



SHERA
board

INNOVATION

REGIONAL ROLE

PROFESSIONALISM

SOCIAL RESPONSIBILITY



GREEN SPIRIT

SHERA strongly follows Mahaphant 's philosophy by participating in enhance better the well being both of Thai and overseas societies as well as responsibility to today global environmental situation.

SHERA provides healthy and environmental friendly products by implementing clean technology which uses recycle energy and reduces waste in production process.



SHERA product complements with modernly clean and rapid construction system which prioritizing to time and total construction as well as maintenance cost saving. The value blends maximum benefits toward building owners in term of energy saving, functional utilization, uniquely attractive design as well as balance living in harmony.

A LEADING INNOVATOR OF FIBRE-CEMENT COMPOSITES FOR INTEGRATED BUILDING SOLUTIONS TO THE WORLD ARENA

Great result from dedicated work of Mahaphant 's R&D team is the first non-asbestos fibre-cement flat sheet in Thailand named 'SHERA flexy board' launched in 2003. Until now, continuous development of fibre-cement technology beyond competitors generates many new items under SHERA board category which provides the completed range products for all cladding applications in almost type of buildings. With reliable quality conformed to international standard, SHERA board is currently exported to more than 30 countries in 7 regions. The partnership is still continuously extended in order to achieve the world leading innovator of fibre-cementitious composites to building solutions.



PRODUCT INTRODUCTION

The autoclaved non-asbestos fibre-cement flat sheet for completed range cladding solution provides the excellent alternative to replace plywood, plaster board, and other types of flat sheets

SHERA flexy board

Providing various thicknesses of 4 to 12 mm. of tougher and stronger water resistant board, SHERA flexy board is suitable for external, wet and damp area including soffit, wall cladding, partitioning, floor underlay and sub roof.

SHERA lining board

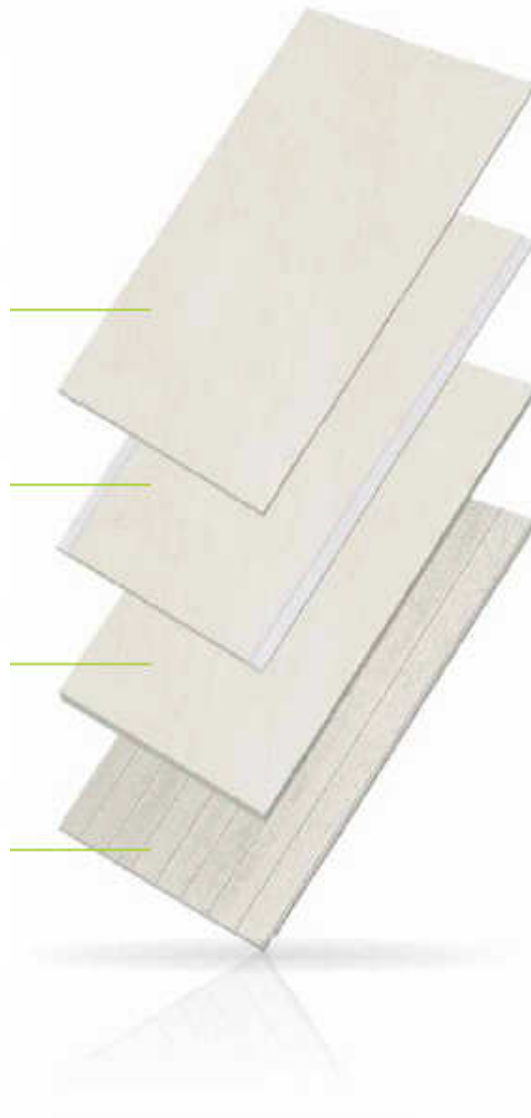
With 2 recessed edge sides along the length, it is ideal for seamless internal partition and ceiling. It offers not only but also gives unique impact strength, water resistant and termite proof properties of fibre-cement beyond plaster board.

SHERA flooring board

The thick fibre-cement board is specially designed for using as loading elevated floor on steel or timber frame base support which needs speed and light weight. Finishing on top surface can be carpet, ceramic tile and laminated floor

SHERA deco' panel

The first embossed fibre-cement board blends idea of textured decoration and function to ceiling and wall with new aesthetic look of 4 different attractive patterns including Cassia, Cassiano, Rocco and Stucco



SHERA
board

1ST LEADER OF FIBRE-CEMENT TECHNOLOGY IN THAILAND
FOR COMPLETED RANGE APPLICATION



CEILING



WALLING



FLOORING

01

Ceiling

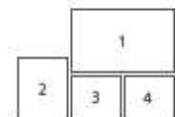
The new formula strengthens the toughness so the board will not brittle easily. The appropriate ceiling applications include external soffit, car park ceiling and internal wet area such as laundry, kitchen, shower room and restroom. It is also bendable with minimum radius of 1-2 meter.

SHERA flexy board				
Thickness (mm.)	Width (cm.)	Length (cm.)	Weight (kg.)	
4	60	240	9.00	
4	120	120	9.00	
4	120	240	18.00	
6	120	240	27.00	
6	120	300	33.75 *	
SHERA lining board				
6	120	240	26.72	
6	120	300	31.82 *	
SHERA vent ceiling				
4	60	120	4.50	
* Advance order for special sizes				

* Advance order for special sizes



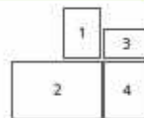
1. and 2. Krishna Knitwear Office, Mhape, India
3. Buono Restuarant
4. Office Building , Saudi Arabia



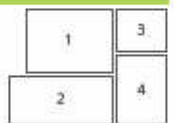
EXTERNAL CEILING



1. ISUZU Auto Mobile Showroom
2. 'Bann-Rim-Bueng' Home Office Project
3. Tesco Lotus Nawanakorn
4. 'Sutharin Privacy' Residential Project



1. Gymnasium of RBAC University
2. Sathorn Heritage Condominium Project
3. 'Taweerada' Residential Project
4. 'Rasika Thepharak' Residential Project



02 Walling

Its more impact strength and water resistant make SHERA board can be applied as wall cladding, wall partitioning and decorative wall in all types building especially where needs speedy construction, clean and hygiene such as schools and hospitals.

SHERA flexy board			
Thickness (mm.)	Width (cm.)	Length (cm.)	Weight (kg.)
8	120	240	36.00
8	120	300	45.00 *
10	120	240	45.00
12	120	240	54.00

SHERA lining board			
Thickness (mm.)	Width (cm.)	Length (cm.)	Weight (kg.)
8	120	240	35.74
8	120	300	43.94 *

SHERA deco'panel			
Thickness (mm.)	Width (cm.)	Length (cm.)	Weight (kg.)
6	120	240	27.00
8	120	240	36.00 **

* Advance order for special sizes

** Available only Rocco



INTERNAL PARTITION

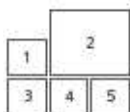


1. Zhenguo Coffee Shop Shanghai, China
2. and 3 Sukapan Center
4. Miacucina Restaurant Mumbai, India

5. Zhongshan Hospital Shanghai, China
6. Mahaphant Building



EXTERNAL WALL

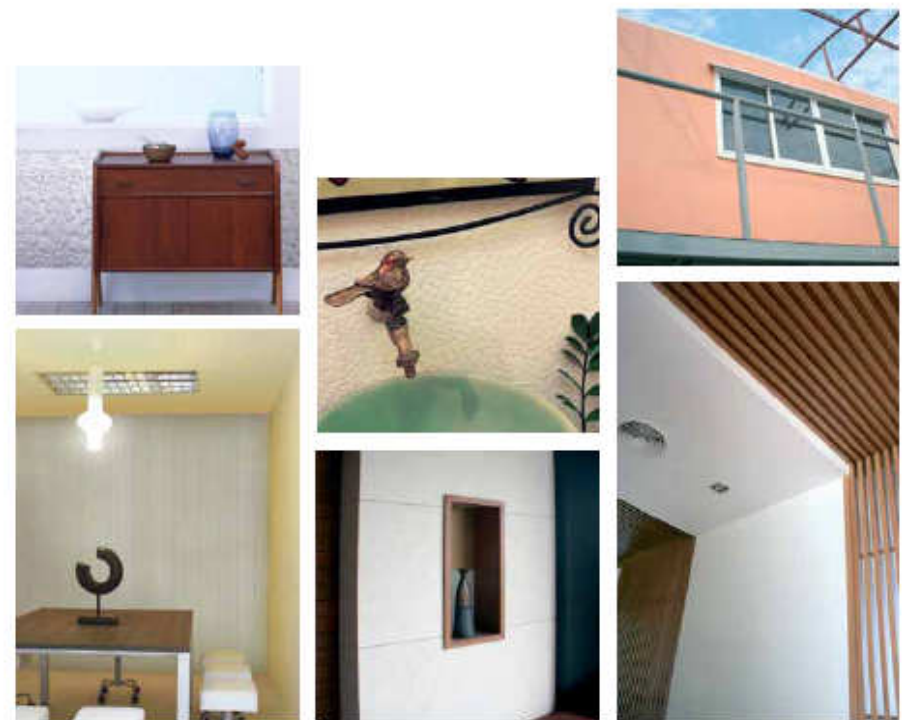


1. Parking Building of Central World
2. St. Mall Home Department store
3. Gymnasium of RBAC University
4. Tesco Lotus Pinklao
5. SBAC College

DECORATIVE WALL



Cassiano Cassia Rocco Stucco



1. Resident Project
2. Multi Design Company
3. Sometime Restaurant
4. and 5. Mahaphant Building
6. Mobile Office by N J Modern Steel Company

03 Flooring

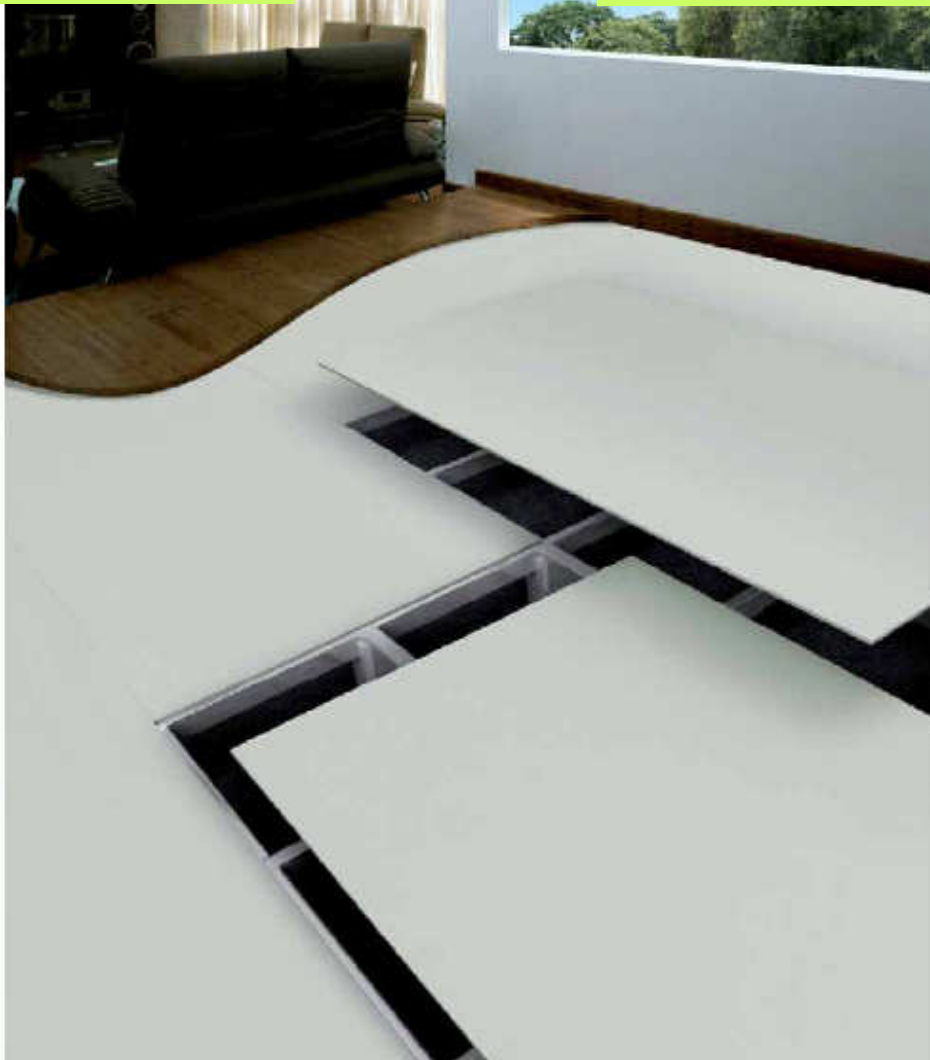
The first thick and strong fibre-cement board for floor leveling and loading elevated floor is introduced as ideal alternative of plywood and wood-cement board in various floor areas of commercial building, shopping center and retails, industrial building, farm and factory

SHERA flexy board for Underlayment

Thickness (mm.)	Width (cm.)	Length (cm.)	Weight (kg.)
8	120	240	36.00
10	120	240	45.00
12	120	240	54.00

SHERA Flooring board for elevated floor

Thickness (mm.)	Width (cm.)	Length (cm.)	Weight (kg.)
15	120	240	63.82
18	120	240	76.58



1. H2O Floating Restaurant, Mumbai

2. Home Office

3. and 4. Faculty of Commerce and Accountancy, Thammasat University

5. Kabab Corner Restaurant , Intercontinental Hotel, India

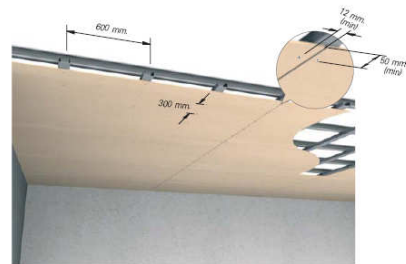


CEILING INSTALLATION

WALLING INSTALLATION

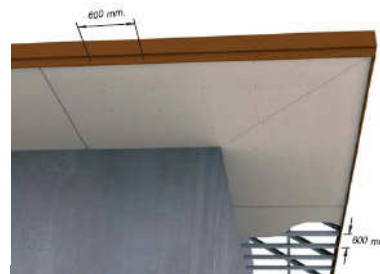
Installation on Steel Frame

SHERA board : SHERA flexy board 4-6 mm. for butt joint
 (Thickness) : SHERA lining board 6 mm. for flush joint
 Frame Type : Hard wood size 1 1/2" x 3"
 Frame Spacing : 60 cm. X 60 cm.
 Fastener Type : Nail size 1 – 1 1/2 "
 Fastener Spacing : 30 cm.



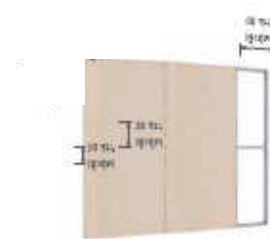
Installation on Timber Frame

SHERA board : SHERA flexyboard 4-6 mm. for butt joint
 (Thickness) : SHERA lining board 6 mm. for flush joint
 Frame Type : Galvanized steel frame (C-Line) no. 24-26
 Frame Spacing : Main track @ 90 cm.
 Sub track @ 40 cm.
 Fastener Type : SHERA screw FIX-B20
 Fastener Spacing : 30 cm.



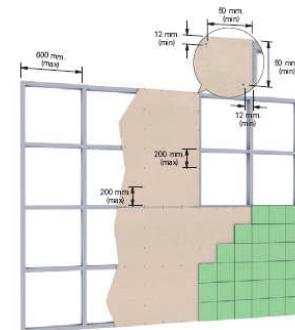
General Wall Installation

SHERA board : SHERA flexy board 8-12 mm. for butt joint
 (Thickness) : SHERA lining board t 8 mm. for flush joint
 Frame Type : Galvanized steel C75 thickness 0.55 mm up
 Frame Spacing : Vertical frame @ 60 cm.
 Horizontal frame @ 120 cm.
 Fastener Type : SHERA screw FIX-W32 G8
 Fastener Spacing: 30 cm.



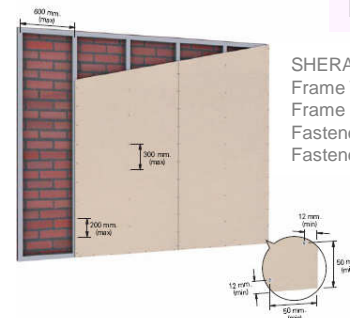
Tiled Wall Installation

SHERA board : SHERA flexy board thickness 10-12 mm.
 Frame Type : Galvanized steel C75 thickness 0.55 mm up
 Frame Spacing : 60 x 60 cm.
 Fastener Type : SHERA screw FIX-W32 G8
 Fastener Spacing : 20 cm.
 Tile Adhesive : Weber Tile Flex / Weber Fix Plus



Installation on Brick Wall

SHERA board : SHERA flexyboard thickness 8-12 mm.
 Frame Type : Galvanized steel (C-Line) no. 24 thickness 0.55 mm.
 Frame Spacing : 60 cm. vertically fixed to metal bracket ex BPB ML75
 Fastener Type : SHERA screw FIX-W32 G8
 Fastener Spacing : 20 cm.



SOUND INSULATED & FIRE RATED WALL INSTALLATION

FLOORING INSTALLATION

Sound Protection Wall



STC:	32 dB*	52 dB **	64 dB **
SHERA flexy board:	10 mm. both sides	10 mm. both sides + 1 sheet at the middle	
Frame Type :	Galvanized steel frame C75 thickness	0.55 mm.	
Frame Spacing :	Single stud	Single stud	Double stud
Insulation :	60 x 120 cm.	60 x 120 cm.	60 x 120 cm.
Wall Width (cm.) :	Fibre glass / Rock wool / Cellulose fibre		
	95	95	180

Wall Weight (kg / m².): 35 43 69

* Tested conformed to ASTM E413-87 by Faculty of Science, Chulalongkorn University

** Tested conformed to ASTM E90-97 by PSB Corporation, Singapore

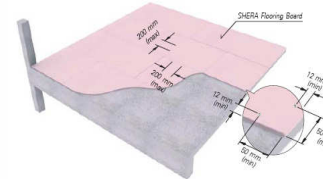
Sound Protection Wall



Insulation :	35 mins *	95 mins *
Integrity :	60 mins *	100 mins *
SHERA flexy board :	12 mm. both sides	8 mm. on 15mm. fire rated gypsum board
Frame Type :	Galvanized steel frame C92 thickness	0.55 mm.
Frame Spacing :	60 x 120 cm.	60 x 120 cm.
Wall Width (cm.) :	95	105
Wall Weight (kg / m ² .):	40	60

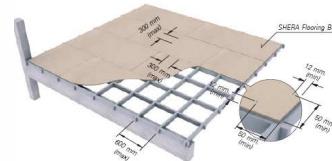
* Tested conformed to BS476 Part 22 by Faculty of Engineering, Chulalongkorn University

Underlay Installation



SHERA board	: SHERA flexy board thickness 8-12 mm.
Board Adhesive	: Fixed with latex / urethane glue together with concrete nail size 1-1.5"
Fastener Spacing	: 30-50 cm.
Finishing Material	: Carpet Ceramic tile, laminated floor

Raised Floor Installation



SHERA board	: SHERA flexy board thickness 15-18 mm.
Frame Type	: Steel frame C75 thickness 2.3 mm, up Hard wood size 1 1/2 " x 3 "
Frame Spacing	: 60 x 60 cm.
Fastener	: SHERA screw FIX-W45 G8 for steel frame SHERA screw FIX-T 1 3/4 for timber frame
Fastener Spacing	: 30 cm.
Finishing	: Finish with carpet, ceramic tile, laminated floor Paint can be either epoxy coat ex. ICI Tru-glaze 4508 or clear urethane ex. ICI urethane 388

Installation SHERA flooring board on Grid Frame

Grid Frame Spacing (cm.)	30x30	30x40	40x40	30x60	40x60	60x60	60x120
Uniform distribution load (kg / m ² .)*	1100	720	620	580	360	275	150
SHERA flooring board 15 mm.	1750	1150	980	930	580	410	230
SHERA flooring board 18 mm.							

Installing SHERA flooring board on One Way Joist

One-way Joist Span Spacing (cm.)	30	40	60
Uniform distribution load (kg / m ² .)*	750	420	180
SHERA flooring board 15 mm.	1050	600	270
SHERA flooring board 18 mm.			

*Remark. Uniform load is calculated using Safety factor 2.5

SHERA ACCESSORIES



SHERA SCREW FIX-B

For fixing SHERAboard with steel frame thickness of 0.55-1.2 mm.

Length : 20 mm.

Package: FIX-B20 = 500 pcs



SHERA SCREW FIX-W

For fixing SHERA board with steel frame thickness of 1.0-3.2 mm.

Length : 32, 45 mm.

Package: FIX-W32 G8 = 500 pcs

FIX-W45 G8 = 250 pcs



SHERA SCREW FIX-T

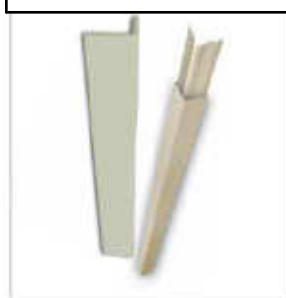
For fixing SHERA board with timber frame.

Length : 32, 45 mm.

Package: FIX-T 1 1/4 = 500 pcs

FIX-T 1 3/4 = 250 pcs

Frame Type	4-6 mm.	8-12 mm.	15-18 mm.
Galvanized steel 0.55-1.2 mm thk.	FIX-B20	FIX-W32 G8	Not recommend
Metal frame 1.0-3.2 mm. thk.	Not recommend	FIX-W32 G8	FIX-W45 G8
Timber frame	FIX-T 1 1/4"	FIX-T 1 1/4"	FIX-T 1 3/4"



SHERA corner piece

For covering end of internal and external cladding

Surface Texture: Smooth
Size: 8x75x3050 mm.

SHERA steel corner piece

Inner unit : 1 x 75 x 3000 mm.
Outer unit : 0.8 x 75 x 3000 mm.



SHERA sealant PU25

Polyurethane Joint Sealant used for jointing SHERA Sheet

Package Size: 310 and 600 mL.



SHERA Polyurethane Sealant

Place on the recessed edge area of SHERA lining board for doing flush joint

SHERA barrel gun

15" Aluminium Barrel Gun for 310 and 600 mL. SHERA Polyurethane Sealant

OTHER ACCESSORIES



Tile Adhesive

Recommend Weber Fix Plus or Weber Tile Fix



Backing Rod

Recommend for SHERA board thickness 12mm.up in order to save joint sealant



Jointing Compound

Recommend ICI 1040 Acrylic Filler

RECOMMENDED TOOLS



Drilling Machine

For fixing SHERA screw with speed 0-2,500 rpm, 550 watts ex. Dewalt D21103 and BOSCH 3/8"



Cutting Machine

For cutting SHERA board with speed 13,000 rpm, 1200 watts ex. MT410 MEXTEC

WITH D21103 AND D21103



Cutting Blade

Recommend diamond blade 4 inch for handling machine and 7 inch for cutting table

KEY FEATURES

Comparison of Key Features

	SHERA board	AC Sheet	Plaster board	Plywood
Weather Resistant	***	***	*	**
Moisture Resistant	***	***	*	**
Fire Resistant	***	***	***	*
Tough / not brittle	***	*	**	**
Sound Protection	***	***	***	***
Easy Workability	**	*	***	**
Low Shrinkage	***	*	***	*
Termite Resistant	***	***	**	*



AREA OF APPLICATION

	Thickness (mm.)						
	4	6	8	10	12	15	18
Soffit / Ceiling / Arch	*	*					
Curved wall / Partition		*	*				
Sub roof / Screen			*	*			
Ext wall / Wet area			*	*	*		
Ext cladding / High rise				*	*	*	
Underlay			*	*			
Raised / Elevated floor						*	*
Weight (kg./sheet)	18	27	36	45	54	64	77
Weight (kg./m ²)	6.25	9.37	12.50	15.62	18.75	22.22	26.74

TECHNICAL DATA

Physical Properties

Property	Tested Result	Unit	Standard *
Thickness Tolerance	± 0.5	mm	ASTM C1185
Density	1,300 ± 50	Kg / m ³	ASTM C1185
Modulus of Rupture (wet condition)	> 7.0	MPa	ASTM C1185
Modulus of Elasticity (wet condition)	5,500 ± 500	MPa	ASTM C1185
Water Absorption	≤ 35	%	ASTM C1185
Moisture Content	≤ 12	%	ASTM C1185
PH	7-8	-	-
Thermal Conductivity	0.15	Watt / m ⁰ K	ASTM C177
Sound Protection (STC)	30 – 64	dB	ASTM E90-97
Length Change by Moisture Movement	0.04	%	ASTM C1185
Length Change by Water Absorption	0.19	%	JIS A5414
Water Tightness	Pass	-	ASTM C1185

Fire Resistant

Ignitability	Pass	-	BS476 Part 5
Fire Propagation Index	I = 0	-	BS476 Part 6
Surface Spread of Flame	Class 1	-	BS476 Part 7
Fire Resistance	30-120	mins	BS476 Part 22
Smoke Developed Index	0	-	ASTM E84-00a
Single Burning Item	Pass	-	EN 13823 : 2002
Fire Classification	A2s1d0	-	EN 13501-1: 2002
Building Combustibility	non-combustible	-	CNS 6532
			ASTM C1185 uac BS EN 12467:2000

Durability Test

Freeze/Thaw resistance	Pass
Warm water resistance	Pass
Heat/Rain resistance	Pass
Soak/Dry resistance	Pass

* Remark 1. SHERA board also conforms to Australia / New Zealand Standard (AS / NZ 2908.2:2000) and European Standard (BS EN 12467:2000) tested by PSB Corporation, Singapore
2. SHERA board also conforms to Thai Industrial Standard (TIS 1427-2540) of Thailand



HANDLING & STORAGE



Handling vertically at 50 cm. from both ends



Storage in under shade, dry and leveling area on minimum 1.5" x 3" timber bearers at 50 cm. spacing
The height of stack should not exceed 100 cm. Do not install and paint the sheets when they are damped or wet.

SHERA

CHALLENGING POSSIBILITY

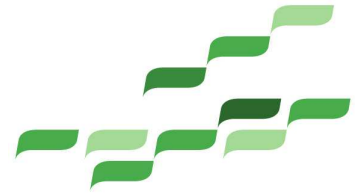


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www.mahaphant.com



COMPANY PROFILE

Mahaphant Fibre Cement Public Co. Ltd is a part of **Mahaphant Group**, established in 1974 in Bangkok Thailand and is emerging as one of very few manufacturers of Unique and Environment-Friendly Fibre-Cement products.

Our Creative range of Environment-friendly products sold under the brand **SHERA** are a unique composite of natural fibers bonded in a high-grade silicate matrix giving stability in all climatic conditions. The SHERA range of products include

- SHERA boards : Fibre-Cement Panels – used for partitioning, cladding, ceiling, substrate, Flooring applications etc. Suitable for Exterior and Interior applications.
- SHERA Déco boards : decorative textured Panels – used for Decorative Cladding. Suitable for Exterior and Interior applications.
- SHERA Planks : Fibre-Cement Planks for Siding, Ceiling and multiple decorative applications. Suitable for Exterior and Interior applications.
- SHERA Floor Planks : Fibre-Cement Flooring Planks for decorative Flooring. Suitable for Exterior and Interior applications.
- Light Weight Roof Tiles: Non-Asbestos Roofing Sheets with unique profile and wide range of colors.

Shera's embedded beauty with added resistance against fire, termite, and moisture makes it an apt material for varying applications in flooring, siding, ceiling / roofing and cladding. These Fibre-Cement Products offer necessary strength, stability and versatility in applications.

Mahaphant is equipped with an independent **R&D Department** focusing on development of products and processes. Through an experience of more than 40 years and an expertise in **AUTOCLAVE TECHNOLOGY**, we are able to cater to the changing needs of Construction and Decoration Industry offering our products with unmatched stability, strength & resilience to weather.

The manufacturing facility of Mahaphant is certified with ISO 9001 and ISO 14001. We also publish the Environment Product Declaration as per ISO 14025.

All the products under SHERA portfolio are tested with the best international standards and comply with all the stringent norms of the construction industry.

We are proud to present SHERA as a demonstration of human respect for nature. We promote living with the nature by preserving the nature. We continue to develop and offer unique products under our quest of Green Products from Green Technology for Green Living.