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(23)

CERTIFICATE NUMBER 060/99



www.ybsinsulation.com

Airtec Cavity Wall & Dry Lining Insulation Systems

High Performance & Low Cost Insulation fron YBS Insulation **Airtec** is a multi-layer air bubble film insulation with aluminium bonded to either one face (*Airtec*-Single) or both faces (*Airtec*-Double). The aluminium is coated with polythene to give durability and corrosion resistance therefore creating a fully waterproof insulation system.

Airtec is a high performance insulation material which acts by trapping air within its structure creating low emissivity air spaces which enhance its total thermal capabilities.

Airtec can be used to enhance 'U' values in traditional cavity wall construction to meet and exceed current Building Regulations.

Airtec is available with a fire retardant additive (*Airtec FR*) Please contact YBS Insulation on: 01909 721 662 for further information



NB: NHBC recommend 50mm (Nominal) Cavity - minimum

NB: NHBC recommend 75mm Cavity - minimum

COMPREHENSIVE FIXING DETAILS ARE AVAILABLE UPON REQUEST

Manufactured in UK and made A TIPE C (Aluminium Foil Bubble Insulation) to a Quality System meeting the requirements of BS EN ISO 9002 **Dry Lining Insulation System**

Airtec-Single

Airtec can be used in one of two wavs:

Airtec-Double

FOR USE WITH THERMAL BLOCKS

Airtec-Single is to be used in conjunction with thermal blocks. Airtec-Single is rolled to 25mm x 38mm vertical counter battens, thus creating the required air gap.

Once Airtec-Single is in place and joints sealed using Airtec YBS 75mm tape, then plasterboard (internal finish) is applied directly onto the Airtec and fixed directly through to the battens.

FOR USE WITH MEDIUM/DENSE BLOCKS

Airtec-Double is to be used in conjunction with medium dense blocks.

Airtec-Double is fixed to the blockwork-mounted horizontal counter battens thus creating the required air gap. Once Airtec-Double is in place and joints sealed with Airtec

YBS 75mm tape, then the vertical counter battens are fixed at the required centres, ready for direct application of the plasterboard (internal surface).



Airtec-Single (Please ensure that the foil coating faces towards the

Medium Density Block 25mm x 38mm Counter Batten 25mm x 38mm Counter Batten Airtec-Double

> 25mm Cavity 25mm Cavity 25mm Cavity

Outer Brickwork

12.5mm Plasterboard



Airtec - Technical Specification/Properties					
		Airtec-Single	Airtec-Double		
Thermal Resig	stance				
	Bubble	0.125m ² K/W	0.125m ² K/W		
	Cavity	0.665m ² K/W	0.665m²K/W		
Total Thermal Resistance		0.790m ² K/W	1.455m²K/W		
Environmenta	al	CFC & HCFC Free	CFC & HCFC Free		
Dimensions Thickness		4mm	4mm		
	Width	1050mm/1200mm/1500mm	1050mm/1200mm/1500mm		
	Length	25m roll	25m roll		
Airtec Foil Tape		50m x 75mm (24 rolls per box)	50m x 75mm (24 rolls per box)		

FOR FURTHER TECHNICAL INFORMATION CALL: 01909 721 662

Examples of 'U' Value Calculation

Please contact YBS Technical on: 01909 721 662

Manufactured in UK and made to a Quality System meeting the requirements of BS EN ISO 9002



		U-Value to 0.35					
			Outside surface resistance	Thickness Co (mm)	Thermal nductivityR (W/mK) -	Thermal esistance (m²K/W) 0.040	
-			Brick, External	102.50 bridged by	0.770 17.2% Morta	0.133 ar (102.5mm)	
			Cavity <i>Airtec Double</i> Cavity	- 4.00 -	- -	0.665 0.125 0.665	
_			Turbo	125.00 bridged by	0.110 6.7% Morta	1.136 r (125.0mm)	
			Plaster Dabs	15.00	-	0.170	
			Plasterboard	12.50	0.190	0.066	
	§	-	Inside surface resis	tance -	-	0.130	
				U-value 0	Combine 35W/m	d Method: P *K	

		U-Value to 0.35				
		Quiteido surfaco	Thickness C	Thermal onductivityF (W/mK)	Thermal Resistance (m²K/W)	
		 resistance 	-	-	0.040	
-		Brick, External	102.50 bridged b	0.770 y 17.2% Mort	0.133 ar (102.5mm)	
-		- Cavity	-	-	0.665	
		Airtec Double	4.00	-	0.125	
		 Cavity 	-	-	0.665	
	-	Lightweight Block	100.00 bridged b	0.270 by 6.7% Morta	0.370 ar (100.0mm)	
		Airtec Single	4.00	-	0.125	
		 Plasterboard 	12.50	0.190	0.066	
		 Battens 	25.00 bridged b	- by 8.3% Timbe	0.665 er (25.0mm)	
		 Inside surface resist 	ance -	-	0.130	
			U-value, Combined Method 0.35W/m ² K			

U-Value to below 0.27 Thickness

Tested

· Emissivity measured by National

Thermal resistance measured by

Independent Test Laboratories.

Tested to BS EN 12153:2000

for water tightness and air

Manufactured in the UK and

meeting the requirements of

permeability.

BS EN ISO 9002.

Physical Laboratory.

Thermal

ConductivityResistance

Thermal

		U-Va	Thickness	0 0.3 Thermal
<		Outside surface resistance	(mm) -	(W/mK)
-		Brick, External	102.50 bridged b	0.770 y 17.2% Mortar
-	<u></u>	Cavity	-	-
		Airtec Double Cavity	4.00	-
	-	Turbo	100.00 bridged b	0.110 by 6.7% Mortar
		Airtec Single Plasterboard	4.00 12.50	- 0.190
		Battens	25.00 bridged b	- by 8.3% Timber
		Inside surface resista	nce - U-value C	- e, Combinec).3W/m²

U-Va	ilue i	0.0.0	
	Thickness Co	Thermal onductivityF	Thermal Resistance
Outside surface resistance	(mm) -	(W/mK) -	(m²K/W) 0.040
Brick, External	102.50 bridged by	0.770 y 17.2% Mort	0.133 ar (102.5mm)
Cavity	-	-	0.665
Airtec Double	4.00	-	0.125
Cavity	-	-	0.665
Turbo	100.00 bridged b	0.110 by 6.7% Morta	0.909 ar (100.0mm)
Airtec Single	4.00	-	0.125
Plasterboard	12.50	0.190	0.066
Battens	25.00 bridged b	- ny 8.3% Timbe	0.665 er (25.0mm)
Inside surface resista	nce -	-	0.130
	U-value 0	e, Combine).3W/m ²	ed Method: 2 K

		Outside surface resistance	(mm) -	(W/mK)	(m²K/W) 0.040
	Brick, External	102.50 bridged	0.770 by 17.2% Mo	0.133 tar (102.5mm	
		Cavity Airtec Double	- 4.00	-	0.665 0.125
		Cavity	-	-	0.665
	Turbo	100.00 bridged	0.110 by 6.7% Mor	0.909 tar (100.0mm)	
		Battens	25.00 bridged	0.038 by 8.3% Mor	0.665 tar (25.0mm)
	+	Airtec Double	4.00	-	0.125
		Battens	25.00 bridged	0.038 by 8.3% Mor	0.665 tar (25.0mm)
	🔫	Plasterboard	12.50	0.190	0.066
		Inside surface res	- sistance	-	0.130
			U-valı	ue, Combin).27W/n	ed Method n²K



For Sales and Technical Support please contact:



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Technical References

- Building Regulations 2000 Approved Documents L1 & L2.
- Building Standards Part J Sept. 2001 BRE publication 'Thermal Insulation: Avoiding the risks'.
- BRE Paper IP12/94 'Assessing the Condensation Risk and Heat Loss at Thermal Bridges Around Openings'. BS EN ISO 6946 : 1997 Building components and building elements -
- Thermal resistance and thermal transmittance - Calculation method.
- British Standard References: BS 5250 Control of Condensation in Buildings.

Condensation Risk

Further to calculating the thermal insulation requirements through a cavity wall, a check should be made for predicting the risk of condensation within the structure. This should be carried out using the method described in BS5250:1999.

J'CSL/4244/04/2004

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