

## Gyproc ThermaLine SUPER

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### INTRODUCTION

Gyproc ThermaLine SUPER consists of 9.5mm Gyproc WallBoard bonded to a backing of CFC free phenolic foam.

Gyproc ThermaLine SUPER can be used as an insulating lining material for new walls and roofs, or for upgrading the insulation of existing structures to satisfy the requirements of the national Building Regulations. The laminate provides a dry lining which responds more quickly to heat input than plasterboard and helps reduce the risk of surface condensation in buildings with intermittent heating. In addition, it reduces the problems associated with cold bridges and also helps to reduce interstitial condensation.

### Standards

The components of Gyproc ThermaLine SUPER conform to:

*BS 1230: Part 1: 1985 Specification for plasterboard excluding materials submitted to secondary operation.*

*EN13166 : 2001 Specification for thermal insulation products for buildings - factory made products of phenolic foam (pf).*

All British Gypsum boards and plasters are manufactured under *BS EN ISO 9002*, a quality assurance system approved by the BSI.

### ENVIRONMENTAL

#### Water vapour resistance

Gyproc ThermaLine SUPER incorporates a vapour control membrane providing an overall water vapour resistance of 200MNs/g. When tested in accordance with *BS 3177: 1959*, it offered a significant resistance to water vapour transmission.

The application of two coats of Gyproc Drywall Sealer after installation and jointing provides additional water vapour resistance should this be necessary for particular structures. Please refer to **White Book** and **SiteBook Section n15 - Jointing**, for further details.

#### Condensation

The use of Gyproc ThermaLine SUPER considerably reduces the risk of surface condensation in intermittently heated rooms. Please refer to **White Book Section x40 - Condensation**, for guidance.

**Table 1 - Condensation risk assessment table**

	Water vapour resistivity MNs/gm	Water vapour resistance MNs/g
9.5mm Gyproc WallBoard	60	0.57
Gyproc ThermaLine SUPER		200

Calculations using the method for assessing risk of interstitial condensation as described in *BS 5250: 2002 (Code of Practice for control of condensation in buildings)* should be carried out for particular structures.

It is feasible to design dry lined walls which will not suffer from condensation within the structure. However, when using insulated dry linings, due consideration must be taken of the overall installation to minimise perforations by services, e.g. light switches and power outlets. In addition the joints at wall / ceiling and wall / floor level must be well sealed.

Surface condensation can occur at cold bridges such as around window and door openings. When an internal insulation method is used ensure that sufficient insulation is provided at these positions. Where the insulated dry lining returns around soffits and into reveals, Gyproc ThermaLine REVEAL is recommended, subject to the thickness of window or door frame and the resultant margin.

### HEALTH AND SAFETY

*Please refer to White Book Section 14 - Health and Safety before specifying, handling or installing any British Gypsum products and systems covered in this publication.*

British Gypsum fully accepts its responsibilities as a supplier of building materials and systems as required by Section 6 of the Health and Safety Work Act: 1974. The designer should take full account of relevant regulations and guidance. Please refer to **Section 14 - Health and Safety**, for further details.

Safety Data Sheets for all British Gypsum products, and additional copies of **Section 14 - Health and Safety** are available to download from our website: [www.british-gypsum.com](http://www.british-gypsum.com), or via the British Gypsum Drywall Academy Advice Centre.

When cutting boards, power and hand tools should be used with care and in accordance with manufacturers' recommendations. Appropriate personal protective equipment should be used.

## PERFORMANCE

### Fire

The surfaces of both Gyproc WallBoard and the phenolic foam backing satisfy Class 0 surface requirements for the purposes of national Building Regulations. Please refer to **Table 2**.

For guidance, please refer to **White Book Section b01** - Introduction - Dry linings.

**Table 2 - Reaction to fire test performance**

Test	Performance
<i>BS 476: Part 6: 1989 Method of test for fire propagation for products.</i>	Index of performance (I) not exceeding 12 and a sub-index (i,) not exceeding 6
<i>BS 476: Part 7: 1997 Surface spread of flame tests for materials.</i>	Class 1

## EFFECT OF TEMPERATURE, THERMAL PROPERTIES AND PERFORMANCE

### Effect of temperature

Gyproc ThermalLine SUPER is unsuitable for use in areas subject to continuously damp or humid conditions and must not be used to isolate dampness. Plasterboards are not suitable for use in temperatures above 49°C, but can be subjected to freezing conditions without risk of damage.

### Thermal conductivity / resistance

Conductivity ( $\lambda$ )

Gyproc WallBoard	= 0.19 W/mK
Phenolic foam	= 0.024 W/mK (10-24mm thickness)
	= 0.023 W/mK (25-44mm thickness)
	= 0.022 W/mK (45-120mm thickness)

### Thermal performance

Uncontrolled air movement through the cavity can result in excessive heat loss from the building. The quoted values in **Table 3** are based on a closed cavity between the lining and the background. This is achieved in practice if the abutting elements and background are well fitted and junctions are sealed.

**Table 3 - Cavity performance**

Fixing/system	R value m <sup>2</sup> K/W
DriLyner RF system	0.03
DriLyner BASIC and DriLyner TL system (with 10mm stand off)	0.11
DriLyner MF system (with 20mm stand off)	0.17
GypLyner wall lining system or Timber battens (with 25mm battens)	0.18

## DESIGN

Gyproc ThermalLine SUPER boards are available with a decorative face and tapered edges for direct decoration or application of a skim coat of Thistle Multi-Finish or Thistle Board Finish plaster. Please refer to **Table 4**.

**Table 4 - Thicknesses available, weight and thermal resistances for Gyproc ThermalLine SUPER**

Width mm	Thickness mm	R value m <sup>2</sup> K/W	Weight kg/m <sup>2</sup>	Length mm
1200	50	1.79	7.0	2400
	60	2.32	to	or
	65	2.55	8.5	2700

## INSTALLATION

### General

It is important to observe appropriate Health and Safety legislation when working on site, i.e. protective clothing and equipment, etc. The following notes are intended as general guidance only, describing the basic sequence of installation. In practice, consideration must be given to design criteria requiring specific project solutions.

Please contact the British Gypsum Drywall Academy Advice Centre for guidance.

### Health and Safety

For correct Health and Safety methods, please refer to **White Book Section 14** - Health and Safety.

### Cutting

Gyproc ThermalLine SUPER may be cut wallboard surface uppermost using a wallboard saw. Holes for switch or socket boxes should be cut out before the boards are fixed using a utility saw or sharp knife.

### Installation

Tapered edge Gyproc ThermalLine SUPER can be installed in the DriLyner BASIC, DriLyner TL and GypLyner wall lining systems. Alternatively, using DriLyner RF facilitates the fixing of boards directly to plastered masonry walls in refurbishment situations using blobs of Gyproc Sealant. As another alternative, boards can be fixed to timber battens or joists using Gyproc Drywall Timber Screws or Gyproc Nails. For details, please refer to **White Book Section r20** - Board accessories for guidance.

## FINISHING

### Jointing

For joint treatment of tapered edge Gyproc ThermaLine SUPER, please refer to **White Book** and **SiteBook Section n15** - Jointing.

### Decoration

After the joint treatment has dried, decoration including any decorator's preparatory work, should follow with the minimum of delay. Please refer to **White Book** and **SiteBook Section n30** - Decorative effects for guidance.

### Plastering

Gyproc ThermaLine SUPER can be plastered with Thistle Multi-Finish or Thistle Board Finish. There should be the minimum of delay between completion of the lining and the commencement of the plastering. Please refer to **White Book** and **SiteBook Section b05** - Plaster systems.

### Finishing

The installation and finishing should be carried out in accordance with the recommendations of British Gypsum, as described in current literature and with the products supplied.

## OPERATION AND MAINTENANCE

If a board is damaged, it should be repaired or replaced as described in **White Book Section 9** and **SiteBook Section 10** - Board finishing.

## ACCESSORIES

For products recommended in this section, please refer to **White Book Section b10** - DriLyner and **b22** - GyLyner. For metal and other components, please refer to **White Book Sections r20** - Board accessories and **r30** - Metal components for further details.

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British Gypsum reserves the right to revise product specification without notice. The information given is correct to the best of our knowledge at the time of publication, but it is the users responsibility to ensure it remains current prior to use. The enclosed information should not be read in isolation as it is meant only as guidance for the customer, who should always ensure that they are fully conversant with the products and systems being used and their subsequent installation prior to the commencement of a job. We advise that you read and familiarise yourself with all the information contained in this literature prior to the commencement of the work or specification. For further details please refer to our Health and Safety Guidance Sheet which is available on request.

For a comprehensive and up to date library of information visit our website at: [www.british-gypsum.com](http://www.british-gypsum.com)

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