

BUILDING KNOWLEDGE SERIES

ENERGY RATING IN ACCURATE®

TECHNICAL GUIDANCE FOR
THERMOSEAL™ WALL WRAP XP

When modelled correctly, reflective laminate wall wrap products can contribute an additional air-gap R-Value to a wall system, improving the overall thermal efficiency of the home. To ensure that the additional air-gap R-Value is correctly calculated, this Building Knowledge Series by CSR Building Products provides guidance on how to accurately input Bradford Thermoseal Wall Wrap XP into AccuRate.

Accurately
simulate the
contribution
of wall wrap



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PRODUCT SPECIFICATION

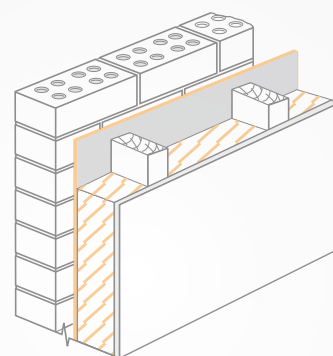
Thermoseal Wall Wrap XP has a reflective and non-reflective surface with the following properties:

- The reflective surface faces outwards and has an emittance of 0.09
- The non-reflective surface faces inwards and has an emittance of 0.9

BRICK VENEER CONSTRUCTION EXAMPLE

This example uses a Brick Veneer wall with a 110mm extruded brick, Thermoseal Wall Wrap XP, R2.5 wall batts and 10mm plasterboard lining.

- Layer 1: Contains the 110mm extruded brick
- Layer 2: Insulation placeholder contains the 40mm nominal 0.1/0.9 reflective air gap for Thermoseal Wall Wrap XP
- Layer 3: Insulation placeholder contains the wall batt (select required wall insulation: R1.5/R2.0/R2.5/R2.7)
- Layer 4: Is the 10mm plasterboard



Description: Brick Veneer wall wrap XP, R2.5 insulation, plasterboard

External	Layer	Material	Thick. (mm)	R layer (Up)	R layer (Down)
	1	Brickwork: generic extruded clay brick (typical density)	110	0.18	0.18
	2	Air gap vertical 31-65 mm (40 nominal) unventilated reflective (0.1/0.9; E = 0.10)	40	0.53	0.53
	3	Glass fibre batt (k = 0.044 density = 12 kg/m3)	110	2.50	2.50
Internal	4	Plasterboard	10	0.06	0.06

Total R (heat flow up): 3.43 m²K/W Total R (heat flow down): 3.43 m²K/W Total U (heat flow up): 0.29 W/m²K Total U (heat flow down): 0.29 W/m²K

ACCURATE[®] PRODUCT SIMULATION

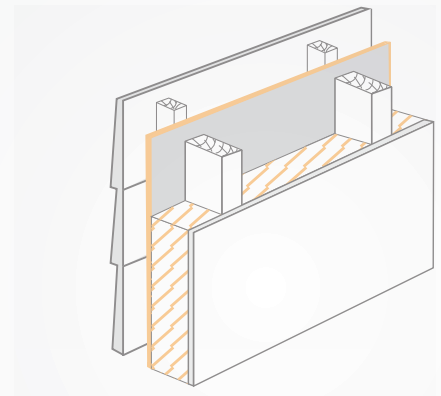
SIMULATION SPECIFICATION

This product simulation applies to AccuRate.

LIGHTWEIGHT CLAD CONSTRUCTION EXAMPLE

This example uses a 9mm Cemintel[™] Expresswall[™] panel on a 35mm top hat, Thermoseal Wall Wrap XP, R2.0 wall batts and 10mm plasterboard lining.

- Layer 1: Contains the 9mm Cemintel Expresswall panel
- Layer 2: Insulation placeholder contains the 40mm nominal 0.1/0.9 reflective air gap for Thermoseal Wall Wrap XP
- Layer 3: Insulation placeholder contains the wall batt (select required wall insulation: R1.5/R2.0/R2.5/R2.7)
- Layer 4: Is the 10mm plasterboard



Description: Express panel: wall wrap XP; R2.0 insulation; plasterboard

External	Layer	Material	Thick. (mm)	R layer (Up)	R layer (Down)
	1	Fibre-cement sheet	9	0.03	0.03
	2	Air gap vertical 31-65 mm (40 nominal) unventilated reflective (0.1/0.9; E = 0.10)	40	0.53	0.53
	3	Glass fibre batt: R2.0	88	2.00	2.00
Internal	4	Plasterboard	10	0.06	0.06

Total R (heat flow up): 2.78 mK/W Total R (heat flow down): 2.78 mK/W Total U (heat flow up): 0.36 W/mK Total U (heat flow down): 0.36 W/mK

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THERMOSEAL WALL WRAP XP – UNDERSTAND THE XP DIFFERENCE

When the building stud cavity is filled with wall batt insulation, conventional (single sided inward facing) wall wraps are no longer able to contribute an additional air-gap R-Value to the wall system. Thermoseal Wall Wrap XP overcomes this problem by using an outward facing patterned antiglare surface to create a more energy efficient wall system by boosting the performance of the wall batt insulation.



CONVENTIONAL WALL WRAP WITH NO WALL BATT INSULATION

Conventional wall wrap installed with no wall insulation works by utilising the empty stud cavity (without wall insulation) to generate a reflective air-gap R-Value.

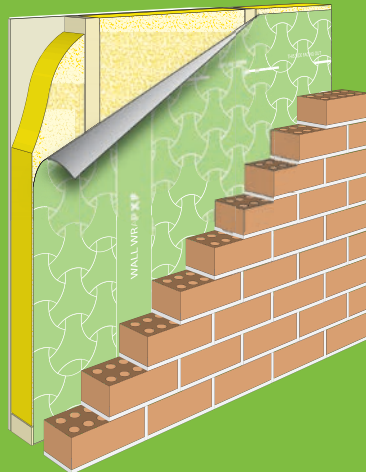
Full R-Value from Wall Wrap	$R_T 1.2$
	Summer



CONVENTIONAL WALL WRAP WITH R1.5 WALL BATT INSULATION

Conventional wall wrap installed with wall insulation can no longer contribute a reflective air-gap R-Value now the stud cavity is filled with insulation.

No R-Value from Wall Wrap, only the wall insulation	$R_T 2.0$
	Summer



WALL WRAP XP WITH R1.5 WALL BATT INSULATION

Wall Wrap XP installed with wall insulation contributes a reflective air-gap R-Value even with the stud cavity filled with insulation so you get the added benefits of both insulation systems.

Full R-Value from Wall Wrap XP plus the wall insulation	$R_T 2.5$
	Summer

NEED TO KNOW MORE

For more information or product advice, contact CSR Bradford on **1300 850 305**, email bradfordenquiries@csr.com.au or visit our website www.bradfordinsulation.com.au to download a product data sheet.

CSR Building Products Ltd
Locked Bag 1345 North Ryde BC NSW 1670
www.csr.com.au

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