

BEAT THE **HEAT**
WITH

LUNE

COOL ROOF TILES



LUNE TILES®

Beat the **heat**

An ISO 9001:2015 Certified Company



Cool Roof Tiles

www.lunetiles.com



LUNE TILES®

Cool Roof Tiles

Gold +



Specification

- Colour - Full White
- Size - 10 X 10 inch
- Thickness - ± 15 mm
- Weight - ± 2 Kg
- Type - Top to Bottom Cooling Minerals



Specification

- Colour - Full White
- Size - 10 X 10 inch
- Thickness - ± 15 mm
- Weight - ± 2 Kg
- Type - Top 3 mm to 4 mm White Cooling Minerals Bottom Concrete Base

Silver +

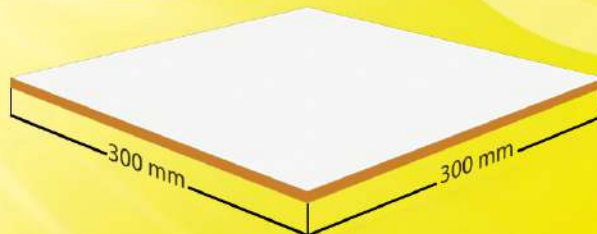
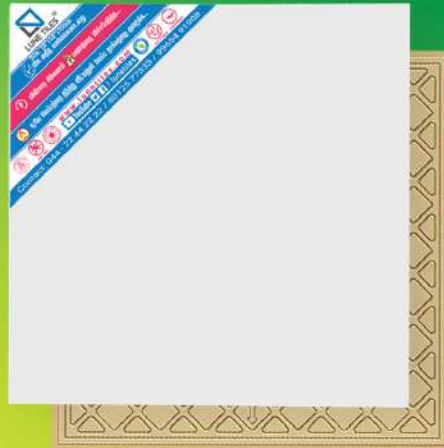
LUNE TILES®

Ceramic Cool Tiles

Ceramic+

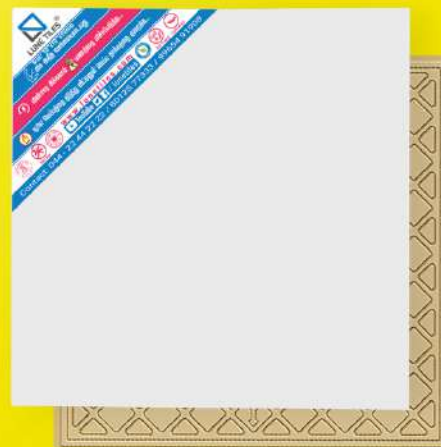
Specification

- Colour - White
- Size - 300 x 300 mm
- Thickness - ± 10 mm
- Weight - ± 1.5 Kg
- Type - Ceramic



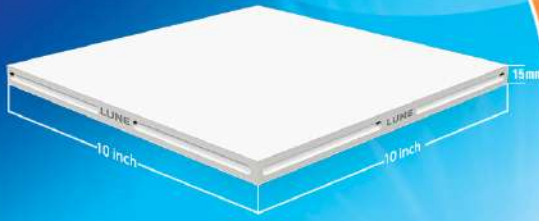
Specification

- Colour - White
- Size - 300 x 300 mm
- Thickness - ± 08 mm
- Weight - ± 1.2 Kg
- Type - Ceramic



Ceramic

Lune Natural Cool Roof Tiles



Lune tiles are also known as
Thermal insulation tile
solar reflective tile
Heat resistant tile
Weathering tile
White Roof Tile
Cool Roof Tile
cooling Tile
white Tile
cool Tile

Benefits

Better living conditions

Usable and pleasant roof space

Less roof weight

Increase building life

Antifungal and anti skidding

Reduced load on A/C systems

Saves electrical energy

Avoid steel corrosion on roof concrete

Enhanced water proofing protection

Less stain absorption

Easily washable

Reduces the roofing expenditure

Lune Ceramic Cool Roof Tiles

300mm X 300mm
8mm & 10mm Thickness



Features



Due to the fact that Lune tiles is white it reflects solar energy without transmitting it and combines it with air to regulate the temperature inside of the house.

By avoiding weathering course for laying Lune tiles you can save from Rs.10 to Rs. 20 per sq.ft



The Lune tiles have a flexural strength of 4.9 N/mm² and three times more durable than those specified by the IS Standard.

By minimizing heat inside our home by reflecting the sunlight on the terrace itself, Lune tiles will decrease the usage of A/C as well as save electricity.



By laying Lune tiles instead of using the weathering course method, we can reduce our Roof weight by using minimum building supplies.

Lune tiles are environment-friendly tiles which is made up of naturally occurring minerals which are 100% Eco-Friendly and saves nature.



Even though the Lune tile surface is smooth, it is absolutely anti-skid and you can walk under any conditions.

Our cool roof tiles are made up of naturally occurring materials which prevent the growth of fungal objects.



*Lune tiles have less than 5% Damage.



Economical

For red tiles, you have to spend additional expense of approximately Rs.140 to Rs.150 for weathering course materials and also for labour charge for that and for laying red tiles overall. But for our Lune tiles, no need of weathering course. So for waterproof coat and rainwater sloping (where it needed), it may cost approximately from Rs.120 to Rs.130 overall. So when compared with red tiles, you can save Rs.10 to Rs.20 per sq.ft.

< APPROXIMATE VALUE FOR 1 SQ.FT * >

Lune Tiles

Cost for grano flooring

Cement	-	3.00
M.Sand	-	6.50
Baby chips	-	5.50
Water proof coat and labour	-	19.00

Cost for laying tiles

LUNE TILE Per Sq.Ft (10 x 10 inch LUNE S+25 RS)	-	36.00
Cement	-	6.00
M.Sand	-	6.50
Water proof compound + white cement + spacer	-	9.40
Laying labour (First floor)	-	33.00

TOTAL 124.90

Clay Red Tiles

Cost for weathering course

Lime powder	-	6.00
Brick jalli	-	16.50
Kadukka + Jaggery	-	5.00
Labour	-	30.00

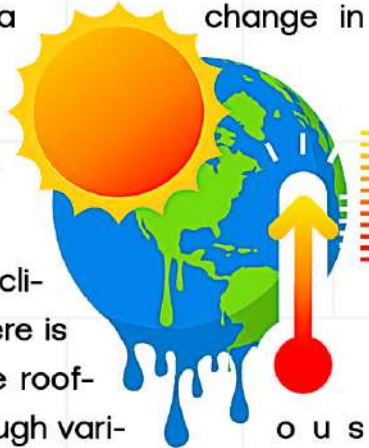
Cost for laying tiles

Clay red tile Per Sq.Ft (9 x 9 inch RED TILE 18 RS)	-	34.00
Cement	-	6.00
M.Sand	-	9.75
Red - oxide and water proof liquid	-	4.50
Laying labour (First floor)	-	30.00

TOTAL 141.75

How Lune tiles helps in prevention of Global Warming?

Due to the presence of carbon dioxide and greenhouse gases in the atmosphere, Earth undergoes a **climate** change in its natural state, leading to global warming. Over the past 100 years, the average temperature of the Earth has increased by 0.8 degrees Celsius.



Furthermore, to combat the impact of climate change and global warming, there is a growing interest in transforming the rooftops of buildings into white roofs. Through various scientific studies, it has been demonstrated that adopting white roofs can contribute to reducing both global warming and the effects of climate change. Many countries worldwide are actively promoting awareness among their populations to address these environmental concerns.

Reflective Versus Non-reflective Roof Where Does The Heat Go?



LUNE NON-CERAMIC COOL TILES LOW LAYING INSTRUCTIONS



INSTALLATION INSTRUCTIONS



I. Preparing the Surface

Before laying Lune cool Tiles on your roof, follow these steps :

1. Thoroughly clean the entire floor using either water or an air-blower.
2. Coat the terrace twice with a waterproof liquid and grey cement mixture in a 1 : 1 proportion, applying the first coat horizontally and the second coat vertically.
3. Double coat the parapet wall up to 8 inches from the bottom.
4. Retain water on the coated surface for 3-5 days, ensuring there is no water leakage before proceeding to laying Lune tiles.

II. Preparing Sloping Points and Grano Flooring

1. Mark sloping points for free-flowing rain water.
2. Spread "Grano flooring" concrete through sloping points with a ratio of 1 : 5 : 5 (Cement-1 part M-Sand-5 part : 8-12mm blue metal chips -5part).
3. Make both side slope on roof and install above 2 to 3 rainwater drain pipes to reduce material usage, roof weight, and cost.

III. Laying Lune Tiles

1. Prepare the base on Grano Flooring surface for fixing tile. the base work must be in the ratio of 1:8 cement with sand / M-Sand.
2. On top of base concrete, spread the cement and water mixture and made some small scratches on the surface for tile retention.
3. Use the required amount of waterproof liquid for Grano flooring and cement mix.
4. Opt for the break joint method for fixing roof tiles, as it proves beneficial for repair works.
5. For non ceramic cool tiles (natural minerals) use an **8mm spacer** and also when working with ceramic cooling tiles, use a **5mm spacer** between tiles to allow space for grouting.
6. Before fixing ceramic cooling tiles in the cement mix mortar, ensure they are soaked in water. This enhances their performance and adherence.
8. Follow an alternate joint fixing pattern (Break Joint method).
9. Avoid walking on the surface immediately after fixing.
10. Start fixing tiles from the wall side towards the door side.

IV. Skirting Tiles and Wall Compound

1. Cut Lune Tiles for skirting using a cutting machine.
2. Make scoring points on the bottom of parapet walls to prevent water leakage.
3. Create a cement mix (1:3 ratio) for the soft compound, pasting it on the parapet wall along a 45-degree angle.
4. Walk on installed tiles the next day to check for any loose hold.
5. Replace any tiles with a loose hold to prevent future cracks.

V. Filling Gaps and Final Cleaning

1. Prepare a soft mortar mix with 1-part white cement, 1-part fine sand, and waterproofing liquid.
2. Fill the gaps between tiles consistently with the soft mortar mix.
3. After an hour, clean the surface with a moist towel to remove excess mortar.
4. Clean the entire roof area with a moist cloth for a neat finish.
5. Pour water on the roof daily twice for the next two days.



Lune Cooring Tiles Handling Instructions

1. Stock Lune Tiles vertically to avoid damage.
2. Avoid stacking tiles horizontally to prevent potential damage.

SRI TEST CERTIFICATE

ULR-TC70201900000056F

Report No: CRDF/RPT/SRI/414

Report Date: 12th February 2019

3. Results of the measurement:

Solar Direct Reflectance

Sample name	Sample ID	Measurement 1	Measurement 2	Measurement 3	Average
Lune Tiles	SRI/02/19/1415	0.7517	0.7521	0.7528	0.7522

Emissivity

Sample name	Sample ID	Measurement 1	Measurement 2	Measurement 3	Average
Lune Tiles	SRI/02/19/1415	0.936	0.936	0.935	0.936

Solar Reflectance Index (SRI) under different wind conditions

Sample name	Sample ID	Solar Reflectance Index (SRI)		
		Low Wind($h_c=5 \text{ W m}^{-2} \text{ K}^{-1}$)	Medium Wind($h_c=12 \text{ W m}^{-2} \text{ K}^{-1}$)	High Wind($h_c=30 \text{ W m}^{-2} \text{ K}^{-1}$)
Lune Tiles	SRI/02/19/1415	94	94	94

Surface Temperature (T_s) under different wind conditions

Sample name	Sample ID	Surface Temperature ($^{\circ}\text{C}$)		
		Low Wind($h_c=5 \text{ W m}^{-2} \text{ K}^{-1}$)	Medium Wind($h_c=12 \text{ W m}^{-2} \text{ K}^{-1}$)	High Wind($h_c=30 \text{ W m}^{-2} \text{ K}^{-1}$)
Lune Tiles	SRI/02/19/1415	52.7	46.9	42.0

4. Certificate of Accuracy:

This is to certify that the test results herein presented are, to the best of my knowledge, true and accurate representations of the samples submitted.

Jigar Patel
Lab. Supervisor



Yashkumar Shukla
Technical Director

Disclaimer:

1. The CEPT Research and Development Foundation, CEPT University is not responsible for any kind of alterations in the physical property of the sample and the customer is solely responsible for it and its consequences.
2. Result relates to the sample tested only. Sample will be destroyed after 7 days of issue of the report unless specified by the customer.
3. Any complains about this report should be communicated in writing within 7 days of issue of the report.
4. The test report shall not be reproduced fully or partially or in parts and cannot be used as an evidence in a court of law and shall be used in advertising media without written approval of Director, CEPT Research and Development Foundation, CEPT University.



NTH TEST CERTIFICATE

FORM NO : NTH/CHN/F5



भारत सरकार Government of India
राष्ट्रीय परीक्षण शाला (द.क्षे.)
NATIONAL TEST HOUSE (SR)
तरमणी, चेन्नई - 600 113. Taramani, Chennai - 600 113.
Phone : 22432374, 22431157 Fax : 22433158 email : nthsr@tn.nic.in

000129

Test Certificate No.	Date of Issue:	Code No.	No. of Pages:
NTH(SR)/CIV(G)/2020/005384M	24/06/2020	5384	1 of 1

Annexure

As desired, the Cool Roof tiles sample marked "LUNE" was subjected to the following tests on the lines of IS 2690(1):1993 (second revision) with the results noted below:

Sl.No	Nature of Tests	Results obtained
1.	Dimension	
1.1	Average length of each side, mm	255
1.2	Average thickness, mm	15
2.	Test for Warpage	
	Maximum warpage observed, percentage	0.15
3.	Test for Water Absorption	
	Average water absorption by mass, percentage	6
4.	Test for Flexural strength	
	Average Modules of rupture, N/mm ²	4.9

Tested by

Jaswant Deepak Bara
Scientific Assistant(Mechanical)

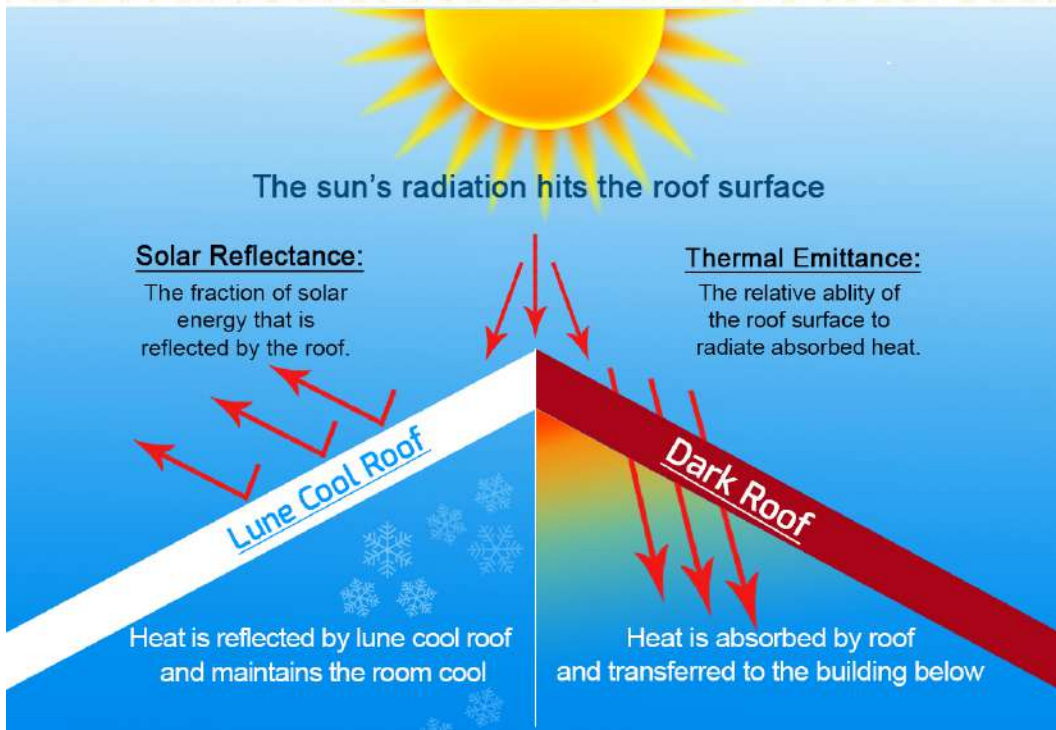
Checked by

G.N. Sudhakar
Scientist D (NDT)

Approved by

G.N. Sudhakar
Scientist D (NDT)

Notes : 1. The results relate only to the items tested or calibrated
2. The test/calibration certificate shall not be reproduced except in full, without written approval of the authority



Customer's Attention

The Lune tiles box should be arranged vertically, similar to how it is positioned in a transport truck, whether on the roof or the floor.

Before laying Lune tiles, make sure to coat the area with a waterproof material and thoroughly inspect for any leaks. This ensures a moisture resistant foundation for the tile installation.

To prevent rainwater issues and facilitate drainage, install one-inch or larger chip concrete, along with Grano flooring, in required areas for effective pavement and weather resistance.

When laying Lune Tiles, use 8mm spacers for non-ceramic and use 5mm spacers ceramic between tiles for consistent and neat gaps. It's recommended to adopt an alternate joint (Break Joint) fixing pattern for better aesthetics and stability.

The day after installation, cure the tile surface with water in the morning and evening. Walk barefoot on the tiles to check their stability. If any tile feels loose, replace it to prevent further fractures. This helps ensure a durable and crack-resistant flooring.

When laying tiles, add waterproofing liquid to the concrete and use a soft mortar mix as per specification. This helps enhance the water resistance of the installation.

Prepare a soft mortar mix with white cement and fine sand, adding waterproofing liquid. You can substitute white sand or marble powder. Evenly spread this mixture over the spaces between laid tiles to ensure proper coverage.



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