

SHERA *infillwall*

Fast-track **Strong** *Light weight*



SHERA *infillwall*

The Fast-track Solid Wall Solution

SHERA*system*

Why SHERA infillwall?

SHERA infillwall The Fast-Track
Solid Wall Solution

Nowadays, brick wall has been used widely in construction work although it still has many concerned points. For example, it takes long time to complete, creates a dirty site because of wet construction system and materials are also heavy and inconvenient to transport. In addition, skillful craftsmen are required. Many defects often occur like cracking or rough and uneven surfaces because bricklaying and cement rendering are not standardized. Furthermore, it is difficult to control loss of materials during construction, resulting in high levels of wastage.

The Mahaphant Group, Thailand's leading manufacturer of green innovative fibre-cement, is acknowledged in over 40 countries throughout the globe under the brand name "SHERA". Recently, SHERA has developed a new wall system, "SHERA infillwall" aiming to offer better choice to replace traditional masonry wall by implementing SHERA board as key component of the system.



Product Benefits

Fast-track **Strong** Light weight

Key Features **SHERA** infillwall

Fast-track construction

- ✓ Installation is 30% faster than masonry work with fewer laborers required. That helps the projects save construction time
- ✓ No need of rendering work; Using flat SHERA infillboard as wall skin surface results in a smooth surface and no hair cracks
- ✓ The M&E work like electrical wiring can be installed concurrently with plumbing without damaging the wall whereas in traditional brick wall this is not possible.

Strong and Standardization

- ✓ It is strong because its properties consist of lightweight concrete and has passed the impact test. Therefore heavy materials like built in furniture or sink can be hung on the Infillwall.
- ✓ SHERA infillboard has special properties which gives it strength for high pressure as well as adhesion of lightweight concrete better than other boards
- ✓ Durability, certificated by reliable testing institutes, ASTM C1185 from PSB Corporation, Singapore
- ✓ Full support of site installation is provided by professional SHERA engineering team to project owners and contractors as well as installation training when requested
- ✓ Barrier to fire is much greater than masonry brick wall. SHERA infillwall has passed both sound insulation and fire resistance test.

Safety and Light weight

- ✓ Due to the Light weight component, SHERA infillwall won't collapse when fire and earthquake occur suddenly unlike concrete and brick wall
- ✓ Due to it being light weight construction, it reduces structural costs in the whole system
- ✓ Follow the LEED (The Leadership in Energy and Environmental Design) performance criteria in construction materials for Green building
- ✓ Transportation is more convenient than masonry building, SHERA infillwall suits high buildings or inconvenient working spaces. This results in transportation costs being reduced.

SHERA infillwall system can help increase the room space due to the thickness of wall (8.7 cm) if compared with normal masonry wall (10 cm). It also has high impact strength and delivers solid performance like brick wall. It is suitable for use as interior partitioning of residential and commercial buildings especially in high condominiums, apartment or hotel where there is large areas of repetitive wall and speed of construction is a must. Furthermore, it allows built-in furniture to be installed and decorative materials can be hung on the wall. It can also be used in wet / high moisture areas like toilets or kitchens.



Wall Comparison

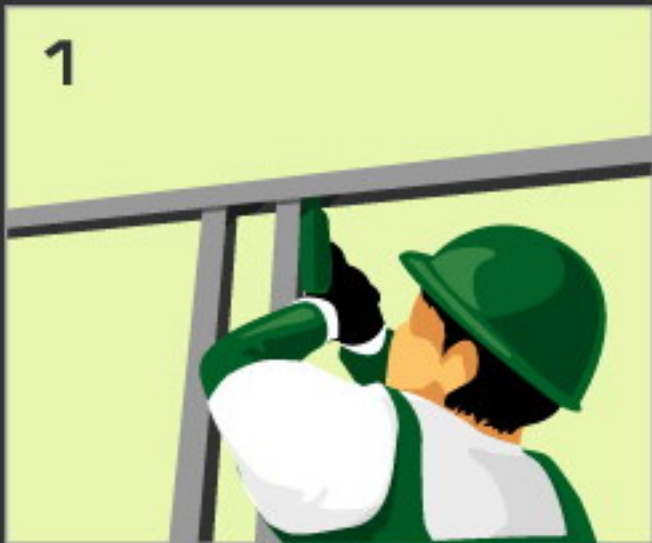
Wall type	SHERA infillwall	Precast concrete wall	Brick wall	AAC wall	Sandwich wall
Bracing	No bracing	Bracing required	Column and beam required	Lintel required	Steel bracing required
Speed of work	22-25 Sq.m/day	10-15 Sq.m/day	8 Sq.m/day	12-15 Sq.m/day	15-22 Sq.m/day
Jointing	Flush finish	Groove finish	Flush finish	Flush finish	Groove finish
Weight	80-100 kg/Sq.m	200-240 kg/Sq.m	180 kg/Sq.m	80-120 kg/Sq.m	100-150 kg/Sq.m
Limitation	Need pumping machine for large scale job	Not suitable for interior partition	Rely on skillful laborer	Specific materials required	Specific tools required
Wastage	5-10%	0%	10-20%	5-10%	5-10%

How it Works?

Installation steps of
SHERA infillwall system

6 steps
Fast
Track

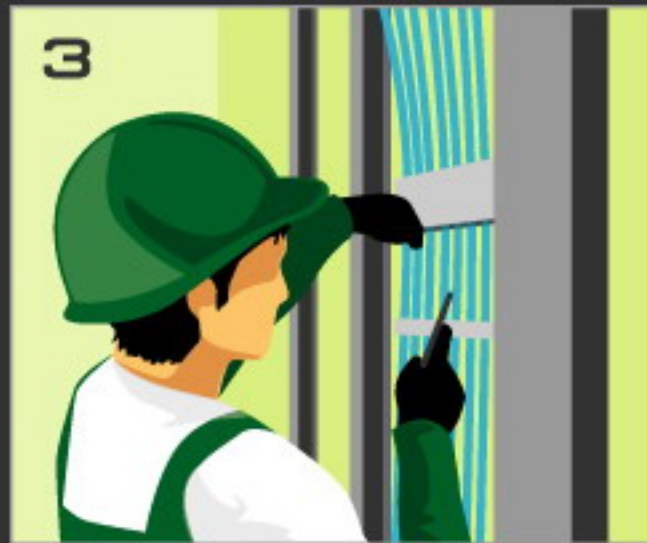
6 Steps of fast-track installation of SHERA infillwall system



- Install SHERA frame vertically with spacing 30-40 cm.



- Fix SHERA infillboard (Recessed edge) to SHERA frame using SHERA screw. Leave one side where M&E service installation is needed.



- Next, install electrical wiring, plumbing and position electrical blocks or fix window and door frames before completes another side of SHERA infillboard.



- Mix lightweight concrete following mixed ratio. Apply to the hollow core by concrete pumping machine.



- Apply SHERA jointing compound for flushing joints and finishing screws, then leave it completely dry and sand the surface.



- Paint or finish with ceramic tiles, wallpaper, laminate or other decorative materials.

Reference Projects

Leading projects chose
SHERA infillwall

1 Diamond Ratchada



2 Sense Sukhumvit



3

T.W. Wong Amat
Condominium, Pattaya



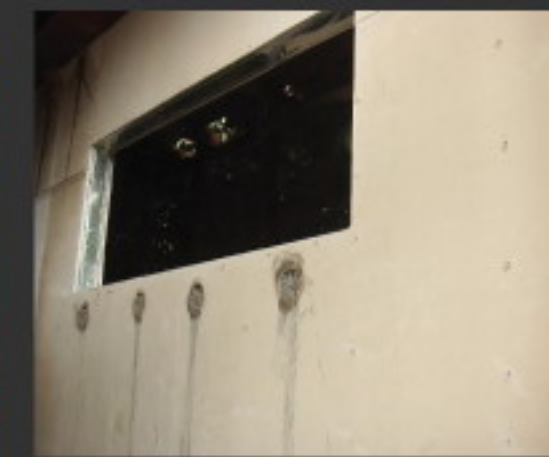
5

Technology Park Factory



6

Outdoor Restaurant,
Kata Beach Phuket



4

Baan Mok Hom Mai Resort,
Wang Nam Keaw



7

Wen Xin Feng Hua
Condominium, Taiwan



Materials & Equipments

Materials & Equipments

SHERA infillwall

Materials



SHERA infillboard;
Profile: two or four sides recessed edge, 6-8 mm.



SHERA frame C 74
SHERA frame U 75



Politerm



Portland Cement Type I



Accessories



SHERA screw FIX-B20



SHERA fiberglass mesh tape



SHERA cement jointing compound
(Exterior use)



SHERA jointing compound
(Interior use)

Equipments



Electric Drill



Circular Fiber Saw



Concrete Pumping Machine

Technical Information

SHERA infillwall System; Meet all requirements

There are alternative ways to use SHERA infillwall, depending on the objective of the areas. For example, in bedrooms where the wall is required to have a high STC value, kitchen and living room where built-in decoration is required by hanging materials on nails, the density of lightweight concrete can be varied to suit the means.

Properties	Standard Test	Density of lightweight concrete (kg / m)			
		350	500	700	900
Compressive Strength		37 ksc	40 ksc	45 ksc	49 ksc
Nail Hanging		15 kg	20 kg	30 kg	40 kg
Fire Resistance	BS 476 Part 22	2 hr.	2.5 hr.	3 hr.	3.5 hr.
Sound Insulation	ASTM E90-97	35 dB	40 dB	45 dB	50 dB
Impact Energy	BS5234 Part 2	200 N.m	250 N.m	300 N.m	350 N.m
Durability *	ASTM C1185	-	-	PASS	PASS

*Density test at 700 and 900 kg/m³ by PSB Corporation, Singapore

PSB Corporation



Wall Comparison of Key Features

Key Features	SHERA infillwall	Precast concrete wall	Brick wall	Gypsum wall
Thickness	8.7 cm	14 cm	10 cm	9.5 cm
Weight	100 kg/m ²	300 kg/m ²	180 kg/m ²	70 kg/m ²
Wall Body	Solid	Solid	Solid	Hollow
Method	Semi-dry	Wet	Wet	Dry
Fire Rating	3-4 hr	1-2 hr	1-2 hr	1-2 hr
Compressive Strength	43 - 60 ksc	n/a	35 - 70 ksc	n/a
Sound Insulation	37 - 60 ksc	52 dB	38 dB	32 dB
Surface Flatness	Excellent	Fair	Fair	Excellent
Moisture Resistant	Excellent, No efflorescence	Good	Good, Easy efflorescence	Poor
M & E works	Easy	Pre-Embedded	Difficult	Easy
Cleanliness	Clean site	Wet and mess site	Wet and mess site	Clean site
Construction Speed	12 m ² /people,day	2 m ² /people,day	6 m ² /people,day	15 m ² /people,day
Earthquake resistant	Good	Not good	Not good	Good

Partners And Setting Teams with SHERA infillwall



POLITERM



SCHENKER
Engineering





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