

# Reflecting advantage for underdeck insulation

Energy is the single largest operating expense and accounts for over \$100 billion in expenses for commercial buildings each year. Supreme Industries, established in 1942, offers unique solutions in the areas of thermal and acoustic insulation, already popular in the industry. The company follows the philosophy of SAVE - Supreme Always Value Efficient. The drivers of this conviction are applied intelligence and innovation to enable cost-effectiveness and precision in delivery.

## Reflective Insulation

Radiant heat is invisible and has no temperature, just energy. When this energy strikes another surface, it is absorbed and increases the temperature of that surface. In summer, radiation from the sun strikes the outer surfaces of walls and ceilings and is absorbed causing the surface to heat up. This heat flows from the outer wall to the inner wall through conduction which is then radiated again, through the air spaces in the building, to other surfaces within the building. Radiation between surfaces is through invisible, infra-red heat rays. Different types of insulation products reduce the heat transferred by conduction, convection and radiation to varying degrees. As a result, each provides different thermal performance and corresponding "R" values. The primary function of reflective insulation is to reduce radiant heat transfer across open spaces, which is a significant contributor to heat gain in summer and heat loss in winter. There are many types of materials that reduce

heat gain and heat loss. Some materials provide greater resistance than others, depending on the mode of heat transfer: convection, conduction or radiation.

## Supreme offerings

With a view to improve efficiency and enable conservation of energy, the Thermal Insulation Division of Supreme provides top-of-the-line insulation solutions with its 'INSU' range of products.

Each of the products that Supreme offers i.e. 'INSUshield' - FR, closed cell chemically crosslinked polyethylene foam for thermal insulation, 'INSUreflector' - Radiant heat reflective material - are for the purpose of saving energy in different segments of the industry and for different applications. All these insulation products are manufactured from virgin raw material.

## Areas of application

The products are employed in the following areas:

- Ducting insulation in hospitals, shopping malls, airports, PEBs, IT/BPO etc.
- Pipe insulation for split AC tubings, chiller piping, drain pipes, chilled water lines etc.
- Floor insulation in server rooms, data centres, medical and diagnostic centres, and control rooms for petrochemicals.
- Underdeck insulation in GI roofs and RCC roofs
- Overdeck and wall insulation in commercial buildings, residential buildings, cold storages etc.

'INSUreflector' offered by Supreme is made of polyethylene Air bubble film (ABF) laminated with aluminum foil on one or both sides. The bright surface of the aluminum foil reflects 96 to 99 per cent infra-red radiation received by the surface of a heated slate roof. It protects the building from undesirable heat gain. The thin reflective foil having low emissivity and high reflectivity when installed with an air space restricts the transfer of far-infrared radiation making it an ideal material to be used for underdeck application.

'INSUshield' is a non-fibrous, fire retardant, closed cell, tri dimensional chemically crosslinked polyethylene foam XLPE. An ideal environment friendly insulation material, with a perfect solution for all your insulation needs for ducts, roofs, pipes, vessels, etc. The divergent advantages of 'INSUshield' are ease of installation, low thermal conductivity and good moisture and vapour resistance preventing microbial growth and optimum condensation protection.

**Quality at its best:** A methodical, systematic and stringent approach to quality ensures durability to all their products. The company adheres to international quality standards while manufacturing products. ISO 9001:2000 and ISO 14001 certifications and NABL accreditation for various plants is a testimony to their serious approach to quality.

For more details contact:  
Email: [atul\\_khanna@supreme.co.in](mailto:atul_khanna@supreme.co.in)  
Website: [www.supreme.co.in](http://www.supreme.co.in)

