 2D letters, signage, display shapes and suspended ceiling features

WHERE NOT TO USE IT

- Not for use as a spanning or load-bearing element of any kind
- Not for use as a fire division. A fire division needs a fire-resistance rating in minutes (E / I / R); cut EPS carries a reaction-to-fire class
- Not for use above roughly 70-80 C. EPS softens and creeps there. Keep it clear of flues, hot pipework, roof-plant discharge, halogen luminaires
- Not for use with solvent-based finishes or adhesives - lacquers, contact adhesives, polyester resin, aerosol spray cans, solvent primers
- Not for use uncoated outdoors. EPS degrades under prolonged UV. Hard-coat or render every part that stays outside.