## **MONIER**

# ThermaFoil® Series



## BMI ThermaFoil® Series, Creating a Cooler Living Environment

With the hot and humid tropical climate and while high air conditioning consumption is considered a norm in today's lifestyle, our bubble foil series is designed with excellent reflective surface on both sides to reduce the excessive incoming heat energy. While reflecting the heat energy and creating comfortable living environment, bubble foil also helps to reduce energy consumption need from air conditioning usage. The bubble layer is made from polyethylene to ensure durability in our hot and damp condition. It acts as an additional barrier to slow down heat transfer to your living space; providing you with indubitably comfort. It also acts as an effective moisture barrier that limits moisture transfer and prevents leakages from damaged roof covering.



- Made from materials with highest heat reflectivity
- Additional conductive and convective thermal insulation
- Cooler indoor environment



- Highest quality premium woven carrier
- Withstands rough handling
- Minimises wastage during installation process



- Quieter indoor environment
- Superior acoustic performance in rainy conditions



 A cooler interior helps reduce the use of air-conditioners and other cooling appliances



Certified to: MS ISO 2095:2014
 Certificate no: PC 000983

#### THERMAFOIL® SERIES

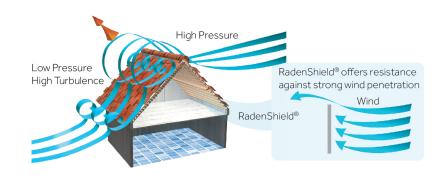
- Superior cooling performance to lower the temperature of your home.
- Reflects up to 97% of radiant heat with highly reflective aluminium surface.
- Ultimate combination of high reflectivity with additional conductive and convective thermal insulation.
- Fibre-free material that is non-asthmatic, non-allergenic and non-irritant to both installer and homeowners.
- Certified Class 'O' by Malaysian Fire and Rescue Department (BOMBA) which complice to BS476 Part 6:1989 and BS476 Part 7:1997.
- Complying to MS 2095:2014 Radiant Barrier Building Materials.

#### **SPECIFICATIONS**

Double sided highly reflective aluminium surface with in-between **thermal-resistant fire retardant air bubble**. Up to 97% reflectivity with additional fire retardant.

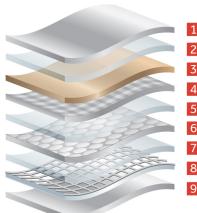
## INCREASED ROOF PERFORMANCE - WITH RADENSHIELD°, ROOF TILES ARE MORE SECURED

RadenShield® reduces pressure difference and decreases the possibility of tiles take off during windy conditions.



#### THERMAFOIL® SUPER BW

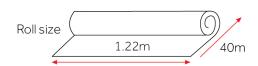
SBW228AA-20mm-FR



- 1 Pure Aluminium Foil
- 2 Polymer Bonding
- FR Polymer Bonding
- 4 Woven Fabric
- 5 Polymer Bonding
- 6 FR Bubble 20mm
- 7 Polymer Bonding
- 8 Fiber Glass Scrim
- 9 Pure Aluminium Foil

#### **BUBBLE SERIES**

Coverage 48.8m<sup>2</sup> per roll



PROPERTY	TEST METHOD	UNIT	SPECIFICATION
Grammage	BS EN ISO 9864	g/m²	400 ± 100
Thickness	-	mm	7 ± 8
Tensile Strength MD	AS/NZS 1301.448s	kN/m	≥13.0
Tensile Strength CD	AS/NZS 1301.448s	kN/m	≥12.4
Edge Tear Resistance MD	TAPPI T470	Ν	≥386
Edge Tear Resistance CD	TAPPIT470	Ν	≥320
Emittance of Surface (Alu)	ASTM C 1371	%	0.01
Reflectivity of Surface (Alu)	ASTM C 1371	%	99
Water Vapour Transmission Rate	ASTM E 96	μg/N.s	0.00897

ISO 8301/MS ISO 8302 m<sup>2</sup>K/w

>1.769

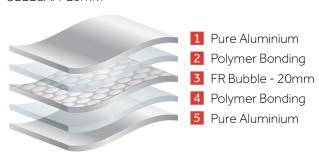
product sample

CIDB PPS Registration No: 1140408SL0001

Thermal Resistance

#### THERMAFOIL® DELUXE BF

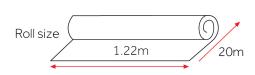
SB228AA-20mm



#### **BUBBLE SERIES**

Coverage 24.4m² per roll

product sample



PROPERTY	TEST METHOD	UNIT	SPECIFICATION
Grammage	BS EN ISO 9864	g/m²	315 ± 50
Thickness	In-House	mm	6 ± 7
Tensile Strength MD	AS/NZS 1301.448s	kN/m	≥ 3.5
Tensile Strength CD	AS/NZS 1301.448s	kN/m	≥ 2.8
Edge Tear Resistance MD	TAPPI T470	Ν	≥83
Edge Tear Resistance CD	TAPPI T470	Ν	≥ 78
Emittance of Surface (Alu)	ASTM C 1371	%	≤ 0.05
Reflectivity of Surface (Alu)	ASTM C 1371	%	≥99
Water Vapour Transmission Rate	ASTM E 96	μg/N.s	≤ 0.0030
Thermal Resistance	ISO 8301/MS ISO 8302	m²K/w	1.864

CIDB PPS Registration No: 1140408SL0001

#### THERMAFOIL® BF

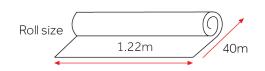
B228AA-10mm-FR



- 1 Pure Aluminium Foil
- 2 Polymer Bonding
- 3 FR Bubble 10mm
- 4 Polymer Bonding
- 5 Pure Aluminium Foil

#### BUBBLE SERIES

Coverage 48.8m² per roll



PROPERTY	TEST METHOD	UNIT	SPECIFICATION
Grammage	BS EN ISO 9864	g/m²	230 ± 20
Thickness	In-House	mm	6 ± 7
Tensile Strength MD	AS/NZS 1301.448s	kN/m	≥ 2.0
Tensile Strength CD	AS/NZS 1301.448s	kN/m	≥ 1.8
Edge Tear Resistance MD	TAPPI T470	Ν	≥ 59
Edge Tear Resistance CD	TAPPI T470	Ν	≥ 58
Emittance of Surface (Alu)	ASTM C 1371	%	≤ 0.04
Reflectivity of Surface (Alu)	ASTM C 1371	%	≥99
Water Vapour Transmission Rate	ASTM E 96	μg/N.s	≤ 0.0112
Thermal Resistance	ISO 8301/MS ISO 8302	m²K/w	1.694

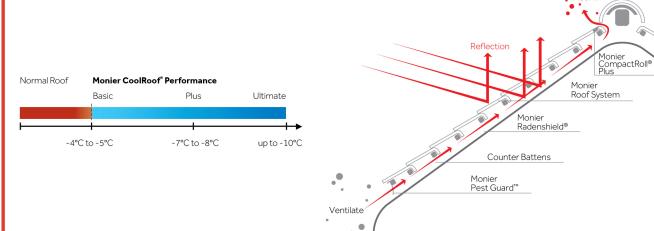
product sample

#### MONIER COOLROOF®

Monier ThermaFoil® is a range of high performance radiant barrier. It is one of the key components in our Energy Efficient Roofing Solutions where it minimises energy consumption and maximises comfort while having a low impact on the environment.

Monier CoolRoof® creates a natural airflow and heat barrier that limits heat transfers through the roof to provide a cool and comfortable home. It is a sustainable system to save energy, reduce electricity costs and protect the environment.

From decades of global experience in roofing industry, our R&D team in Malaysia and Europe have developed state-of-the-art roof simulation software called BMI Roof Physics. The software capability is acknowledged by the committee of Journal of Building Physics and US Department of Energy Laboratory. Through the software, our experts concluded that Monier CoolRoof® system reduces the living space temperature of your home up to  $10^{\circ}$ C\* compared to conventional roof in Malaysia.



#### Cooler home and bigger savings!

- Up to 10°C\* cooler inside
- Reduce up to 60% of air conditioning usage\*
- Reduce up to 30% of electricity bills\*
- Less than 2 years payback period
- \*Data validated by BMI Technical Centre in Europe for tropical weather, in collaboration with Oak Ridge National Laboratory and Lawrence Barkeley National Laboratory in U.S.A.





### MONIER

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#### BMI ROOFING SYSTEMS SDN. BHD.

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#### **ABOUT BMI GROUP**

BMI Group was born out of a recognition that customers now expect a single point of expertise to help them find their ideal roof. Bringing together some of the industries most trusted brands to become the largest supplier of both flat and pitched roofing and waterproofing solutions throughout Europe, BMI Group has over 173 years of experience and innovation to offer its clients.

As a **Standard Industries** company, BMI Group, headquartered in London, has the support, reach and resources of a global enterprise. With over 120 production facilities across Europe, Africa and Asia, and more than 9,500 employees worldwide, the business is well positioned to provide an unparalleled level of service to homeowners, specifiers, contractors, property owners and developers.

Find out more at www.bmigroup.com