

COOLROOF[®]

Heat Reflective Paint

Takes the heat out



Heat Reflective
High Albedo Paint
Very High SRI as per ASTM/LEEDS-122



PRODUCT DESCRIPTION

COOL ROOF® is elastic, ready to use paint, when coated on the roofing materials, reflects sunlight to a greater extent and prevents the roofing materials from getting heated up, even in peak summer afternoons. Since it works on the principle of continuous rejection of UV and IR Rays, the roof itself is not getting heated up. So the air below the roof never gets hot, keeping the rooms cool and comfortable. This prevents the buildings for a longer period, extending the life of the buildings. In air-conditioned areas, an attractive power saving of upto 20% can be noted during peak summer.

COOL ROOF® is a high performance one component, non toxic, high emissivity, ready - to - use high Albedo, Heat Re-Radiating paint which significantly lowers the surface temperature of your roofs and exteriors resulting in :

- Your building remains cool even under intense sunlight conditions.
- Your staff remain cool and maintain higher level of productivity.
- Your humidification and air conditioning costs cut upto 20%.
- Reduction of roof heat about 8°C to 20°C

Solar heat incident on a roof is dissipated by means of three physical phenomena namely:-

- a fraction of the absorbed heat is conducted to the ground and surrounding buildings
- a fraction is dissipated by convection to air leading to higher air temperatures, and
- a fraction is radiated to the sky.

As such one has no control over the first two phenomena but the third one that is the amount of heat radiated can be maximized by **COOL ROOF®** coatings that inherently possess high emittance values.

COOL ROOF® is particularly useful where the terrace covers an air conditioned space. A higher roof temperature necessarily leads to a higher load on the air-conditioning plant. A reduction in roof temperature will result in lower roof temperature with consequent savings in power consumption.

COOL ROOF® coating can be applied with ease on following surfaces:

- Concrete, Plaster & Asbestos Cement Sheet, Precoated Sheets
- Galvanized/Powder coated Tin Sheet, Brick Coba
- Primed Metal

Some advantages of **COOL ROOF®** Heat Reflective Paint :

- Ready to use single pack system.
- Repels heat energy & control heat transfer.
- Reduces air-conditioning running cost.
- The coating acts as a shield and protects the surface from heat and water.
- Its film is water resistant and does not support growth of fungus and algae.
- Does not crack due to wide temperature fluctuation.
- Cleans up with soap and water.

Where to use COOL ROOF[®] Coating?

COOL ROOF[™] has multiple usages like :

- For green building as its application gives required credit points
- In poultry and live stock sheds for reducing heat stress.
- Malls, Schools, Hospitals for providing better work environment
- In Industrial Sheds as its application reduces heat load.
- Residential Houses, Villas and Office Buildings by reducing cost of air conditioning.
- For Cold Storage and Air Conditioned Buildings.
- Railway Tracks and Defence Vehicles.

Special Features

- ❖ **COOL ROOF[®]** Enhances durability of the roof and reduces both building cooling loads and the urban heat island effect.
- ❖ **COOL ROOF[®]** is also an effective alternative to bulk insulations under the roofs in humid tropical climates. Bulk insulation can be to an extent replaced by **COOL ROOF[®]** coatings that reflect solar radiation and provide emission to the sky.
- ❖ **COOL ROOF[®]** has excellent abrasion and water resistance it is also resistant to fungal growth.
- ❖ **COOL ROOF[®]** is recommended for reduction in the "carbon foot print" of a building as it reduces fuel consumption of the air-conditioning plant.

In general the roof temperature is in the range of 60° C to 80° C in summer and this can be substantially reduced by coating the roof with **COOL ROOF[®]**. Below mentioned is an example of reduction in surface temperature after the application of **COOL ROOF[®]** coating :

- RCC terracesUpto 14° C
- Asbestos cement sheets Upto 16° C
- GI or powder coated sheets Upto 22° C

The above figures are indicative and will vary according to ambient atmospheric conditions.

Direction for use

- Application areas to be cleaned with a hard brush to remove all dust, weak paint, fungus etc. Cleaned area to be washed with water , Bleaching Powder (If Required)
- Stir the paint thoroughly before each use.
- Apply first coat with brush on the cleaned & washed surface.
- Apply second coat after a gap of minimum 3 to 4 hours.
- Ensure that the coated area does not come in contact with water for atleast 2 hours.
- After completion of full coating, it should be allowed to cure.

Technical Information

Physical Appearance	Milky white
Solar Reflective Index (SRI)	122
Coating type	100% pure acrylic base heat insulating paint
Solar Reflectance tested as per ASTM C1549-09	0.95
Thermal Emittance tested as per ASTM C1371-04a	0.91
Volatile Organic Contents (VOC)	Extremely low 1.34 gm/ltr.
Service Temperature	100 °C
Toxicity	Non toxic
Water Absorption :	Water proof coating
High Humidity:	No penetration of water, no loss of adhesion, no blistering, cracking or flaking.
Fungus Resistance	No fungi development
Impact Resistance	56"/pound
Chemical Resistance	Stable in mild Alkali acid and solvent
Fire resistance	Not flammable
Adhesion Strength :	40pound/square inch
Abrasion Resistance :	0.5gm/1000cycle
Number of coats :	2 coats
Solids by weight	50%
Dry film thickness	55 micron/coat
Dry Touch @ 30°C	60 min
Recoating time @ 30°C	After 4 hour
Curing Mechanism	At ambient temperature paint cures by evaporation of water & coalescence of polymer particles
Viscosity	10 poise
Ph	7 to 8



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