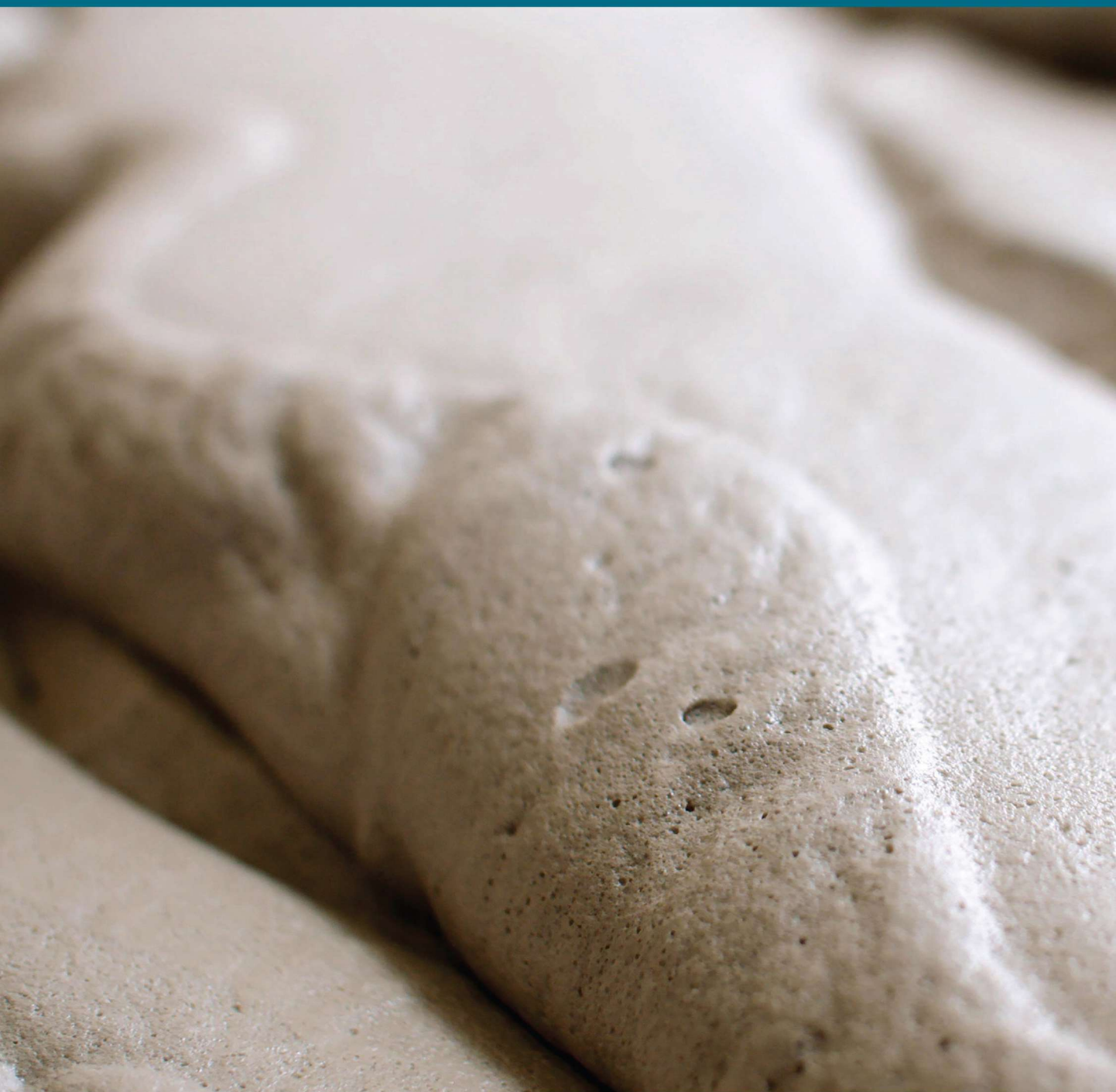


# AIRIUM<sup>®</sup>

## Insulation Redefined

TOP TIER INSULATION FOR SUSTAINABLE BUILDINGS



Readymix Muscat LLC  
Premix LLC



# Airium™ – mineral foam insulation

Improving the energy efficiency of buildings is among the biggest challenges of the 21st century. Approximately one-third of global energy consumption is currently used for heating and cooling buildings. Buildings generate close to 20% of global greenhouse gases during their use phase.

LafargeHolcim's answer is Airium™, an insulating technology that improves energy efficiency of buildings, from wall to wall and floor to ceiling: for example, block-filling, roof terraces, attics, sub-screeds and double walls.



## How does it work?

Airium™ is made of a cement-based slurry, aqueous foam and mostly... enclosed and distributed air bubbles. It is the first mineral foam to offer a top-tier insulating performance, for an ideal thermal comfort, be it for cold temperatures or heat waves. Being mineral, it is also fully fire-resistant, completely recyclable, unfavorable to insects or rodents, and contains no added chemicals. Airium™ is also very easy to use, increasing the speed on jobsites and tightly filling any corner or shape.

**“Airium is fully mineral and highly insulating. It really fits well with our willingness to differentiate and to meet with what we feel our customers are increasingly asking for: products which are healthier, safer and more sustainable.”**

Top executive in a major  
Real Estate developer in Oman



## Living with Airium™

For healthy and safe insulation solutions

Rising energy bills, swings in room temperature, risk of fires or environmental impacts: these are just a few issues that can arise with popular home-insulation products.

Airium™ is an insulation alternative that brings comfort and peace of mind. Our revolutionary material is:

- **Effective:** helping you deal with temperature changes and acoustics.
- **Healthy and safe:** chemical-free with optimal fire protection: A1 per EU standards.
- **Sustainable:** the most durable, low-carbon and affordable insulation option.



## Building with Airium™

Go faster and avoid unnecessary hassle

Meeting tight schedules and regulatory targets, optimizing operations and margins while ensuring the health and safety of workers: all well-known struggles for builders and contractors.

Airium™ can make life on jobsites easier when it comes to insulation because it is:

- **Efficient:** build and insulate at the same time.
- **Hassle-free:** reduced transportation, storage and handling needs.
- **Easy to use:** flexible and adaptable material.



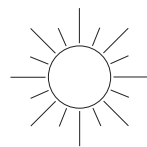
## Designing with Airium™

Choose a local, mineral, long-lasting solution

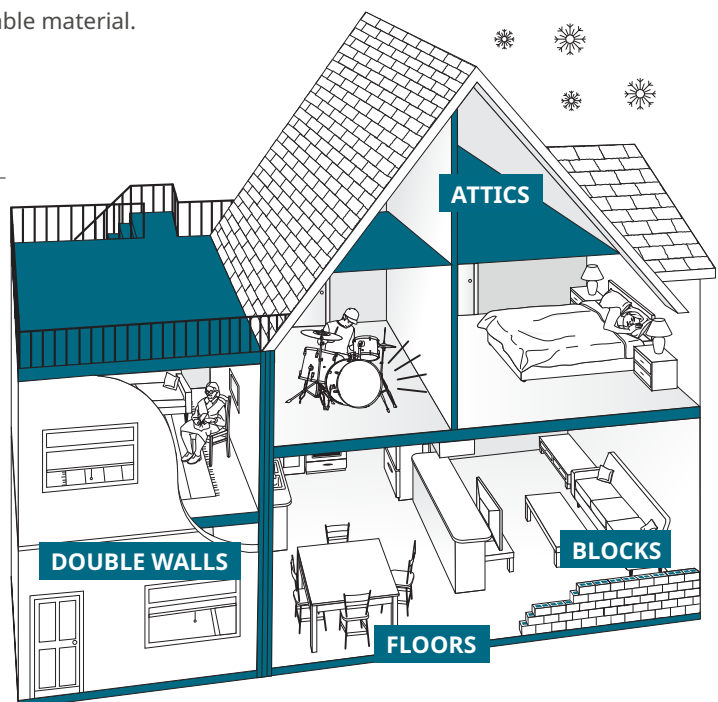
Reaching ambitious energy efficiency targets in a sustainable way is key in any building an architect designs these days.

Airium™ provides insulation that is:

- **Ecological:** a low-carbon and recyclable material.
- **Healthy:** keeping the air chemical and mold-free.
- **Durable:** lasting more than 100 years.



ROOF TERRACES

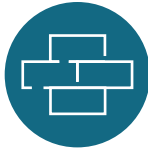


# Applications of Airium <sup>TM</sup>



## ROOFS

- Roof terraces
- Attics
- Precast roofing elements



## WALLS

- Filled concrete blocks
- Filled precast wall panels
- Airium <sup>TM</sup> on site (in air layers or in lost formworks)



## FLOORS

- Insulating layer below screeds
- Lightweight intermediary floors



## OTHER APPLICATIONS

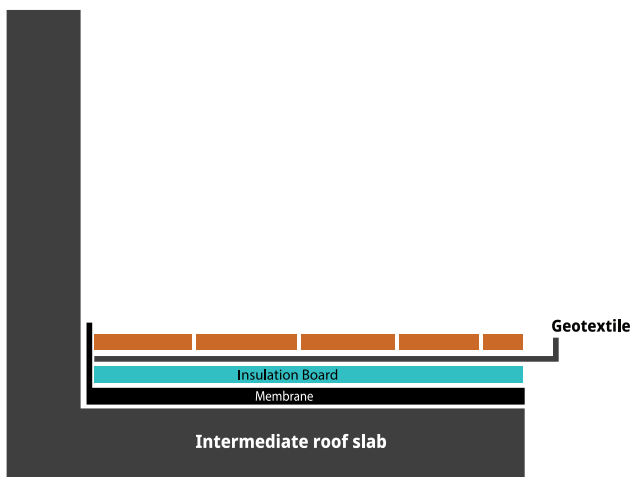
- Utilities
- Geotechnical projects

## Airium density ranges in Oman

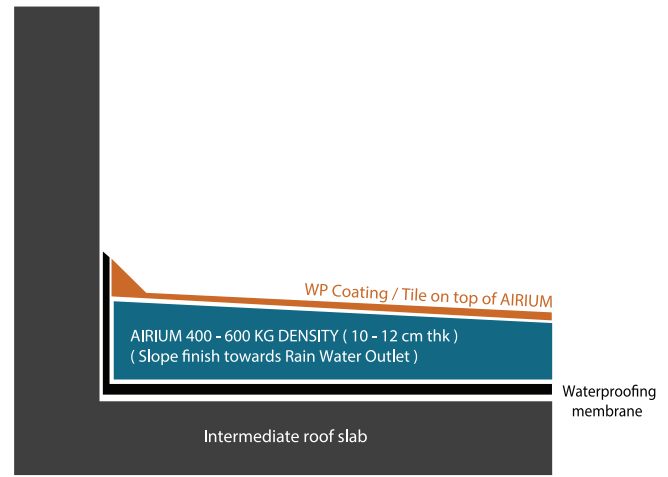
**400 KG** | **600 KG** | **800 KG** | **1000 KG** | **1200 KG**

## Oman Existing Roofing system VS AIRIUM Roofing system

### Conventional WP system



### AIRIUM WP system



## Benifits of AIRIUM system

1. Less layers compared to the conventional system
2. Cost effective compared to the 5 layer system ( Only 3 layers)
3. Sloping can be done easily
4. Seamless insulation layer compared to polystyrene insulation boards
5. Less wastage of material
6. Easy installation
7. Very fast Installation & saves a lot of time

## Roof terraces with Airium™

A smart and easy horizontal insulation



**“This solution allows covering more space more quickly than other materials, and it’s easier on a day-to-day basis for my workers.”**

Sreekumar , PM , Oman Shapoorji LLC  
IPA Building at Al Khuwair

The “Airium™ Thermochope” the light weight solution enables the replacement of the sloped concrete and the insulating material by one single layer. Builders and applicators can therefore build and insulate at the same time.

Using Airium™ for roof terraces helps save a lot of time during construction: a minimum of two days per week can be saved! Besides requiring less material, the material is produced through a single piece of equipment that is easy to operate from ground level.



**“ This product is very easy and fast to install. It was a fast track project and has saved us a lot of time and cost.”**

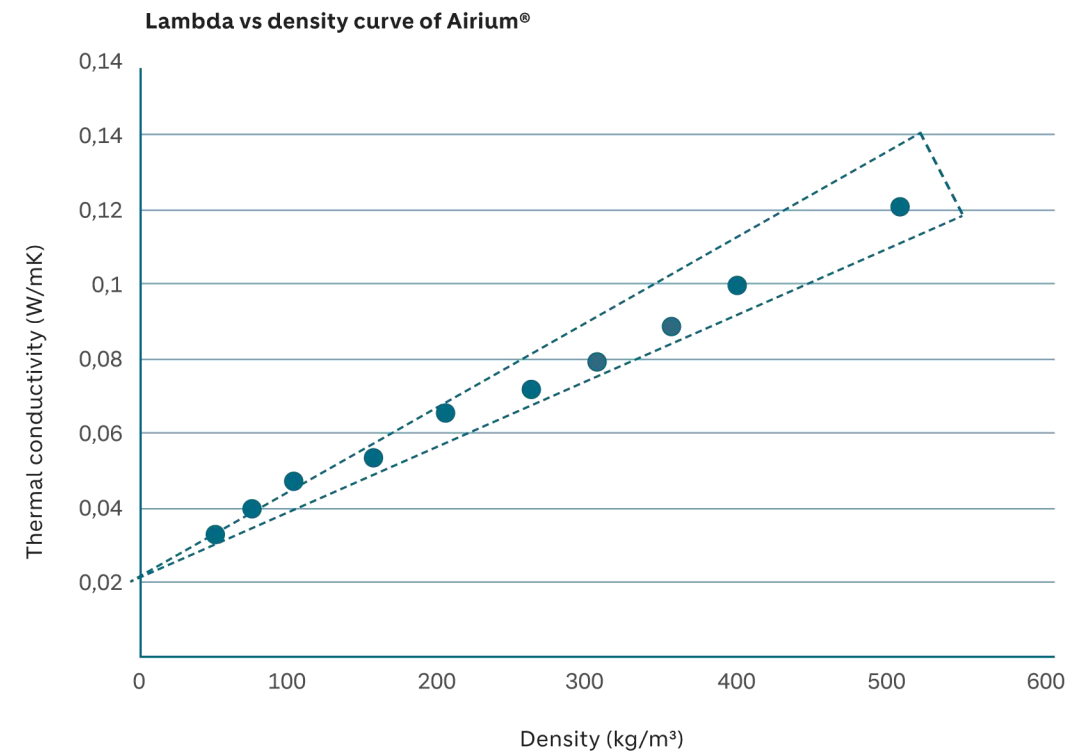
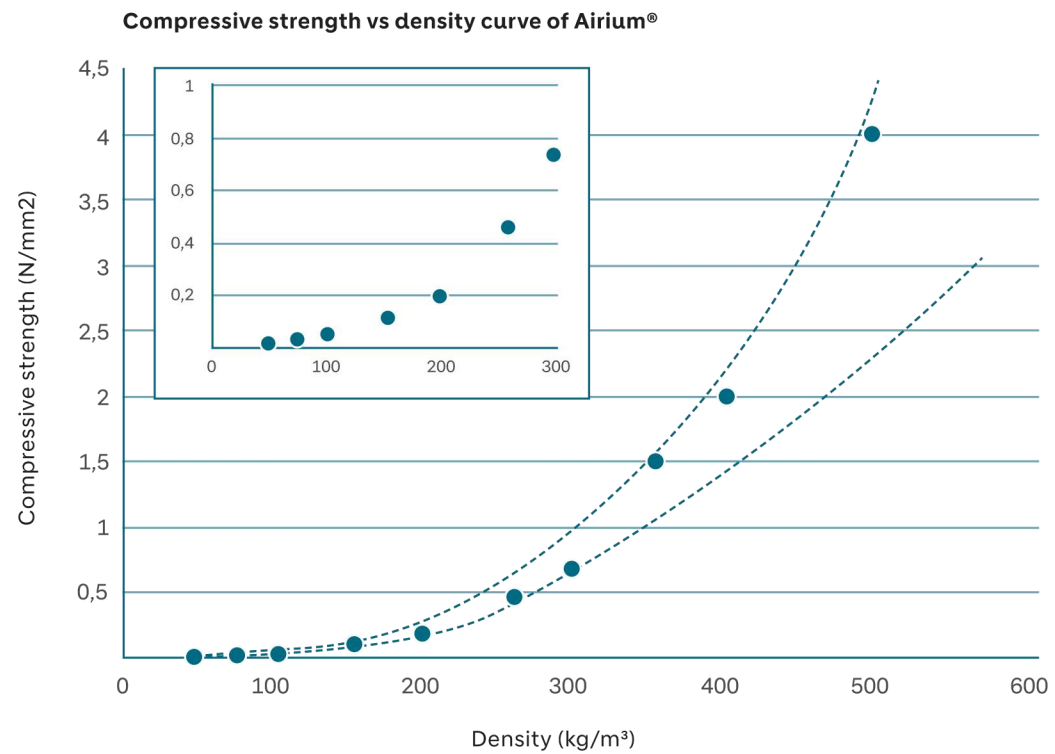
Pushparajan , PM , Zawawi Powertech  
Grid Station at Barik & Suwaihat

**“Load of the slabs were a challenge here and this product has resolved our problem”**

Srinivas , PD , Larsen & Toubro  
Mandarin Hotel at Shattil Al Qurum



# TECHNICAL INFORMATION ON AIRIUM®



Airium® at different densities	Airium® 50	Airium® 70	Airium® 150
<b>Applications</b>			
<b>Floors</b>			Sub screed
<b>Roofing</b>	Non walkable attics		Walkable attics
<b>Blocks and precast</b>		Blocks	Sandwich walls
<b>Lightweight filling</b>			
<b>Density (dry)</b>	50 kg/m³	70 kg/m³	150 kg/m³
<b>Minimum thickness</b>	4 cm	4 cm	4 cm
<b>Thermal conductivity (dry)</b>	0,037 W/m.K	0,042 W/m.K	0,055 W/m.K
<b>Compressive strength</b>	10 kPa	20 kPa	150 kPa
<b>Fire Resistance</b>	A1	A1	A1
<b>Water vapour permeability (µ-value)</b>	3	3	5
<b>VOC Emission (Eurofins)</b>	A+	A+	A+

Airium® 250	Airium® 400	Airium® 600	Airium® 1000
Sub screed and sub slab		Screeds	
	Insulating slope		
Geotechnical and lightweight filling applications			
250 kg/m³	400 kg/m³	600 kg/m³	1000 kg/m³
4 cm	4 cm	4 cm	4 cm
0,070 W/m.K	0,10 W/m.K	0,14 W/m.K	0,35 W/m.K
500 kPa	1500 kPa	2500 kPa	> 5000 kPa
A1	A1	A1	A1
7	11	15	40
A+	A+	A+	A+

# AIRIUM

Airium® is a mineral insulation foam technology. It is fully fire-resistant, long-lasting and sustainable. It can fill any type of shape and cavity, either on site or in an industrial controlled environment. Airium® can be used in a variety of applications – from blocks to roofs to floors – as it offers a wide range of possible compromises between insulation and structural performances.

## Want to know more?

Get in touch with the Airium® team on [airium@holcim.com](mailto:airium@holcim.com)

Discover the epic quest for insulation on [airium.com](http://airium.com)

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