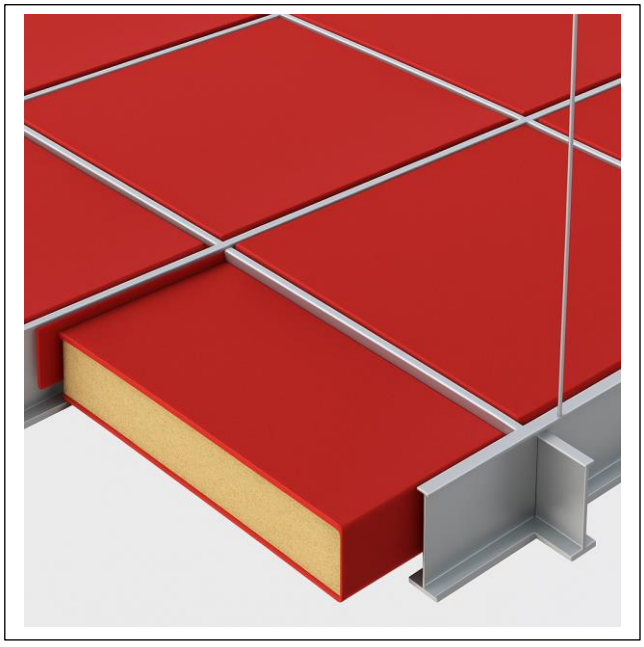
Polythene-Encapsulated Glass Fibre Pad Red Flame Retardant — Data Sheet

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 with the added feature of a red Fire retardant film fully encapsulating layer.

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
- Addition of a 100mu SW sheeting 7.5% Fire Ret
- Reduction of surface spread of flame class 1

3. Thermal Performance

Thermal conductivity (λ): ~0.035 W/m·K
Thermal resistance (R-value) depends on thickness:

- 60 mm → R = 1.36 m^2·K/W
- 80 mm → R = 1.81 m^2·K/W
- 100 mm → R = 2.27 m^2·K/W
- 150 mm → R = 3.40 m^2·K/W
- 200 mm → R = 4.54 m^2·K/W
- 250 mm → R = 5.68 m^2·K/W
- 270 mm → R = 6.13 m^2·K/W
- 300 mm → R = 6.81 m^2·K/W

4. Acoustic Performance

Pads manufactured with 10–12 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**: ~0.50–0.70 α
- **250 Hz**: ~0.90–1.05 α
- **500–4000 Hz**: 1.00+ α
- **NRC**: ~1.00–1.10

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

Typical room to room reduction of 32 dB (when incorporated into a ceiling grid)

5. Size & Pricing/packing Matrix

Size (mm)	Thickness (mm)	Pack Qty	Pallet Qty
600 X 600	50MM (FIRE RETARDANT)	30	600
1200 x 600	50MM (FIRE RETARDANT)		
600 x 600	60MM (FIRE RETARDANT)		
1200 X 600	60MM (FIRE RETARDANT)	20	480
600 X 600	100MM (FIRE REDARDANT)	20	400
1200 X 600	100MM (FIRE REDARDANT)	20	300
600 X 600	150MM (FIRE RETARDANT)	15	300
600 X 600	200MM (FIRE RETARDANT)	15	240
600 X 600	300MM (FIRE RETARDANT)	10	200
600 X 600	25MM (ACOUSTIC 45KG)	nan	300
600 X 600	50MM (ACOUSTIC 45KG)	nan	156
600 X 600	75MM (ACOUSTIC 45KG)	nan	120
600 X 600	100MM (ACOUSTIC 45KG)	nan	84
600 X 600	150MM (ACOUSTIC 45KG)	nan	56
600 X 600	200MM (ACOUSTIC 45KG)	nan	42