# **Product Description**

Polyester Solutions Polysorb 3 is a medium/heavy weight semi rigid insulation manufactured using thermally bonded polyester fibre, with a high percentage of recycled fibres. Polyester Solutions Polysorb 3 provides both thermal and acoustic insulation and is manufactured to comply with AS/NZS 4859.1.

# **Applications**

Polyester Solutions Polysorb 3 is the optimal product for acoustic applications and delivers premium sound absorption performance across the lower frequency range. Other recommended uses include sound studios, theatres, auditoriums, under certain metal roof applications for rain noise, storage tanks, process equipment, acoustic cabinets, plant rooms, acoustic baffles and acoustic silencers.

**Standard Sizes and Packaging**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Nominal Thickness (mm) | Length (m) | Width (mm) | Number per pack | Nominal Thickness (mm) | Length (m) | Width (mm) | Number per pack |
|  |  |  |  |  |  |  |  |
| 25 | 10 | 1200 | 1 | 25 | 2400 | 1200 | 10 |
|  |  |  |  | 50 | 2400 | 1200 | 3 |
|  |  |  |  | 75 | 2400 | 1200 | 3 |
|  |  |  |  | 100 | 2400 | 1200 | 3 |

**Acoustic Performance**

Acoustic performance (based on tests conducted and assessed in accordance to ISO 354:2003 Acoustics -- Measurement of sound absorption in a reverberation room).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Product** | **125 Hz** | **250Hz** | **500Hz** | **1000Hz** | **2000Hz** | **NRC1** |
| Plain 25mm | 0.13 | 0.33 | 0.65 | 0.82 | 0.98 | 0.70 |
| Plain 50mm | 0.40 | 0.70 | 0.91 | 0.95 | 0.94 | 0.85 |
| Perf Foil faced 50mm | 0.46 | 0.78 | 1.05 | 1.06 | 0.95 | 0.90 |
| Plain 75mm | 0.30 | 0.85 | 1.00 | 1.00 | 1.00 | 1.05 |
| Plain 100mm | 0.50 | 1.00 | 1.00 | 1.00 | 1.00 | 1.10 |

 1NRC Noise Reduction Coefficients

**Thermal Performance**

Thermal performance is based on testing in accordance with AS/NZS 4859.1 at 23ºC mean temperature.

|  |
| --- |
|  **Product R-Value m2K/W** |
| Polysorb 3 Plain 25mm 0.7 |
| Polysorb 3 Plain 50mm 1.5 |
| Polysorb 3 Plain 75mm 2.2 |
| Polysorb 3 Plain 100mm 3.0 |

# **Fire Resistance**

When tested in accordance with AS1530.3 (1999), “Early Fire Hazard Properties of Materials”, PSB exhibit the following characteristics:

Ignitability Index 0

Spread of Flame Index 0

Heat Evolved 0

Smoke Developed Index 0 - 3

# **Moisture Resistance**

Exposure to an atmosphere of 50˚C and 95% relative humidity for 4 days results in less than 0.2% by vol moisture absorption.

# **Maximum Service Temperature**

The maximum temperature to which Polyester Solutions PolySorb 3 should be exposed in service is 150˚C.

# **Environmental and Health Benefits**

Recycled Fibre Content 80% minimum Volatile Organic Compounds (VOC’s) No harmful VOC’s Formaldehyde Content Nil

Phenol Content Nil

Ammonia Content Nil

Ozone Depleting Potential (ODP) Nil

 Chloride Content Nil

Total Recyclable Content 100%

**How to Specify**

The insulation material shall be Polyester Solutions PolySorb 3 25mm, 50mm, 75mm, 100mm as manufactured by Polyester Solutions. For walls, the product shall be fitted in one piece per stud opening to fill the entire area

**General Installation Advice**

Polyester Solutions Polysorb 3 is safe and easy to install in walls or ceilings. Polyester Solutions PolySorb 3 products are easily torn across the width of the products or if required can be cut with a pair of industrial scissors, shears or serrated knife (type Swibo with half moon head. Use safety mesh gloves.) For higher density products use a rotary cutter made to cute textiles (brand type Elizabeth Lightning cutters). Off cuts can be used to fill corners, crevices and gaps, eliminating any waste. For walls, the insulation is placed between the wall studs or furring channels before the plasterboard is put in place. If required, string/strap insulation to secure it into position. No special clothing, gloves or masks required for installation. Allow up to one month for products subjected to compression packing to recover to their nominal thickness

# **Testing**

All testing was conducted in a laboratory situation. On site results may vary due to site conditions and quality of installation. Thermal testing is done in accordance with AS/NZS 4859.1(Materials for the thermal insulation of buildings - General criteria and technical provisions) and acoustic testing in accordance with ISO 354:2003 Acoustics -- Measurement of sound absorption in a reverberation room. . As these products are constantly being researched and developed, we reserve the right to update these specifications without notice.