

VITALLY ALUMINIUM COMPOSITE PANEL

by Vitally Industries Sdn. Bhd.

PAM NORTHERN CHAPTER CPD SEMINAR
27-04-24

Elevating Aesthetics : Project Showcase





TF AMD MICROELECTRONICS @ BATU KAWAN

- **Colour**
VT-1A Flash Silver
- **Finishes**
Metallic
- **Use**
External wall cladding



INFINION @ MELAKA

- **Colour**
VT-2D Pearl White, VT-5A Deep Grey
- **Finishes**
Solid
- **Use**
External wall cladding

FELCRA TOWER @ JALAN SEMARAK, KL

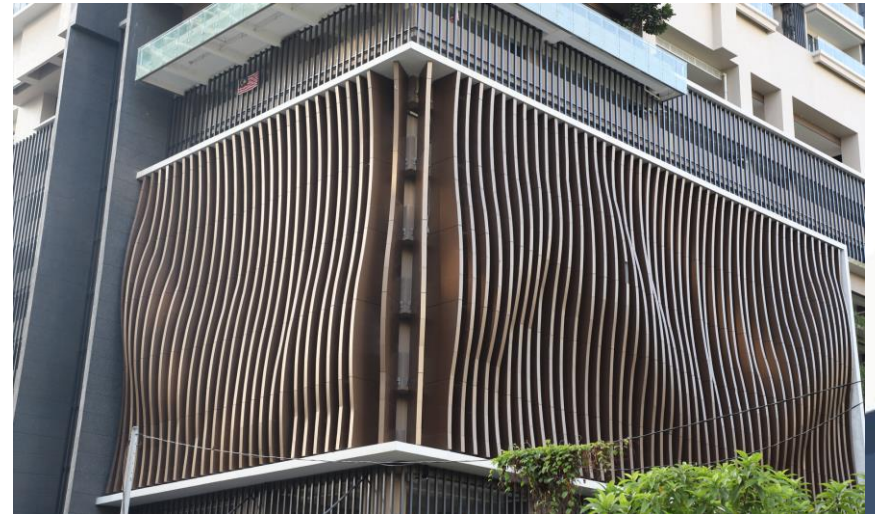
- **Colour**
VT-1A Flash Silver
- **Finishes**
Metallic
- **Use**
External columns, link bridge





THE MANOR @ KUALA LUMPUR

- **Colour**
VT-5G Mica Copper
- **Finishes**
Metallic
- **Use**
Curve fins at podium





M RESORT & HOTEL @ KUALA LUMPUR

- **Colour**
AS-53 Red Pine, AS-54 Marble Grey
- **Finishes**
Wood grain & stone grain look a-like
- **Use**
External wall cladding, vertical coping



JKR HQ (BLOCK F) @ JLN SALAHUDDIN

- **Colour**
VT-7D Champagne Silver
- **Finishes**
Metallic
- **Use**
External wall cladding



IJM RIMBAYU SALES GALLERY @ BANDAR RIMBAYU, SELANGOR

- **Colour**
VT-7L Honeycomb
- **Finishes**
Metallic
- **Use**
External wall cladding, ceiling, louvers/vertical fins



PINNACLE SALES GALLERY @ SRI PETALING

- **Colour**
VT-7A Flash Gold
- **Finishes**
Metallic
- **Use**
External wall cladding

IMPERIAL LEXIS @ KUALA LUMPUR

- **Colour**
BS-80 Silver Brushed
- **Finishes**
Brushed/hair line
- **Use**
Horizontal coping



SENTRAL SUITES @ KL SENTRAL

➤ **Colour**

VT-4D Red Coffee, VT-5A Deep Grey, VT-2A Silver Grey

➤ **Finishes**

Solid, Metallic

➤ **Use**

Vertical decorative panel at podium



SUKE TOLL PLAZA

➤ **Colour**

VT-3G SUKE Blue, VT-1A Flash Silver

➤ **Finishes**

Solid, metallic

➤ **Use**

Curve shape decorative panel, external wall cladding



DXN RETREAT & WELLNESS CENTRE @ CYBERJAYA

➤ **Colour**

VT-2A Silver Grey, VT-6A Champagne, VT-7A Flash Gold,
VT-8C Galaxy Black, VT-2D Pearl White

➤ **Finishes**

Solid, metallic

➤ **Use**

External wall cladding





PUSAT JANTUNG HOSPITAL SERDANG

- **Colour**
VT-2A Silver Grey
- **Finishes**
Metallic
- **Use**
Drop-off canopy, roof edge



MAJLIS BANDARAYA ISKANDAR PUTERI @ JOHOR

- **Colour**
VT-2C Yellow, VT-8C Galaxy Black
- **Finishes**
Solid, Metallic
- **Use**
Roof edge & ceiling, external wall cladding

MRT2 – UNDERGROUND STATIONS

➤ **Colour**

Special Colours

➤ **Finishes**

Solid, metallic, high gloss

➤ **Use**

Internal wall cladding



CONLAY STATION



TITIWANGSA STATION



PERSIARAN KLCC STATION



HOSPITAL KL STATION



CHAN SOW LIN STATION



SENTUL WEST STATION



AMPANG PARK STATION



RAJA UDA STATION

Introducing Vitally : A snapshot

Understanding Vitality at a Glance...



Company Background

- Established in 2013 under Vitality group
- HQ located in Muar, Johor
- Annual sales : RM70mil
- Market : Malaysia domestic project & Southeast Asia regional project



Product Compliance

- CIDB PPS certified
- MS2571:2017 product certificate
- BOMBA Class O certified
- BOMBA BS8414 certified
- EN13501 (1) tested
- GBI point contribution/ GPM listed



Product Application

- Exterior applications
- Interior applications
- Decorative panels



Vitality Industries HQ & Production Plant

- ❑ ISO 9001:2015 certified
- ❑ Production capacity : 240,000M2/month



Laminating Line Process

1. FR core pellet melting @ 260°C



3. Adhesive film- go between core sheet & aluminum sheet



5. Curing process



7. Edge trimming to width



2. Core extrusion - 3 roller machine



4. Aluminium Coil Lamination



6. Protection tape lamination



8. Cut to length & final check



Vitality Industries In-house QC Laboratory



Vitally's Range of Product



**Exterior Wall Cladding
Panel**

Interior Wall Panel

**Awning/ Roofing
Panel**

**Signage & Advertising
Board**



ACP - Exterior Wall Cladding

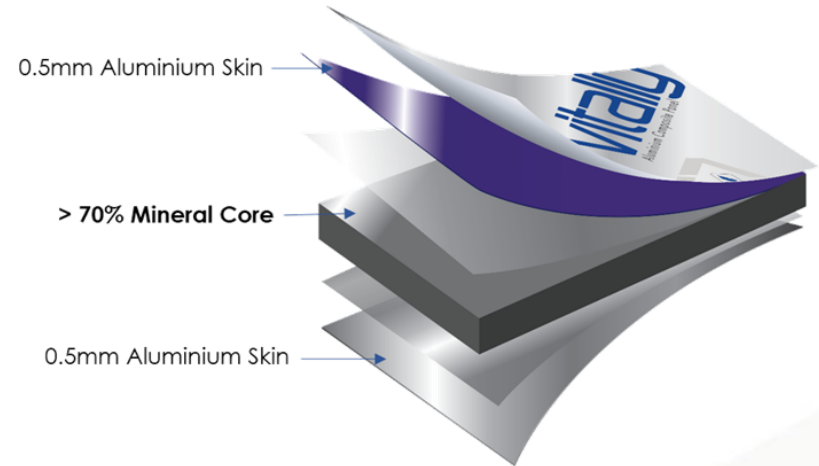
MS2571:2017 The Requirement for ACP (External Cladding)

	MS2571:2017	VITALLY FR
Flame Retardant Core	Min 70% of non-combustible mineral	✓ (75%)
Aluminium Alloy	3000 series & 5000 series	✓ (AA3003)
Surface Coating	Fluorocarbon with 70% of PVDF/FEVE resin	✓ (70%)
Thickness of Coating	Min 33 µm (3 coats)	✓ (35-43µm)
Weight (4mm-0.5 panel)	Min 7.3kg/M2	✓ (7.4kg - 7.6kg/M2)
Fire Resistance Property	BS476 Part 6 & Part 7 (Class O)	✓ BS476 Part 6 & Part 7 (Class O)

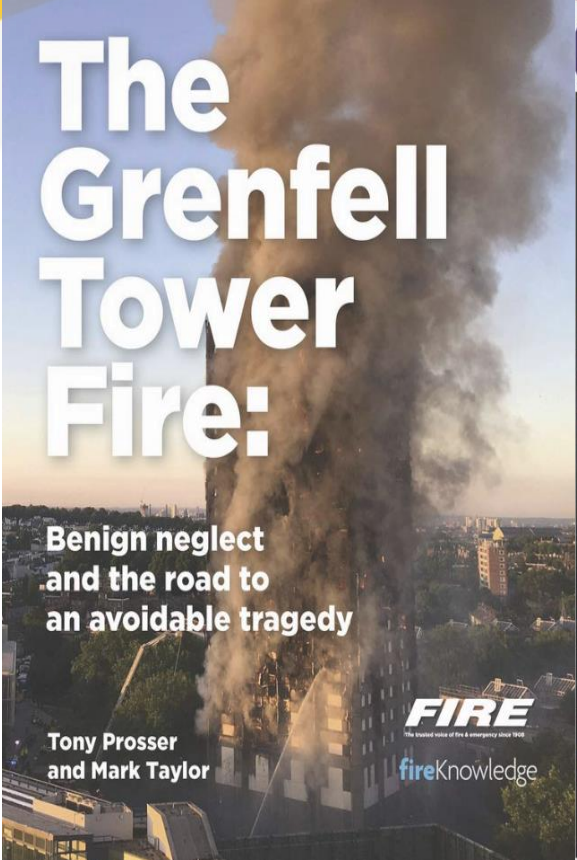
ACP - Exterior Wall Cladding

Vitality FR ACP – Product Specification

Panel Thickness	4.0mm
Aluminium Skin Thickness	0.5mm
Core Thickness	3.0mm
Aluminium Alloy	AA3003
Core	FR (Mineral-filled core)
Surface Finishing	PPG 70% Kynar 500® PVDF
Panel Width	1250mm (4') / 1550mm (5')
Panel Length	2440mm(8')/3200mm(10')/4100mm(13') /4880mm(16') (up to 6000mm)



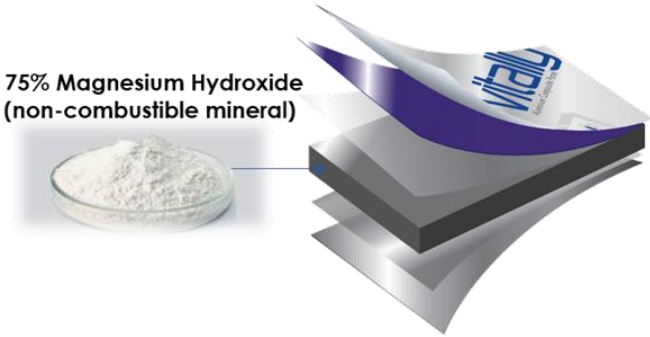
Fire Protection & Prevention : **The Compliance of Fire Safety Design**



VITALLY FR ACP

- A critical component in mitigating fire risk in external cladding design
- Designed to resist the spread of flames and limit fire damage
- Enhancing fire safety in high-rise buildings

~ 75% Magnesium Hydroxide
(non-combustible mineral)



Reduces production of
smoke and toxic gases










Slows down the spread of flames



Provides crucial time for safe
evacuation and firefighting efforts.

Fire Performance Test

	Type of Test	Test Lab	Results	Flame Spread	Smoke Development	Burning Droplets
BS476 - Part 6 & Part 7	Material	SIRIM	Class O			
EN13501 - 01	Material	Intertek	B,s1,d0			
ASTM E84	Material	Intertek	Class A			
BS8414 - Part 1	System	SIRIM	Passed			

Fire Performance Test

BS476 Part 6 & Part 7 : Fire Propagation Test & Surface Spread of Flame Test

BS476 Part 6:

- Measures the amount of heat release and contribution to the growth of fire
- Requirement : Fire Propagation Index (I) not more than 12, subindex (i1) not more than 6.

Vitality FR

Subindex i1	Subindex i2	Subindex i3	Fire Propagation Index (I)
0.4	0.1	0	0.5

BS476 Part 7:

- Measures the lateral spread of flame along the material surface
- To achieve a Class 1 classification the flame spread by 1.5 and 10 minutes must be less than 165 mm.

Vitality FR

Flame Spread at 1.5min	Final Flame Spread at 10min
< 75mm	< 75mm



Fire Performance Test

EN 13501-01 : Fire Classification of Construction Product & Building Elements (Reaction to Fire test)

BS EN ISO 11925-2:2010 : Ignitibility of product subjected to direct impingement of flame (Single-flame source test)

- Evaluates the ignitability of a product and measures flame distances, burning time & any flaming droplets or particles generated.

BS EN 13823:2010 : Single burning item test

- Measures the heat release, surface spread of flame, smoke production & burning droplets

Vitally FR

Fire Behavior	Smoke Production		Flaming Droplets	
B	s	1	d	0



Fire Performance Test

ASTM E-84 : Standard Test Method for Surface Burning Characteristics of Building Materials



- Measures flame spread distance & smoke developed value for interior finishes and building materials (Also known as Steiner Tunnel Test)
- Test Duration : 10 minutes
- Classification :

	Flame Spread Index (FSI)	Smoke Developed Index (SDI)
Class A (I)	0 - 25	0 - 450
Class B (II)	26 - 75	0 - 450
Class C (III)	76 - 200	0 - 450

Vitality FR

Flame Spread Index (FSI)	Smoke Developed Index (SDI)
15	5


Class A

Fire Performance Test

BS8414 Part 1 : Test Method for Non-loadbearing External Cladding Systems Applied to the Masonry Face of Building



- Full – scale system test incorporating joints & corner details, fixings, insulation, fire breaks, cavities and other elements of the system construction.
- Assess the performance of complete cladding system.
- Full test duration : 60 minute; fire extinguished @ 30 minute after ignition of fire.
- Applicable to ALL cladding materials for building with >18M in height.

Fire Performance Test

BS8414 Part 1 - Test Method for Non-loadbearing External Cladding Systems Applied to the Masonry Face of Building

Vitally's Test on BS8414-1 | Test Date : 31st July 2019 | Test Lab : Sirim Rasa



Applicable to building with >18 meters in height

REPORT NO.: 2019FE0134	PAGE: 20 OF 41
<small>This Test Report refers only to samples submitted by the applicant to SIRIM QAS International Sdn. Bhd. and tested by SIRIM QAS International Sdn. Bhd. This Test Report shall not be reproduced, copied in full and shall not be used for any means or forms (including but not limited to advertising purposes) without written approval from the Managing Director, SIRIM QAS International Sdn. Bhd. Please refer the test value for Conditions Relating to the Line of Test Report.</small>	

The cladding system was tested to the requirements of BS 8414-1:2015+A1:2017 without early termination of the test, and therefore assessment is possible according to the results from the following table:

Criterion	Results	
	Start time t_e (min)	Assessment of criteria
External fire spread	15 minutes	Passed
Internal fire spread (ventilation layer)	15 minutes	Passed

Criterion	Results	
	Test duration (min)	Assessment of criteria
Visible Flaming	60 minutes	Passed
Mechanical Performance	60 minutes	Passed
Burning Debris and Pool Fires	60 minutes	Passed

PASSED ALL 5 TEST CRITERIA



Coating : Enhancing Durability & Performance

AAMA 2605 High Performance Exterior Specification

	AAMA SPECIFICATIONS		
	AAMA2605	AAMA2604	AAMA2603
South Florida Weathering	10 Years	5 Years	1 Year
Colour Retention	5ΔE	5ΔE	Slight Fade
Chalk Resistance	8 / 6	8	Slight Chalk
Gloss Retention	Min 50%	Min 30%	N/A
Humidity Resistance	4,000 Hours	3,000 Hours	1,500 Hours
Salt Spray Resistance	4,000 Hours	3,000 Hours	1,500 Hours
Warranty	10 Years	5 Years	1 Year

- **AAMA 2605** → superior performance coating
- A coating meet AAMA2605 specification would be a 70% fluoropolymer resin-based coating (**70% PVDF resin**)
- Outstanding resistance to humidity, color change, chalk, gloss loss and chemicals
- Low-maintenance solution for exterior cladding

AAMA 2605 High Performance Exterior Specification

- PPG DURANAR® 70% KYNAR 500® PVDF resin coating
- VITALLY's aluminium coil supplier → PPG certified applicator :
 - ☆ Enhanced coating warranty
 - ☆ Heightened technical service
 - ☆ Priority colour matching



Colour Range for Exterior & Interior Application

SOLID



VT-2D Pearl White



VT-4A Cream White



VT-3D Light Grey



VT-7C Mouse Grey



VT-5A Deep Grey



VT-1C Pure Black



VT-8A Chinese Red



VT-5D Pure Orange



VT-2C Yellow



VT-4H Bayview Blue



VT-5H Blue Thunder



VT-9F Cove Blue



VT-7E Night Blue



VT-8G Dill Weed



VT-9G Eco-Green



VT-1H Glade Green



VT-2H Fairview Taupe



VT-3H Buckhead Brown



VT-4D Red Coffee

METALLIC



VT-1A Flash Silver



VT-2A Silver Grey



VT-6A Champagne



VT-7D Champagne Silver



VT-6H Natural Suede Mica



VT-7A Flash Gold



VT-5G Mica Copper



VT-6G Hazelnut Mica



VT-7G Sky Silver



VT-1D Metallic Black



VT-8C Galaxy Black

Colour Range for Exterior & Interior Application

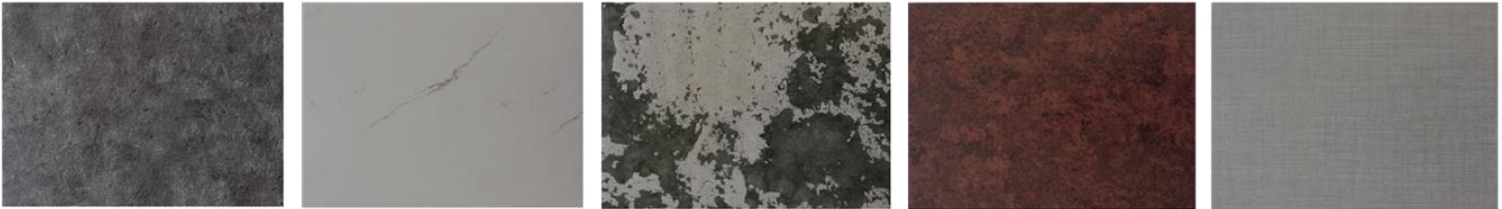
STONE GRAIN SERIES



WOOD GRAIN SERIES



OTHERS



Common Issues on ACP : Understanding the Truth

Before



After



Issue :

Colour tonality/ colour variation

Prevention :

- Consistent batch selection
- Proper orientation/ assembly direction
- Consistent & timely installation

Improper installation + exposure to moisture & humidity



Issue :

Bubbling & peeling

Prevention :

- Proper installation
- Avoid direct water exposure
- Effective drainage



Issue :

Staining & contamination

Prevention :

- Avoid using oil-based silicon
- Cleaning after installation

Product Certificate & Test Report

CIDB CERTIFIED
PERAKUAN PEMATUHAN STANDARD
(BARAH BINAAN)
CIDB PPS No. 1190109.jh0341

MS
SRIM
MS 2571:2017
PC004038

certified by
BOMBA

certified by
BOMBA

EN13501-01

ASTM E84

CIDB
PERAKUAN PEMATUHAN STANDARD (BARAH BINAAN)
A-044881
MAMPAI SUDUT (Fireproofing on steel structure) at work at all heights (Kerangka Baja Rangka Ketinggian dan Tinggi Struktur) 100% dari Lokasi Pembangunan (Lokasi Pembangunan) - (Kerangka Baja Rangka) 100% dari Lokasi Pembangunan (Lokasi Pembangunan).
Non-Pegangan / Non-Tether : VITALLY INDUSTRIES SDN BHD
MAMPAI SUDUT (Fireproofing on steel structure) at work at all heights (Kerangka Baja Rangka Ketinggian dan Tinggi Struktur) 100% dari Lokasi Pembangunan (Lokasi Pembangunan) - (Kerangka Baja Rangka) 100% dari Lokasi Pembangunan (Lokasi Pembangunan).

PPS

MS
LESEN PENGEHAAN BARANGAN
Product Certification License
MAMPAI SUDUT (Fireproofing on steel structure) at work at all heights (Kerangka Baja Rangka Ketinggian dan Tinggi Struktur) 100% dari Lokasi Pembangunan (Lokasi Pembangunan) - (Kerangka Baja Rangka) 100% dari Lokasi Pembangunan (Lokasi Pembangunan).
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MS2571:2017

SIJIL PEPASANGAN KESELAMATAN KEBAKARAN
APPROVAL CERTIFICATE
Jabatan Bomba dan Penyelamat Malaysia
Fire and Rescue Department of Malaysia
bersertifikat
EXTERNAL CLADDING SYSTEM
100mm - Cavity (Depth and Vertical Spacing)
Thinner - Cavity (Horizontal Spacing)
Kelas - External Finish
Berasaskan Pemasangan
Complying with
BS 8414-1:2017
Part 1 - Test Method For Non Loadbearing External Cladding Systems
Applied To The Heavy Duty Fire of Building
Syarikat Berdaftar
Registered company
VITALLY INDUSTRIES SDN BHD (Syarikat PTD 3235, Kawasan Perindustrian Bukit Bakri Batu 2 Jalan Bukit 84200 Muar, Johor DTJ)
Tempoh sah peneraju: 22/1/2019 hingga 21/1/2023

BS8414-1

SIJIL PEPASANGAN KESELAMATAN KEBAKARAN
APPROVAL CERTIFICATE
Jabatan Bomba dan Penyelamat Malaysia
Fire and Rescue Department of Malaysia
bersertifikat
BAHAN KELAS 'O'
Berasaskan Pemasangan
Complying with
BS 476-PART 6:1989-A1:2009 & BS 476-PART 7:1987
Syarikat Berdaftar
Registered company
VITALLY INDUSTRIES SDN BHD (Syarikat PTD 3235, Kawasan Perindustrian Bukit Bakri, Batu 2, Jalan Bukit, 84200 Muar, Johor DTJ)
Tempoh sah peneraju: 12/04/2019 hingga 07/12/2019

CLASS O (BS476-6 & 7)

intertek
Test Report
Test Item: EN13501-01
Test Results and Failure:

Method	Parameter	Result
EN 13501-01/P1	Smoke, 250s	0.0
	Smoke, 300s	0.0
EN 13501-01/P2	Smoke, 600s	0.0
	Smoke, 900s	0.0
	Smoke, 1200s	0.0
EN 13501-01/P3	Smoke, 1500s	0.0
EN 13501-01/P4	Smoke, 1800s	0.0

FLAME PROPAGATION:
The specimen did not continue to burn in accordance with EN 13501-1.

EN13501-01

intertek
Test Report
Test Results and Details:

Method	Parameter	Result
ASTM E84/P1	Smoke, 250s	0.0
	Smoke, 300s	0.0
ASTM E84/P2	Smoke, 600s	0.0
	Smoke, 900s	0.0
	Smoke, 1200s	0.0
ASTM E84/P3	Smoke, 1500s	0.0
ASTM E84/P4	Smoke, 1800s	0.0

ASTM E84

Green Pages Malaysia Listing

ARCHITECTURAL BUILDING MATERIALS



VITALLY® ALUMINIUM COMPOSITE PANEL



WHY IS IT GREEN?

Low VOC & Regional Materials

- The aluminium skin of the panel could be 100% recyclable.
- Mineral core could be recycled or reused.

PRODUCT FEATURES

- Vitally® ACP surfaces are coated with Kynar 500® PVDF (70% PVDF resin) formulated coating. PVDF has exceptional weather characteristic in resistance to colour fading, chalking, peeling, dirt collection and chemical staining. This coating system is compliant to the industry requirements of AAMA 2605 standard.
- Vitally® FR ACP is compliant to industry codes of requirements: BS8414, CIDB PPS, MS 2571:2017, Class 'O', as well as BS6853:1999, EN13501 and ASTM E84.
- **Sound Insulation**
 - Tested with standard ISO 10140-2:2010 Part 2: Measurement of Airborne Sound Insulation
 - Great sound insulation reduces noise transmission hence improving the indoor sound quality
- **Thermal Insulation**
 - Tested with ASTM C518-17
 - Low thermal conductivity reduces heat transfer and saves indoor energy consumption
- Standard panel thickness of 4mm
- Standard aluminium skin thickness of 0.4mm & 0.5mm
- Aluminium skin with aluminium alloy AA3003
- Vitally owns a QC lab with a complete set of QC equipment for monitoring quality in statistical procedures to produce high conforming products with less wastage
- Lightweight and great flexibility of design
- Easy fabrication and fast installation
- Low and easy maintenance

PRODUCT CERTIFICATION & COMPLIANCE

- BS8414-1:2015+A1:2017
- ASTM E84-19b
- EN13501
- CIDB PPS
- MS 2571:2017
- BS476 Part 6 & Part 7
- ISO 10140-2:2010 Part 2 (Acoustic)
- ASTM C518-17

APPLICABLE GBI CREDITS

NRNC	EQ4, MR3
RNC	EQ2, MR3
INC	EQ4, MR3
NREB	EQ4
IEB	EQ4
INTERIORS	EQ2, MR3

COMPANY DETAILS

VITALLY INDUSTRIES SDN BHD

No PTD3255,
Kawasan Perindustrian Bukit Bakri,
Batu 8, Jalan Bakri,
84200 Muar, Johor.

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Email enquiry@vitally-acp.com
WEB www.vitally-acp.com

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GBI point contribution

APPLICABLE GBI CREDITS	
NRNC	EQ4, MR3
RNC	EQ2, MR3
INC	EQ4, MR3
NREB	EQ4
IEB	EQ4
INTERIORS	EQ2, MR3

Thank You

For further inquiries, please contact:



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