

INSULATION · TECHNICAL DESIGN GUIDE

EPS Pipe Lagging

A standard, made-to-order moulded EPS pipe-insulation section — pre-cut split half-shells that lock over the pipe, cut to your bore, wall and length.

Overview

Technopol Pipe Lagging is a made-to-order moulded pipe-insulation product supplied as pre-cut split sections (half-shells) that wrap around a pipe and close back together. The core is normally expanded polystyrene (EPS); it can also be supplied in mineral wool / stone wool where an application requires it. It is a deliberately standard, non-proprietary industry item rather than a proprietary system — well understood, unremarkable and made to order.

Each 'ring' of lagging is a moulded curved shell whose inside radius matches the pipe outside diameter and whose outside radius is set by the specified insulation-wall thickness. Smaller bores are supplied as two half-shells; larger bores are supplied as two- or three-section sets so the pieces can be handled and closed around big-diameter pipe. There is no fixed standard-size-only catalogue — Technopol cuts to the client's bore, wall thickness and length.

The product is supplied bare, without any cover or vapour barrier, so any facing, cladding, mastic or vapour-barrier wrap is a separate, site-applied item. Functionally it reduces heat loss on hot lines, controls condensation ('sweating') on cold and chilled lines, and gives frost protection to exposed pipework across residential, commercial and industrial installations.

Because it is a standard industry item, much of the engineering data an EPS product would normally carry — thermal conductivity (λ), R/U-values, compressive strength, temperature service limits, a reaction-to-fire class and any SANS/Agrément reference — is not established for this product in Technopol's primary sources. Those gaps are stated honestly here rather than filled from generic industry figures. EPS is combustible, and no fire test, fire-resistance rating or Agrément certificate applies to this product.

Key specifications

Property	Value	Standard
Material / core	Expanded polystyrene (EPS); mineral / stone wool on request	—
Form / build-up	Pre-cut moulded split sections (2- or 3-piece half-shells) that lock over the pipe; supplied bare, without cover or vapour barrier; cut to client's bore / wall / length	—
EPS density grades offered	Standard Grade/16DV, 20DV, 24DV, 32DV (nominal 16–32) kg/m ³	—
Pipe nominal-bore range	15NB–650NB (plus 290ID) NB	—
Insulation wall thickness	20, 25, 30, 35, 40, 50, 70, 75, 80, 90, 100, 110, 130, 150 mm	—
Standard supply length	1220 (1.22 m); shorter 610–1220 mm sections invoiced at 1220 mm price mm	—

Materials & build-up

The shells are moulded and pre-cut so they split, wrap and close over the pipe. The inside face is moulded to the pipe outside diameter; the outside face is set by the specified insulation-wall thickness. Sections are locked together by one of several jointing arrangements in common use; which specific arrangement is supplied on a given job is not fixed in the source set.

- Core material: expanded polystyrene (EPS); mineral wool / stone wool on request where the application requires it.
- Sections per ring: 2-piece (two half-shells) for smaller bores; 2- or 3-piece sets for larger bores (an internal costing tool also allows 4- and 6-section sets for the largest bores).
- Jointing: sections lock together; several locking arrangements are in common use — confirm the actual arrangement per order.
- Facing/cover: supplied bare, without cover or vapour barrier — any cladding, mastic or vapour barrier is a separate, site-applied item.
- Cut to requirement: no standard-size-only catalogue; custom bores and thicknesses available on request.

Applications

Positioned as a cost-effective alternative to mineral-fibre and elastomeric pipe insulation for moderate hot/cold duties. For higher-temperature or fire-rated duties, an alternative grade or product should be specified (see Key considerations).

- Residential plumbing — hot and cold water lines
- HVAC systems and chilled-water lines
- Refrigeration lines
- Cold-water pipes — condensation / 'sweating' control
- Underfloor-heating manifolds
- Industrial process pipework
- Frost protection for exposed or external pipes
- Large-bore ducting and pipe runs (2- or 3-section sets)

Installation & handling

Sections split open, wrap around the pipe and close back together, then lock via the supplied jointing arrangement — a fast, tool-light installation. The shells are rigid, lightweight and easy to cut and handle on site.

- Larger bores are supplied as 2- or 3-section sets so each piece can be handled and closed around big-diameter pipe.
- Supplied bare: any vapour barrier, cladding, mastic joint-sealing or mechanical banding is a separate, site-applied step and the specifier's responsibility.
- Particularly on cold/chilled lines, an unbroken, sealed vapour barrier is normally required to prevent condensation forming within the insulation.
- Technopol source material does not prescribe a fixing/wrapping method or joint-sealing detail.

Dimensions & availability

Made to order — cut to the client's bore, wall thickness and length. The standard supply length is 1.22 m (1220 mm); shorter 610–1220 mm sections are invoiced at the 1220 mm price. An Insulpro price line is also quoted per 1000 mm and per 1200 mm.

- Bore range: 15NB – 650NB plus 290ID (standard nominal-bore steps); published o/d values run from 22 mm (15NB) to 324 mm (300NB) in the extracted table, with larger NB steps to 650NB priced.
- Insulation-wall thicknesses (priced): 20, 25, 30, 35, 40, 50, 70, 75, 80, 90, 100, 110, 130, 150 mm (the brochure headlines 25 / 40 / 50 mm; the price lists carry the fuller range).
- Density grades: Standard Grade/16DV, 20DV, 24DV, 32DV (Insulpro line at 15DV / 24DV).
- Manufacturer: Technopol SA (Pty) Ltd, est. 1993 — Johannesburg; info@technopol.co.za; +27 11 363 2780.

Design considerations & limitations

- Combustible core: EPS is combustible; this product has no reaction-to-fire class and no fire-resistance rating. Where any fire performance is required, specify an alternative grade/product (FR-Cel EPS or PIR32/PIC32) and obtain its own documentation — do not assume the standard EPS shell meets a class.
- No published thermal data: no thermal conductivity (λ), R-value or U-value is established for this product in Technopol's sources. Heat-loss / condensation calculations cannot be closed out from Technopol data alone; the designer must obtain a λ from a qualified source as an external input. The brochure's λ figures are unsubstantiated and are not to be used.
- No temperature service limits are published for the EPS lagging. The +140 °C figure in the general brochure belongs to the separate PIR32/PIC32 line, not to EPS lagging. EPS has a modest upper service temperature and is unsuitable for high-temperature lines without an alternative product.
- Supplied bare: no integral vapour barrier or cover. On cold/chilled service the specifier must add and seal a continuous vapour barrier; joint sealing and mechanical fixing are site responsibilities.
- No structural/compressive data (kPa/MPa or strain) is published; do not rely on the lagging to carry pipe loads at supports without an external load-bearing insert or saddle.
- Jointing arrangement not fixed: several locking arrangements are in common use; confirm the actual arrangement and any load/vibration suitability with Technopol per order.
- Mineral/stone-wool variant is confirmed to exist but has no published density, sizes, spec or price list — treat it as quote-to-order with data supplied by Technopol.
- No SANS reference, no Agrément certificate and no fire-resistance rating apply. Agrément SA 2020/609 covers the LiteCore Building System only and must never be presented as covering pipe lagging.
- No dimensional tolerances (bore, wall, length) are published.

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Figures trace to Technopol technical documentation. Properties listed as "not established" are not covered by Technopol primary sources and must be obtained from a qualified source. Confirm exact figures for your specification with Technopol. Not for construction without project-specific verification.