



The Best-rated Boards for Dry Walls and Ceilings

**RAMCO**  
**HILUX**  
CALCIUM SILICATE Dry Walls & Ceilings

**A huge range of building materials is available today, it is becoming increasingly difficult to make an informed choice - with such a wide range of attributes, finishes and forms. Deciding which material to choose, is quite a challenge.**

But there can be no debate that for critical applications as partitioning, panelling and false ceiling, hard core, functional product attributes should definitely take priority over aesthetics, workability and finish. That's why we have built in the best structural properties into Hilux Calcium Silicate Board.

It rates the highest on crucial parameters like fire, water and termite resistance, among others.

**Quite simply, it is the best-rated board for dry walls and ceilings.**



# FIRE RESISTANCE

More than Plywood.  
Far better than Gypsum.

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The only 4-hour fire-rated system in India !



Fire Rating (System)

4 hrs (max)



#### Combustibility

Non-combustible according to  
(BS 476:Part 4-1970)

#### Surface spread of flame

Class - 1 as per  
(BS 476:Part 7-1997)

#### Fire Propagation

Fire propagation index I = 1.2 as per  
(BS 476:Part 6-1989+A1:2009)

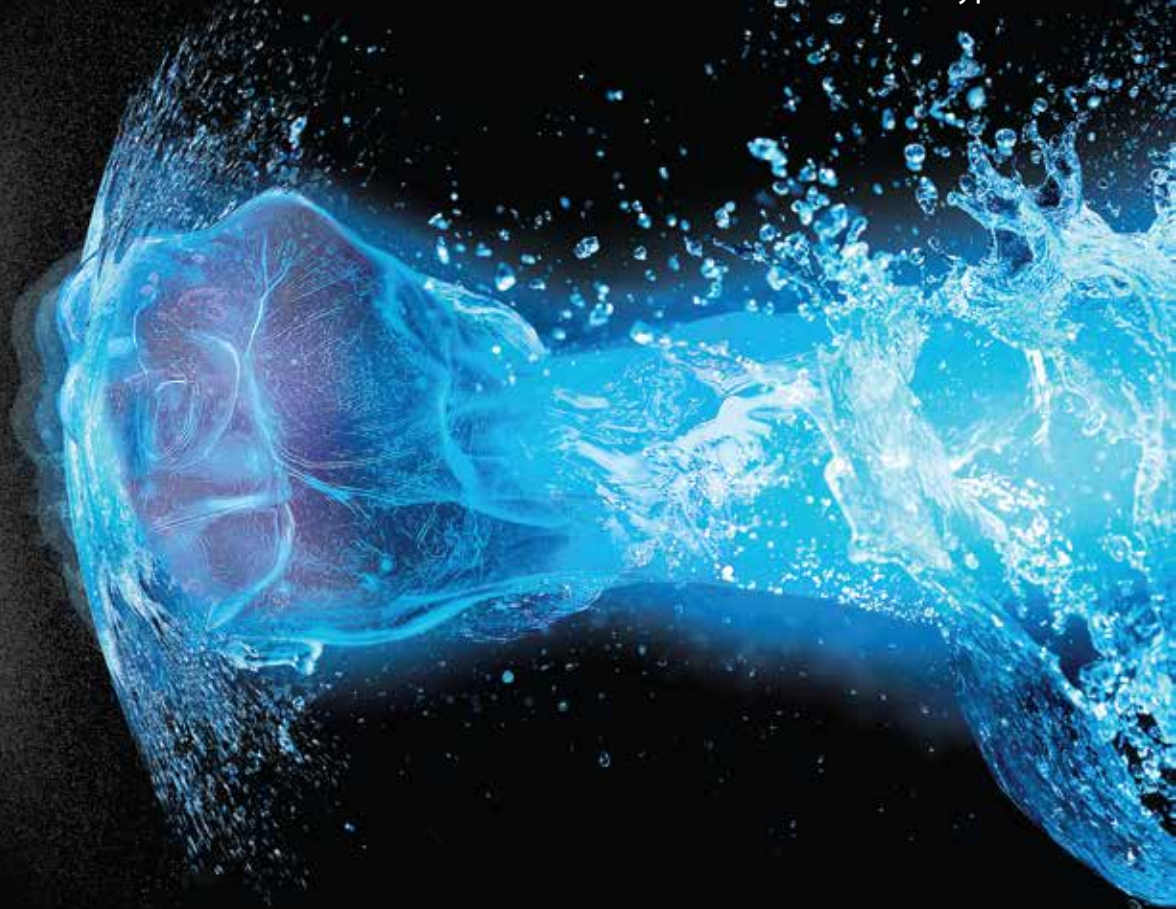
#### Ignitability

Class 'P' not easily ignitable as per  
(BS 476:Part 5-1979)

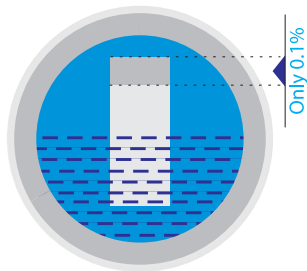
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# WATER RESISTANCE

More than Plywood.  
 Far better than Gypsum.



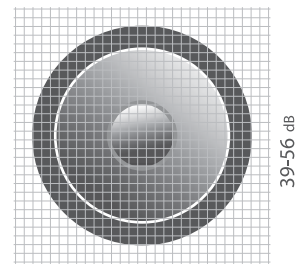
**The only board dimensionally stable even when exposed to water !**



Length Change in Water



No Fungus growth



Sound Insulation

Properties	Values
Thermal Conductivity-K	0.15 W/mK
Thermal Resistance-R	0.03/0.04/0.05/0.06 m <sup>2</sup> K/W for 6 /8/10/12mm thick boards respectively
Moisture Content	Under 15%
Shrinkage Dimension (dry-saturated)	< 0.1%
Alkalinity	10 pH

Properties	Values
Density	900 Kg/m <sup>3</sup>
Flexural Strength	10 N/mm <sup>2</sup> (Longitudinal) 5.5 N/mm <sup>2</sup> (Transverse)
Impact Strength	1900 J/m <sup>2</sup>
Compressive Strength	22.5 N/mm <sup>2</sup>
Tensile Strength	60 Kg/cm <sup>2</sup>

# TERMITE RESISTANCE

More than Plywood.  
Far better than Gypsum.

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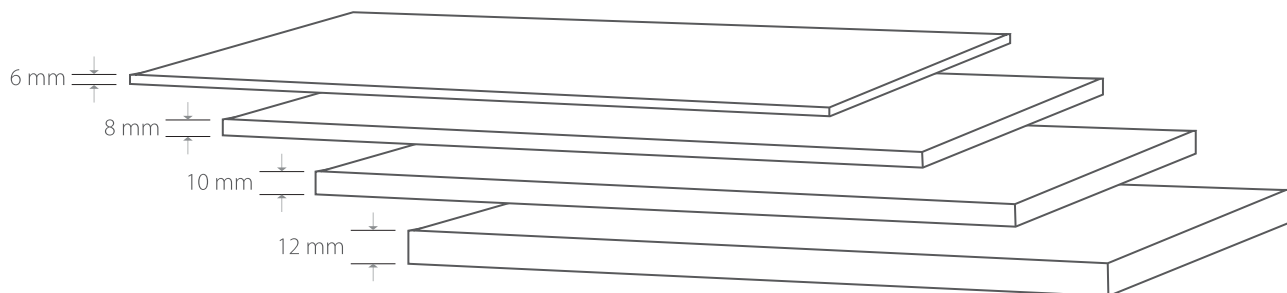
CALCIUM SILICATE Dry Walls & Ceilings

**The only board completely unaffected by termites**

## Available Sizes :

2440 x 1220 mm	1830 x 1220 mm	1220 x 1220 mm	
1220 x 610 mm	1195 x 595 mm	610 x 610 mm	595 x 595 mm

## Available Thickness



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# FUNGUS RESISTANCE

More than Plywood.  
Far better than Gypsum.



**The only board with zero fungus growth ensuring clean and healthy environment**

Unique Features

#### **Dimensional Stability**

The boards are auto-claved (high pressure steam curing) which results in an irreversible chemical change, thus providing high dimensional and chemical stability.

#### **Decoration**

The boards can be decorated with any type of paint, wall paper, wood veneer or hard laminate of 1 mm thickness. Ceramic tiles can also be pasted to Hilux boards, using suitable adhesive. Interior designers and architects can give free reign to their imagination when working with Hilux!

#### **Flexibility**

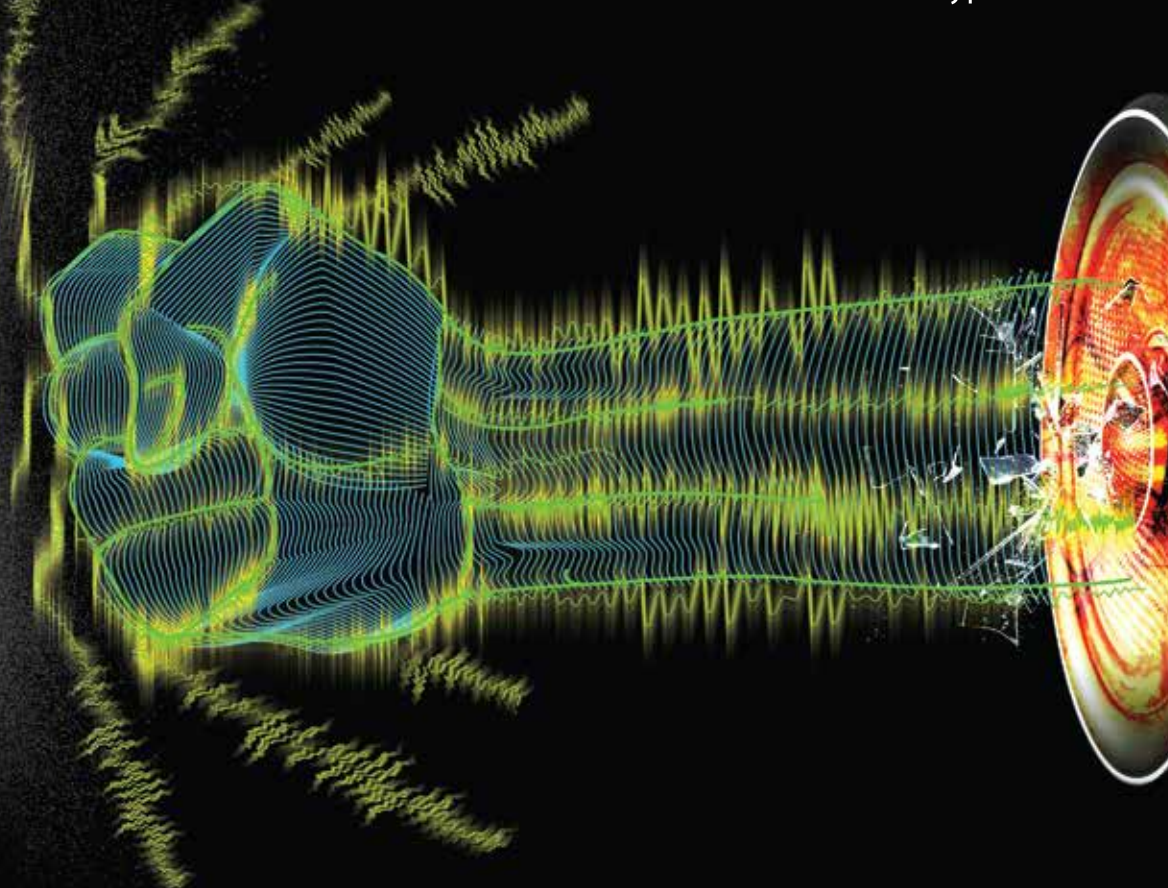
Hilux boards are also very flexible to design. 6mm thick Hilux boards can be bent (minimum radius-600mm) to provide curved surfaces. Boards will bend more easily, if bent across their long axes when they are wet or saturated.

# SOUND INSULATION

More than Plywood.  
Far better than Gypsum.

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**Excellent acoustics with transmission class between 39 - 56 dB**

#### Compatibility

The boards do not aid corrosion, saponification of paints or affect bituminous compounds. Hilux boards are compatible with most common building materials.

#### Screw / Nail Holding

Hilux boards have the capacity to hold nails and screws and do not require any backing frame to hang light-weight objects like picture frames.

#### Seamless Finish

Hilux boards can provide seamless finish decorated with most forms of paints and wall papers.

# IMPACT RESISTANCE More than Gypsum. As good as Plywood\*

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\* in the respective density range

**Strong board at low density with high impact strength of 1900 J/m<sup>2</sup> @ 900 Kg/m<sup>3</sup>**

Applications

Verticals	Features
Commercial Complexes (Shopping Malls, Theatres, Community Centres and Auditoriums)	Fire Resistance, Acoustic & Light Reflection, Energy Saving, Moisture Absorption, Heat Insulation, Impact Resistance
Airports and Metro Rail Stations	Light Reflection, Sound Insulation, Moisture Absorption
Food and Pharma Industries	Light Reflection, Sound Insulation, Moisture Absorption, No fungal/bacterial growth
Textiles	Energy Saving, Workability, Heat Insulation, Sound Insulation
Hospitals and Laboratories	Sound Insulation, Fire Resistance, Impact Resistance, Water Absorption, Moisture Absorption, Heat Insulation
Hotels, Resorts and Restaurants	Workability, Fire Resistance, Sound Insulation, Water Absorption, Moisture Absorption, Impact Resistance, Heat Insulation, Energy Saving
Offices, IT Parks & Educational Institutions	Fire Resistance, Sound Absorption, Water Absorption, Moisture Absorption, Heat Insulation





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# WORKABILITY Far better than Fibre Cement Boards



**Easy to cut. Easy to mount. Easy to install**



Applications	Recommended Areas
Ceilings, Partitions, Wall Panellings, Columns, Duct Encasements and Fire Doors	Halls, Bathrooms and Toilets, Canteens, Convention Centers, A/C Ducts, Rooms, Conference Halls
Ceilings, Partitions	Semi-exposed Areas, Bathrooms and Toilets, Corridors
Ceilings, Partitions, Wall Panellings	Processing Units
Grid Ceilings	Processing Units
Ceilings, Partitions, Fire Doors, Duct Encasement	Operation Theatres, ICUs, Reception & Halls, Semi Exposed Areas, A/C Ducts, Rooms
Decorative Ceilings, Partitions, Fire Doors, Duct and Column Encasements, Wall Linings	Corridors, Receptions, Toilet Areas, Semi-Exposed Areas, Fire Exit Staircases, A/C Ducts, Rooms, Conference and Banquet Halls
Ceilings, Partitions, Duct and Column Encasement, Wall Paneling, Soffit Lining	Receptions, Meeting Rooms, Class Rooms, Semi Exposed Areas, Exteriors, Canteens & Open Auditoriums, Toilet Areas, Gymnasiums

Applications

# RAPID CONSTRUCTION

Faster than  
Fibre Cement Board

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**Tremendous time saving. No painful waiting periods**

Description	Testing Centre	Code	Result
Combustibility	PSB Corporation, Singapore	BS-476-Part-4-1970	Non-Combustible
Fire Propagation Index	PSB Corporation, Singapore	BS-476-Part-6-1989+ A1:2009	I=1.2
Surface Spread of Flame	PSB Corporation, Singapore	BS-476-Part-7-1997	Class-1
Ignitability	PSB Corporation, Singapore	BS-476-Part-5-1979	Class"P" Not easily ignitable
Bending Strength	Anna University, Chennai	Across the fibre Along the fibre	129 Kg/cm <sup>2</sup> , 84 Kg/cm <sup>2</sup>
Thermal Conductivity	Anna University, Chennai	ASTM C177 & ISO 8302	0.15 W/mK
1 x 12 mm Hilux board + Fillet on each side of 48 mm stud + 50 mm x 48 Kg/m <sup>3</sup> . Ceramic wool in the cavity.	CBRI, Roorkee	BS- 476-Part-20/22	One Hour
2 x 10 mm Hilux boards on each side of 48 mm stud + 50 mm x 48 Kg/m <sup>3</sup> . Mineral wool in the cavity.	CBRI, Roorkee	BS-476-Part-20/22	One & Half Hour

**LIGHTWEIGHT** As good as Wood.  
 Much more lighter than brick and mortar.

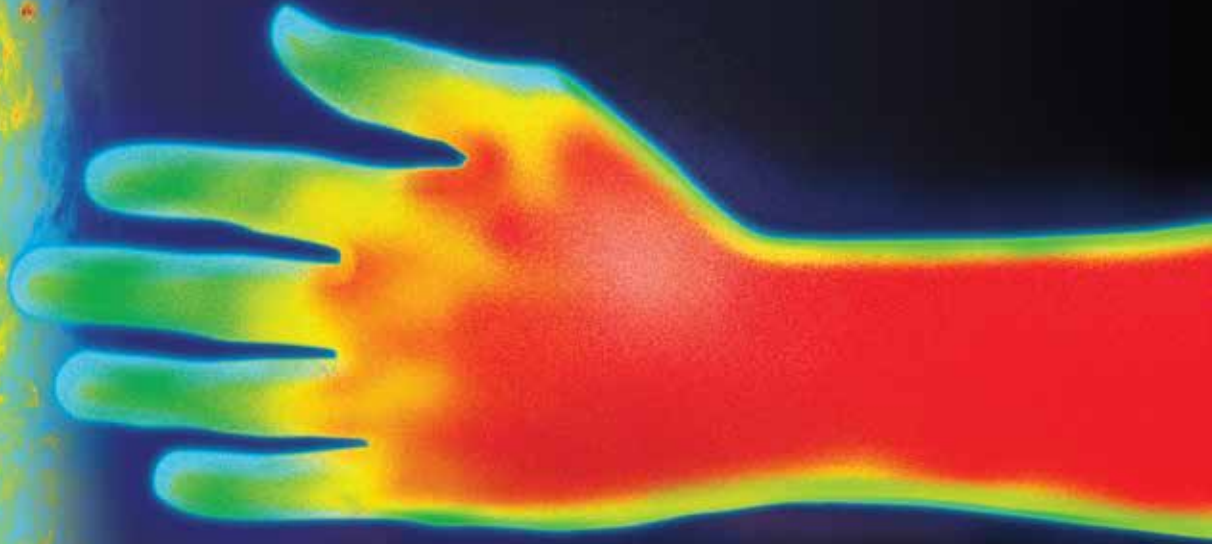
**Light in weight with superior properties**

Description	Testing Centre	Code	Result
2 x 12 mm Hilux board on each side of 48 mm stud + 50 mm x 64 Kg/m <sup>3</sup> . Rock wool in the cavity.	Spectro Analytical Labs New Delhi	BS-476-Part-20/22	Two Hours
2 x 12 mm Hilux board on each side of 48 mm stud + 50 mm x 64 Kg/m <sup>3</sup> . Ceramic wool in the cavity.	PSB Corporation, Singapore	BS-476-Part-20/22	Two Hours
3 x 12 mm Hilux Boards on each side of 98 mm stud + 92 mm x 64 Kg/m <sup>3</sup> . Rock wool in the cavity	Spectro Analytical Labs New Delhi	BS-476-Part-20/22	Four Hours
2 x 12 mm Hilux Boards on each side of 146 mm stud + 100 mm x 48 Kg/m <sup>3</sup> . Glass wool in the cavity.	ARAI, Pune	ASTM E-90/150 10140-2 ASTM E-413	56 dB
Sound Absorption: NRC 8 mm thick Hilux Perforated tile (595 x 595 mm) mounted on 50 mm x 48 Kg/m <sup>3</sup> . Mineral wool in the cavity	NPL, New Delhi	As per IS : 8225-1987	0.85
Sound Absorption : NRC 10 mm thick Hilux board	NPL, New Delhi	As per IS : 8225-1987	0.30
Flame Spread Index	Spectro Analytical Labs New Delhi	ASTME-84:16	'0'
Smoke Developed Index	Spectro Analytical Labs New Delhi	ASTME-84:16	18

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# THERMAL INSULATION

More than Wood.  
 Much more than plastic,  
 rubber and glass.

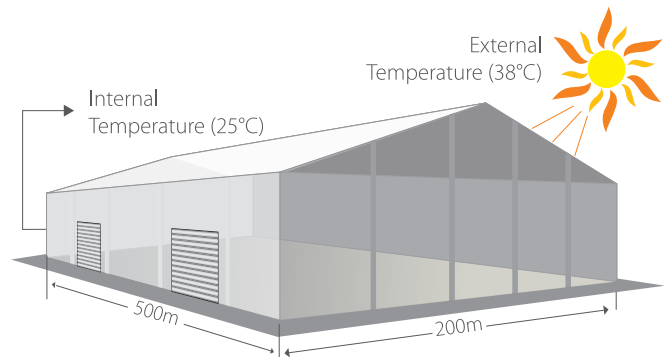


Minimises heat transfer in buildings, up to 40% energy and cost savings

Use Hilux.  
 Save lakhs in energy costs.

### Temp Difference

External Temperature (°C) - Internal Temperature (°C)	
38°C - 25°C = 13°C	Area = 200 m x 500 m = 1,00,000 sq.m



Description	Fibre Cement Board	Hilux Board
U Value	4.38 W/m <sup>2</sup> K	4.17 W/m <sup>2</sup> K <small>Lower the U Value, better the heat Insulation</small>
Heat Loss - KWh (U value x area x temp. Difference / 1000)	4.38 x 1,00,000 x 13 / 1000 = 5694 KWh	4.17 x 1,00,000 x 13 / 1000 = 5421 KWh
Heat Loss in a year (kWh x 300 days x 24 hours)	4,09,96,800 KWh	3,90,31,200 KWh
Overall loss caused by heat loss @ Rs. 9 per unit	4,09,96,800 x Rs. 9 = Rs. 36,89,71,200	3,90,31,200 x Rs. 9 = Rs. 35,12,80,800

**Recurring Savings per year** on usage of Hilux Board for a 1,00,000 sq. m. area (Rs. 36,89,71,200 - Rs. 35,12,80,800)

**Rs. 1,76,90,400**

# DESIGNER FINISH

Not possible with Gypsum  
Only possible with Hilux

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## The Boards can be Digitally Printed



\* Conditions apply

### Unique Warranty

Such is the confidence we have in the performance of our products that we are offering a 15-year Warranty on our Boards and a 25-year Warranty on our Tiles, covering free replacement of the Boards or Tiles if they deteriorate owing to a manufacturing defect.

### Terms & Conditions of Warranty:

The Warranty is not valid in case of

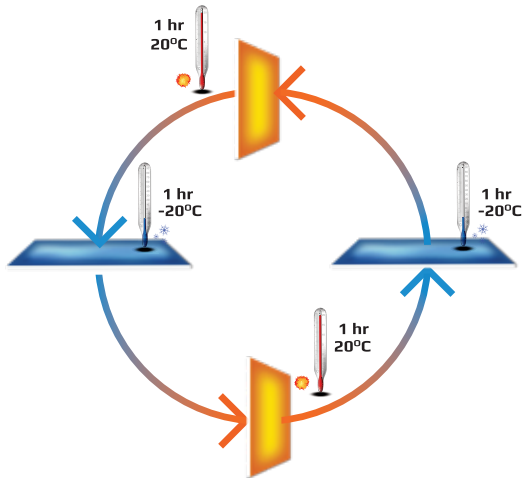
1. Boards/Tiles purchased from a dealer/retailer/seller other than those authorized by Ramco Industries Limited.
2. Installation, storage and maintenance procedures followed are found to be in contravention to those outlined on our website [www.ramcohilux.com](http://www.ramcohilux.com).
3. Only on usage of Hilux accessories in your installations.
4. Wilful negligence by user personnel. 5. Force Majeure.

# DURABILITY

## Freeze / Thaw Tests

Ascertains the use of the material in hot and cold environment

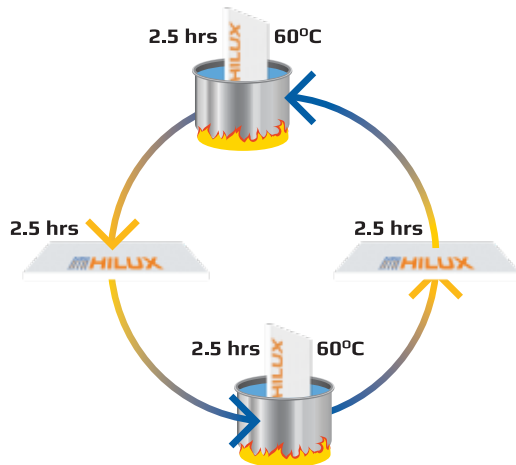
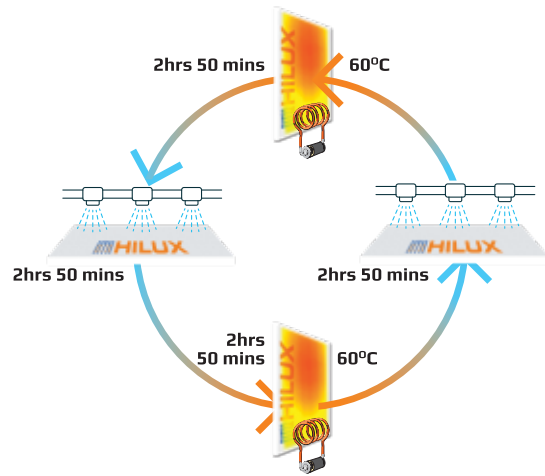
**Passes 100 cycles**



## Heat Rain Test

Indicates the capacity to the material to withstand extreme weather conditions.

**Passes 50 cycles**



## Warm Water Test

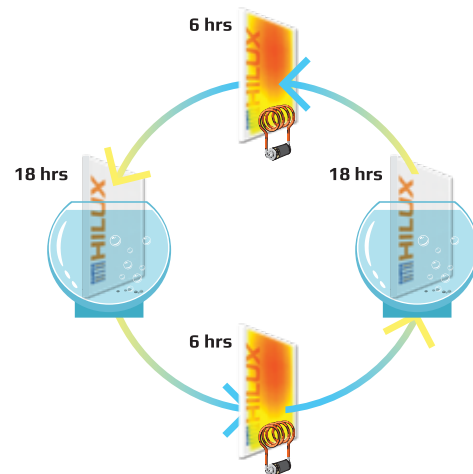
Property of material to resist degradation when immersed in hot water

**Passes 56 days**

## Soak Dry Test

Property of material to resist cyclic degradation of drying and wetting

**Passes 50 cycles**



Ramco Hilux is extremely durable when compared to all other types of boards. It can withstand all weather conditions and is highly suitable for use in places where the climate is extreme.

Description	Testing Centre	Code	Result
Freeze Thaw	NTH, Chennai	BS EN 12467:2012	Passes 100 cycles
Heat Rain	NTH, Chennai	BS EN 12467:2012	Passes 50 cycles
Warm Water	NTH, Chennai	BS EN 12467:2012	Passes 56 days
Soak Dry	NTH, Chennai	BS EN 12467:2012	Passes 50 cycles



ENGINEERING



IT SECTOR



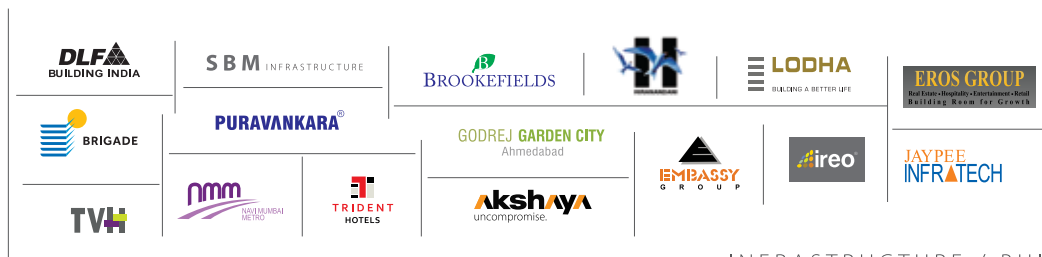
PHARMA / HOSPITALS



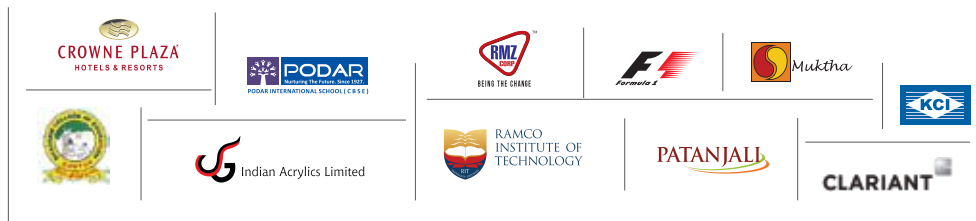
GOVT. SECTORS



TEXTILES



INFRASTRUCTURE / BUILDERS



OTHERS

# RAMCO SmartBuild

T e c h S e r v i c e s

Ramco SmartBuild is an end-to-end Service and Solutions initiative for Dry Construction



Design & Material Consultancy



Project Execution



Site Quality Assurance



Training in Dry Construction methods

Boards	Acoustic Tiles	Ceiling Tiles	Accessories
Chroma Walls	Tiny Hole perforated	Semi Pin Hole	<b>Finishing</b> Jointing compound, Fibre mesh tape
Wall Woods	Random Slit perforated	Semi Pin Hole square	
Visual Walls	Round Hole perforated	Tiny Stars	<b>Frame work accessories</b> G.I. Channels, Connecting clip, Soffit cleat, Rawl Plug
Marble Walls	Square Hole perforated	9 Squares	
	Tiny Slit perforated		
	Round Hole		<b>Minor accessories</b> Self drilling and tapping screws
	Straight Slit perforated		



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