INNER® ENGINEERING
DESIGN • COMFORT • INSULATION

Back Away Heat & Fire

INSERA™

ENCAPSULATED ALU FOIL PADS

DESIGN
COMFORT
INSULATION

INSERA™ - ENCAPSULATED ALU-FOIL PADS

- **INSERA™** Encapsulated Alu-Foil Pads is heat resistant wool packed in readymade bag made up of aluminium foil gives high performance in thermal insulation & fire resistance.
- It is having high temperature stability, low thermal conductivity, excellent thermal shock resistance, light weight & superior corrosion resistance.
- It can be used where thermo-fire application requirements are there on the wall & false ceiling of building.
- It is completely inorganic with no added organic constituents & binders as well as it is asbestos free.

Brief Description	INSERA™ Encapsulated Alu-Foil pads is heat resistant wool packed in readymade bag made up of aluminium foil. This specific grade is used for thermal & fire applications
Material Type	Excellent thermal resistance & good fire resistance properties
Color	Silver
Applications	Wall of server room & data centers, AC plant room wall, false ceiling

STANDARD DIMENSIONS:

Density	Thickness	Width	Length
64 kg/m³	25 mm	610 mm	1000 mm

Thermal Conductivity (K value) Table (As per IS 15402/IS 3346):

Mean Temperature (°C)	100	200	400
Thermal Conductivity (W/m.K)	0.05	0.06	0.11

Thermal Resistance (R value) Table (For 25 mm Thickness):

Mean Temperature (°C)	100	200	400
Thermal Resistance (ft².hr.°F/BTU)	2.81	2.37	1.29

Technical Data (For Core Material):

Surface Burning Characteristics	Flame Spread index (FSI): **25 Max.** Smoke Developed Index (SDI): **450 Max.** Fire Classification: **Class A**	As per ASTM E 84, NFPA 90A, 90B & Life Safety Code 101
Reaction to Fire Tests	**Non-combustible material** Fire Classification: **Class A1**	As per BS EN ISO 1182/BS EN ISO 1716/EN 13501-1
Fibre Diameter	**3 Microns**	As per IS 15402/IS 14656

FEATURES :

- Excellent thermal & chemical stability
- Light weight
- Good fire rating
- Low thermal conductivity
- Resistant to thermal shock
- Good thermal & fire property
- Excellent corrosion resistance
- Non-combustibility
- Asbestos free

INSERA™ ALU FOIL PADS APPLICATION AREA:

BUILDING WALL :

- Many commercial and residential buildings posses such critical rooms which are required to safeguard from fire as well as required to maintain temperature for energy saving for which thermal insulation is also required. Various examples of thermo-fire insulation applications are:

1. SERVER ROOM & DATA CENTER WALL:

- Server rooms contain various equipments which are supposed to be kept at particular temperature to ensure its properly working. Hence the server rooms are air conditioned which consumes high amount of energy per year.
- **INSERA™** encapsulated alu foil pads are having low thermal conductivity shall be fixed on the wall of server room to reduce the heat transfer inside the server room which will reduce the energy consumption of server room.
- Various businesses possess data center or server rooms where large amount of data information about business is stored. It consists of various equipments. There are chances in case of fire that it may destroy the important data, which will ultimately cause a huge loss to the business financially hence fire, is a serious financial threat to various businesses. So, it becomes necessary to safeguard server rooms from fire.
- **INSERA™** encapsulated alu foil pads can withstand fire and also sustain high temperatures shall be fixed on the wall of server room with the help of screw washer & GI wire to make it fire safe.

2. AC PLANT ROOM WALL:

- The central air conditioning plant rooms are used when large buildings, hotels, theatres, airports, shopping malls, etc are to be air conditioned completely.
- In central air conditioning systems, there is a plant room where large compressor, condenser, thermostatic expansion valve and the evaporator are kept in the large plant room & chilled air is passed to different rooms, halls, or other spaces that needs to be air conditioned via supply air ducts.
- As there are many equipments working inside of a room which generates heat. The use of **INSERA™** Encapsulated Alu foil pads helps in reduction of heat transfer from that room to other room by applying it on the wall and helps in maintaining comfort level in other rooms.
- As the AC plant room contains mechanical & electrical equipment, there are chances of fire due to any cause, also there may be chances of fire protruding into the plant room from external source which may lead to serious hazardous situations.
- **INSERA™** Encapsulated Alu foil pads helps in resisting fire for specific period of time from plant room to other rooms or vice versa by applying them on the wall of plant room.

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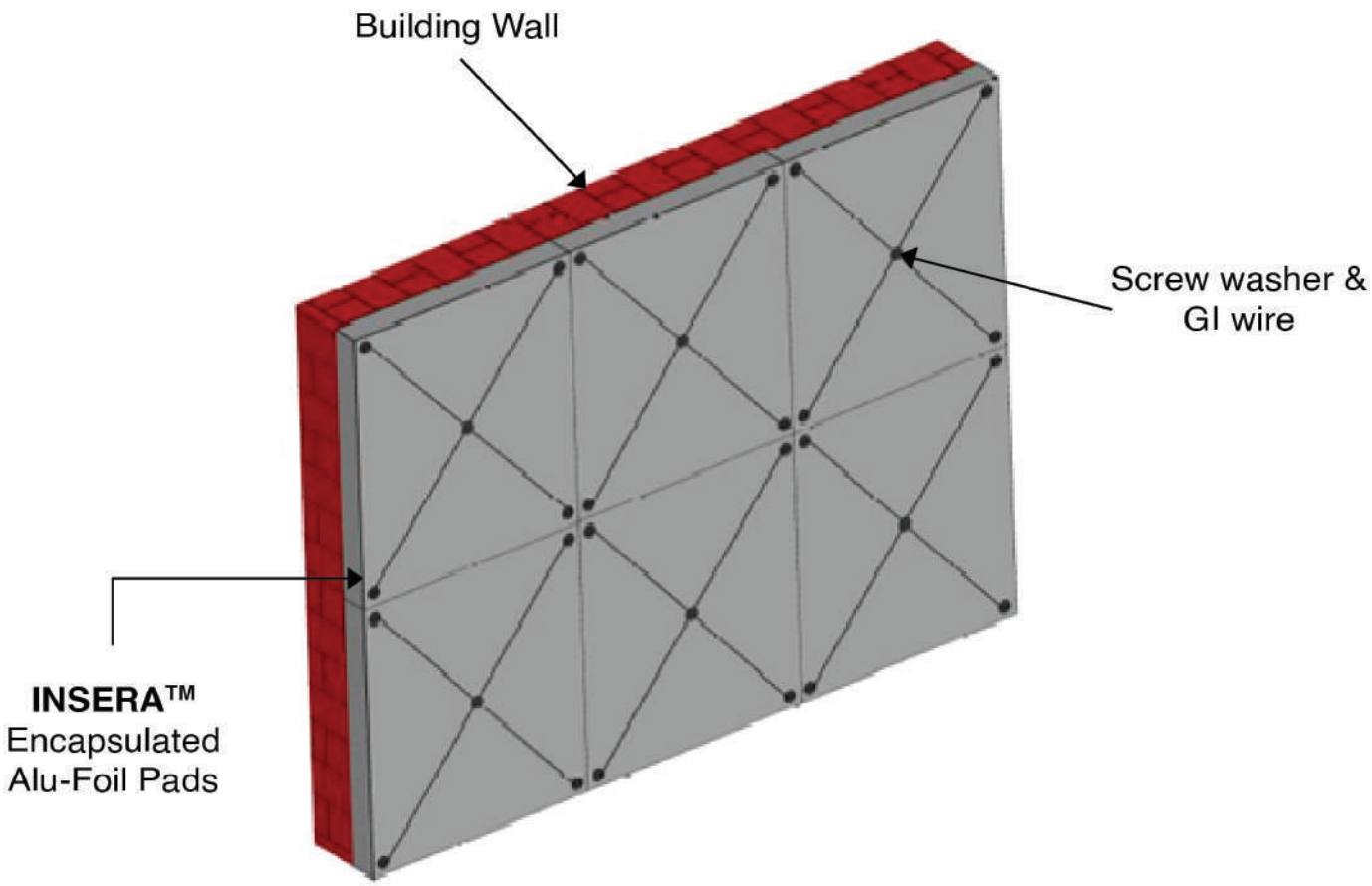
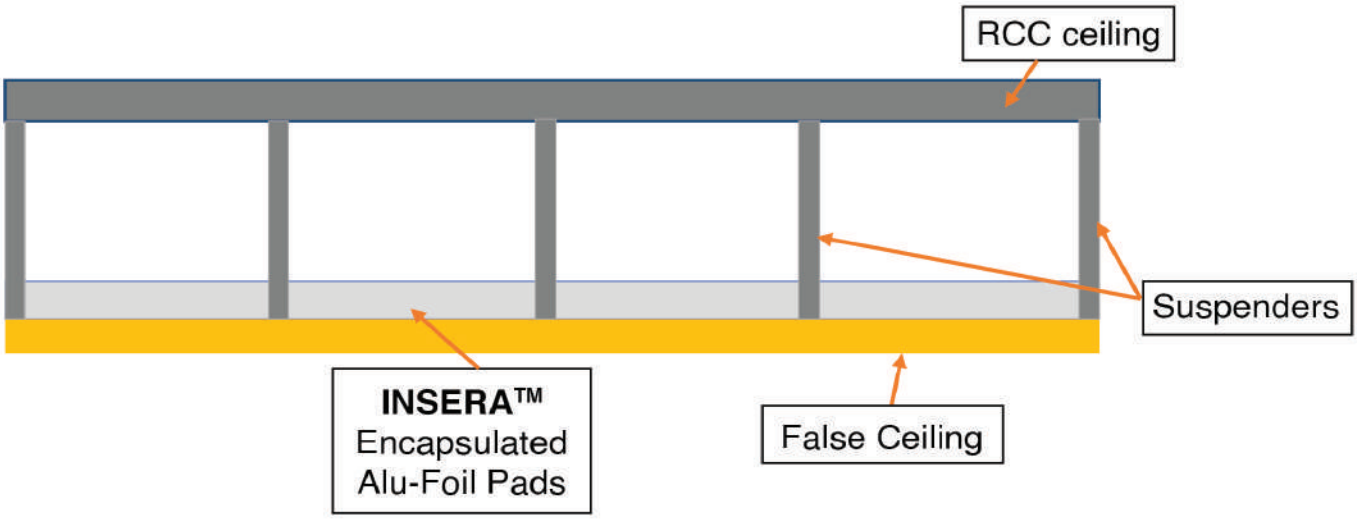


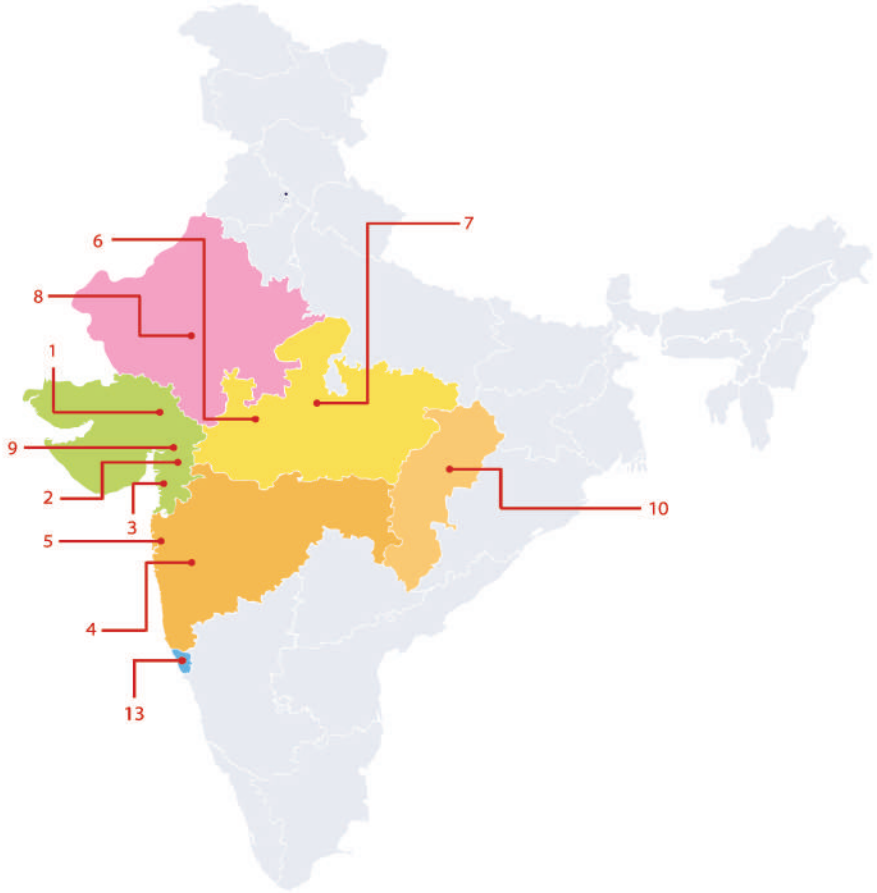
FALSE CEILING APPLICATIONS:

- Adding insulation to false ceiling boosts thermal performance by preventing circulated cool air from escaping through the ceiling. This helps in reducing heat transfer & ultimately reducing energy consumption.
- A ceiling in fire protection systems is considered as supporting framework and lining which includes fixings, hangers & insulating materials.
- In case of fire, the main purpose of ceiling is horizontal compartmentation of a building. Horizontal compartmentation avoids the spread of fire and hot gasses from one floor to another. Hence it can allow the people present in the upper part of building to escape safely which is most important in case of fire.
- **INSERA™** Encapsulated alu-foil pads having low thermal conductivity & high temperature sustainability shall be kept directly over false ceiling to provide thermal comfort to occupants as well as to avoid spreading of fire.



UNDERDECK APPLICATIONS:

- RCC ceiling of any buildings could be the prime aspect of heat gain inside the building. In such cases heat gain takes place from the RCC ceiling to inside the building providing discomfort to the occupants. It will certainly increase the energy consumption of the building.
- **INSERA™** Encapsulated alu-foil pads having low thermal conductivity shall be fixed under the RCC ceiling of building to provide thermal comfort to occupants.
- **INSERA™** Encapsulated alu-foil pads having high-temperature sustainability will help in reducing the fire spread in case of any hazardous fire situations & will also provide aesthetic look when fixed under the RCC ceiling.



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