

MultiPremium

Made of 2 external pure aluminium foil (8 microns) with anti corrosive treatment, covering a double layer of fire retardant non-dripping polyethylene bubble film, and a single core layer of XPE fire retardant foam.

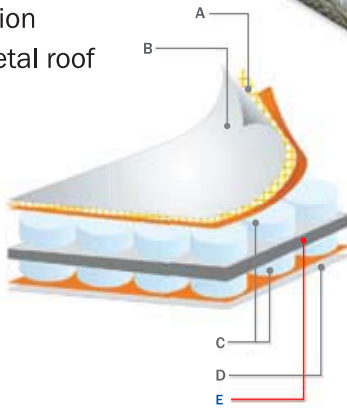
With CoolMax Multi Premium you can achieve MULTI EFFECT SOLUTIONS :

- i) Total Thermal Insulation Solution
- ii) Thermal Break Solution for metal roof
- iii) Accoustic Solution



Structure of insulation

- A. Optional reinforcing net
- B. High purity low-e Aluminium facing
- C. Thermally insulating air-bubble layer
- D. High purity low-e Aluminium facing
- E. 3mm XPE FR FOAM



Roll size : **1.2m(W) x 30m(L) x 9mm(T)**
 Coverage : **36m²**
 Roll Weight : **14kg**

Key Benefits



Accoustic
up to 78% NRC



Advanced Thermal Performance
reflecting 97% of radiation heat



3 in 1
provide a protective insulation barrier, radiant barrier and waterproofing membrane



No Health Hazards Fiber Free
anti bacteria and anti fungal, non-asthmatic and poses no health and safety risks



Easy Installation
no wire mesh
no additional protective film
fast & easy



Energy Saving, Cost Saving



Fire Retardant
Achieved Class 0 Classification & all International Standards

Technical Data

PROPERTY	UNITS	DIR	CoolMax Multi Premium
Layer Description			MULTI LAYERS of High Resistance Aluminum Foils / Non-Dripping Close Cell PE Bubbles / High Resistance Aluminum Foil / Cross Linked PE FR Foam as core layer
Nominal thickness	mm		9.00
Emissivity (ASTM C 1371)	%		3
Reflectivity (ASTM E 408)	%		97
Heat Resistance (Max R) (ASTM C 236)	m ² °C/W		3.13 to 3.50
Scratch Resistance			Both Sides
Acoustic Value	NRC		78%
Surface Flame Spread (BS 476:Part 7)			Class 1
Fire Propagation Test (BS 476:Part 6)			N/A
Fire Standards For Japan Market ISO 5660-1 (Test done by GBRC, Japan)			Comply
Fire Hazard Properties according to AS/NZ 1530 part 3, 1999			
Flammability Index according to AS/NZ 1530 part 2, 2005			Index of flame < 1
Fungal Resistance Test (ASTM C 1338)			No fungal growth
Water Vapor Transmission (ASTM-E-96)	g / ft ² · hr		0.0018 (method A)
Dry Delamination (AS/NZS 4201.1)			PASS
Wet Delamination (AS/NZS 4859.1) (Appl)			PASS
Surface Corrosion (AS/NZS 4859.1) (Appl)			PASS*
Mean Ignition Time	Seconds		0
Mean Flame Propagation Time	Seconds		0
Mean Heat Release Integral	Kj/m ² /remain		0
Mean Smoke Release	Density/m		0.006

Terreal CoolMax Multi Premium are designed and manufactured under control of a Quality Management System, which meets the requirements of ISO 9001:2000 as certified by :



* All products are supplied with high resistance (H.R.) treatment against corrosion as standard.




Long Lasting

Main Features and Advantages

Subject	Typical conventional insulation such as glasswool	CoolMax Multi Premium
Main Insulation Concept	Heat Absorption	Heat reflection: using low Emissivity surfaces to keep the heat away
Accoustic Value	Up to 80% NRC Performance can drop with wrong application	Equivalent to glass wool Performance consistent
Effectiveness Against Radiation Heat	Low: absorb 88% of radiation heat	High: Block 97% of radiation heat, hence acting as HEAT BLOCKAGE MEMBRANE
Heat Resistance Calculation and Accuracy	Using K Value to asses heat resistance based on sterile laboratory conditions with up to 50% degrading compare with manufactures data!	Using total system heat resistant (Rt) calculation, based on real constuction conditions and building elements! Very accurate and realistic concept!
Installation Concept	Slow and complicated, need to use wire mesh and protective film such as foil, or, PVC membrane	All in ONE: Fast, easy, water proof, no wire mesh, and no protective film. Save time and money!
Heath Risks	High	Non-Fiber products, safe and environmental friendly.

Certificates & Approvals

CERTIFICATION	COUNTRY	STANDARD	TEST RESULT	CERTIFICATION BODY
Quality Management System	International	ISO 9001:2000	comply	
Product Safety in Food Packaging Applications	International U.K.	HACCP BRC / IOP	comply comply	
FIRE SAFETY	United States	ASTM E 84 Equivalents: UL 723 ANSI/NFPA#255 UBC No. 8-1	Class A	SGS U.S. Testing Company Inc.
	Japan	ISO 5660	non-combustible	General Building Research Corp. of JAPAN Officially approved By the Ministry of Land, Transport and infrastructure
	European Union	EN 13501-1:2000	B - s2, d0	Warrington Fire Research Centre Ltd. - U.K.
	France	NF P 92 - 507	M1	SNPE-Laboratoire d'Essais au Feu - France
	Spain	UNE 23-727-90	M1	CIDEMCO - Spain
	Germany	DIN 4102	B1	HT Troplast AG - Germany
	U.K.	BS 476:Part 7	Class 1	Warrington Fire Research Centre Ltd. - U.K.
	Malaysia / Singapore	BS 476:Part 7 BS 476:Part 6	Class 1 Class 0	Fire and Rescue Department Malaysia. (JPBM:PPP/005/14/79) Singapore Productivity & Standards Board (PSB Corporation)
	Australia	AS 1530 Part 3	Pass all categories	APL, Applied Physics Laboratories, New Zealand
ASBESTOS FREE	International	X-ray diffraction method RTM-2 (AIA)	No asbestos fibres identified No asbestos fibres found	Ministry of National Infrastructures, Geological Institute "Millennium Hygiene" - Enviromental measurement
	United States European Union	ASTM C 236 DIN 52.611	1,567 m ² °C / W 1,801 m ² °C / W	Celotex Corporation Testing Services, U.S.A. CIDEMCO - Spain
THERMAL RESISTANCE MEASUREMENT	Korea	KS F 2273	1,695 m ² °C / W 3,550 m ² °C / W (multiple layers)	Fire Insurers Laboratories of Korea [FILK]
	United States	ASTM C 236	R=21 Btu'in/(hr'ft ² 'F)	Geo Science Laboratory, San Diego, California
THERMAL CONDUCTIVITY				
Emmissivity	Singapore	ASTM C 1371	0.04	Singapore Productivity & Standards Board (PSB Corporation)
Reflectivity			96%	
Emmissivity	Australia	ASTM E 408	0.03	The University of Western Australia
Reflectivity			97%	
Moisture Barrier	United States	ASTM E 96	0.018 perm	SGS U.S. Testing Company Inc.
Mold Resistance	United States	ASTM C 1338	No fungal growth	
Thermal Stability Tests	United States	ASTM D 1204	< 0.25% change	Technion Research & Development Foundation Ltd.
		ASTM C 1263	No Cracks / No delamination	
TECHNICAL APPROVALS	Poland	AT-15-5167/2002	Approved	Instytut Techniki Budowlanej
	Spain	DIT	Approved	Instituto Eduardo Torroja de Ciencias de la Construcción
	Australia	AS/NZS 4859.1:2002	Approved	JMF, Australia
	United States	AS/NZS 4859.1:2002	Approved	R&D Services, U.S.A.

DISCLAIMER: The information contained in this Technical Data Sheet is the result of extensive laboratory testing performed on our products during standard production. The values given here are typical average values and are believed to be correct to the best of our knowledge, but user should not rely on them absolutely and must confirm their validity and suitability in each particular case. Terreal Malaysia Sdn Bhd makes no guarantee of results and assumes no obligation or liability in connection with this advice.

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