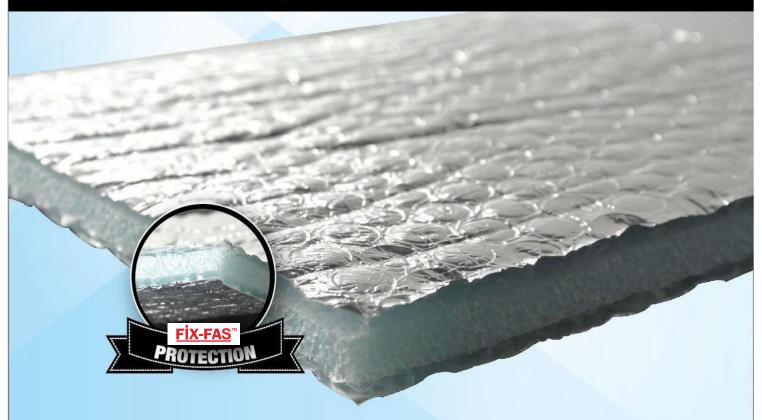




# Avantgarde

Fibre-free , High Thermal Performance Insulation



For Cooler Living Environments







STRONG & DURABLE

- High level of tear resistance
finimise wastage during installation

- No additional supporting



NOISE REDUCE

- Reduces noise from











 ENERGY & COST SAVIN
 Create a cooler interior to reduce the use of air-conditioners



MADE IN MALAYSIA
- Locally produced with latest lamination technology



## **Avantgarde**

#### Product Code Avantgarde

The All-In-One insulation system is a combination of 8mm thick PE foam heat laminated with a layer of pure aluminium bubble foil on both sides. The state-of-the-art design combines the technology of reflective material with conductive heat resistance of the bubble packs & PE foam, making it one of the most effective solution in the market.

#### DOUBLE LAYER OF ALUMINIUM BUBBLE FOIL WITH 8MM PE FOAM.

AVANTGARDE

1. Pure Aluminium

6. Bonding Layer

2. Bonding Layer

7. Bubble

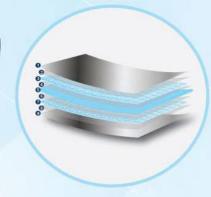
3. Bubble

8. Bonding Layer

4. Bonding Layer

9. Pure Aluminium

5. 8mm thick PE Foam



#### **Technical Data**

Avantgarde			
Description	Test Method	Units	Specification
Weight	BS EN ISO 9864	g/m²	600 ± 25
Thickness	-	mm	16 ± 2
Tensile strength MD	ASTM D 828	N/25.4mm	65 ± 25
Tensile strength CD	ASTM D 828	N/25.4mm	55 ± 10
Initial Tear Resistance MD	ASTM D 1004	N	60 ± 10
Initial Tear Resistance CD	ASTM D 1004	N	50 ± 10
Puncture Resistance	ASTM D 4833	N	100 ± 10
Emittance of surface (Alu)	ASTM E 408	%	3 - 5
Reflectivity of surface (Alu)	ASTM E 408	%	97 - 99
Scratch Resistance			Both Sides
Dry Delamination	AS/NZS 4201.1		PASS
Wet Delamination	AS/NZS 4201.1		PASS
Shrinkage	AS/NZS 4201.3		PASS
Water Barrier	AS/NZS 4201.4		HIGH
Mass Unit	ABS EN ISO 9864	g/m²	570 ± 20
Thermal Insulation	ISO 8990: 1994	K-W/mk	0.044
Fungal Growth Ability			No Fungal Growth

#### Specification Sample

ROOFSEAL FIX-FAS<sup>™</sup>
 Avantgarde Insulation Combination Of 8mm Thick PE Foam Heat Laminated With Pure Aluminium Bubble Foil On Both Sides.

\* By Roofseal Resources (M) Sdn Bhd Tel: 03-8723 4776 Fax: 03-8723 4775

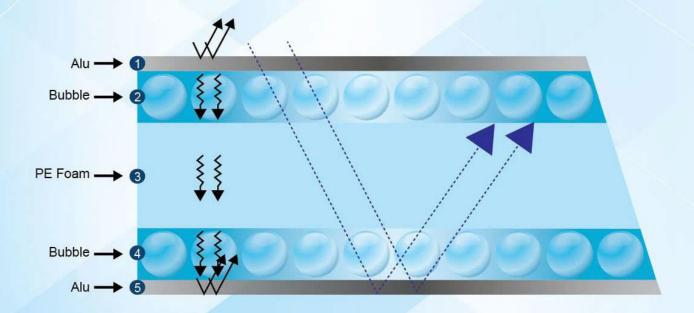
\* Details in accordance with manufacturer's instructions



## **Avantgarde**

## How does it work?

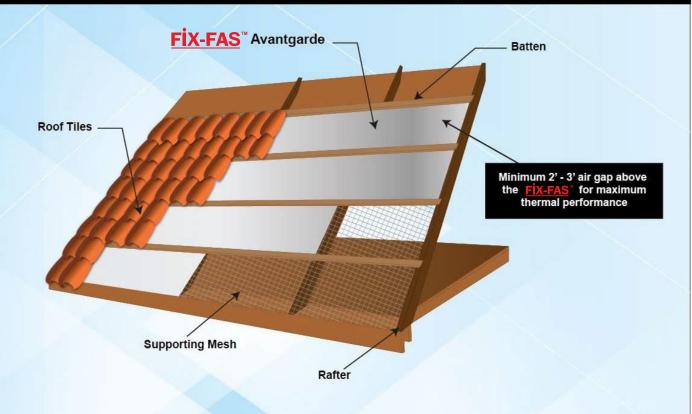
During day time, the sun radiates heat and heats up the roof covering of the building. The roof gets heated up and radiates heat to the top surface of aluminium foil of **FIX-FAS** Avantgarde, which is installed underneath the roof.



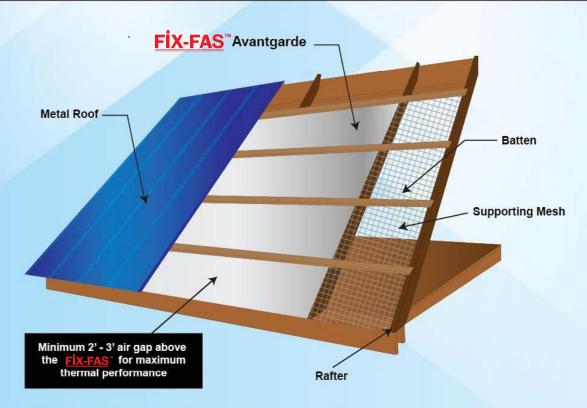
- 1. The aluminium foil reflects the radiant heat by up to 97%, allowing only 3% of the radiant heat to transfer through.
- 2. The encapsulated air in the HDPE bubble packs trap & delay conduction heat transfer.
- 3. The thick fibre-free PE foam delays conduction heat from HDPE bubble packs, functioning like the conventional bulk insulation (rockwool / glasswool)
- The encapsulated air in the HDPE bubble packs trap & delay conduction heat transfer from PE foam.
- 5. The minimal heat radiated from the bubble layer reaches the bottom layer of aluminium foil surface, and is then reflected again by 97%.

The final result is that there is, very minimal amount of heat that goes through the Avantgarde Insulation as it is engineered to create a Fiber-free, High Thermal Performance Insulation in one single product.

## <mark>FİX-FAS</mark><sup>™</sup> Tiled Roof System



### Fix-FAS Metal Roof System



**ROOFSEAL** TOTAL INSULATION SOLUTIONS

