## **Cool roof coatings**



High consumption of electricity in running air conditioners / coolers in summer is a usual phenomenon. A rough estimate shows that there is a saving of ₹480 Crores per annum in electricity if the temperature of a roof-top house (size 1000 sq. ft and having a one ton AC, running only for 10 hours) is reduced by 10°C. This in turn will reduce the carbon foot print and hence global warming.

The roof temperature rises sharply on a summer day. It is estimated that if the day temperature is 45°C, the roof temperature at the peak hours of the day (mid day) is ~65°C. The concrete can reduce just 12-14°C, thus restricting the temperature in a roof-top home to 53°C.

After application of the cool roof coating developed by us, the temperature of a roof-top home will drop by 15-20°C and the temperature in room will drop to ~37-39°C, thus saving electricity and reducing global warming. This reduction is due to the addition of certain specific pigments which reflects the near infrared rays (NIR) back to atmosphere, thus making the roof cool. The coating developed is green in colour and is water based with non-volatile organic compounds and can be applied by brush roller or spray techniques with DFT of  $100 \ \mu m$ . The cost of the coating is comparable to other architectural coatings.



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