

Polythene-Encapsulated Glass Fibre Pad — Data Sheet

This document provides technical details for polythene-encapsulated glass fibre pads, including thermal, acoustic, and dimensional specifications.

1. Product Overview

A glass mineral wool pad fully enclosed in polythene for use in acoustic and thermal insulation applications, typically above suspended ceilings to improve sound attenuation and thermal resistance.

2. Key Features & Benefits

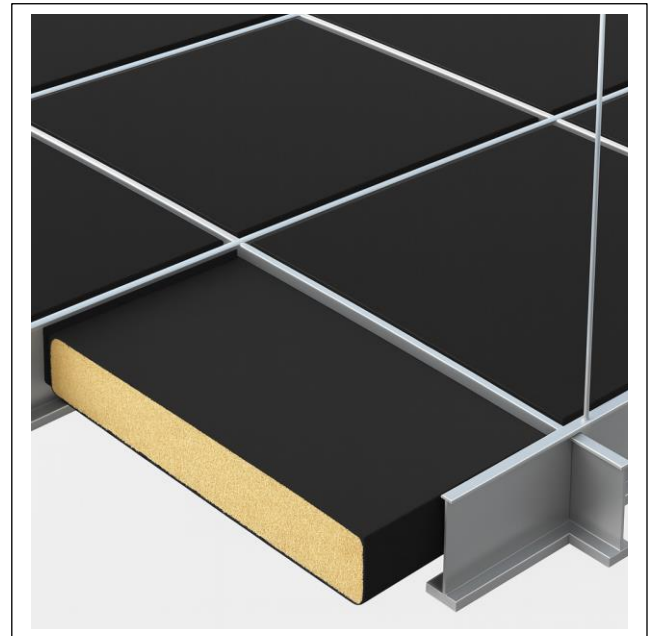
- High thermal and acoustic performance
- Polythene encapsulation prevents fibre migration
- Optional adhesive bonding for vertical stability
- Available in a range of sizes and thicknesses

3. Thermal Performance

Thermal conductivity (λ): $\sim 0.035 \text{ W/m}\cdot\text{K}$

Thermal resistance (R-value) depends on thickness:

- 60 mm $\rightarrow R = 1.36 \text{ m}^2\cdot\text{K/W}$
- 80 mm $\rightarrow R = 1.81 \text{ m}^2\cdot\text{K/W}$
- 100 mm $\rightarrow R = 2.27 \text{ m}^2\cdot\text{K/W}$
- 150 mm $\rightarrow R = 3.40 \text{ m}^2\cdot\text{K/W}$
- 200 mm $\rightarrow R = 4.54 \text{ m}^2\cdot\text{K/W}$
- 250 mm $\rightarrow R = 5.68 \text{ m}^2\cdot\text{K/W}$
- 270 mm $\rightarrow R = 6.13 \text{ m}^2\cdot\text{K/W}$
- 300 mm $\rightarrow R = 6.81 \text{ m}^2\cdot\text{K/W}$



4. Acoustic Performance

Pads manufactured with $10\text{--}12 \text{ kg/m}^3$ glass wool provide **high broadband sound absorption**, particularly in the **mid-high frequency range** (500–4000 Hz) where speech clarity is most critical. Thicker pads offer improved **low-frequency** control, especially when installed over an air gap. The polythene encapsulation contains fibres without significantly reducing acoustic performance. Based on similar density glass wool products:

- **125 Hz:** $\sim 0.50\text{--}0.70 \alpha$
- **250 Hz:** $\sim 0.90\text{--}1.05 \alpha$
- **500–4000 Hz:** $1.00+ \alpha$
- **NRC:** $\sim 1.00\text{--}1.10$



LANCASTER INSULATION

This performance reduces reverberation, improves speech intelligibility, and limits flanking sound transmission through ceiling voids.

5. Size & Pricing/packing Matrix

Other sizes available on enquiry

Size (mm)	Thickness (mm)	Pack Qty	Pallet Qty
600 X 600	50MM	30	600
600 X 600	100MM	20	400
600 X 600	150MM	15	300
600 X 600	200MM	15	240
600 X 600	250MM	15	240
600 X 600	300MM	10	200
1200 X 600	50MM	20	400
1200 X 600	100MM	15	200
1200 X 600	150MM	10	200
1200 X 600	200MM	10	160
1200 X 600	250MM	10	160
1200 X 600	300MM	10	100