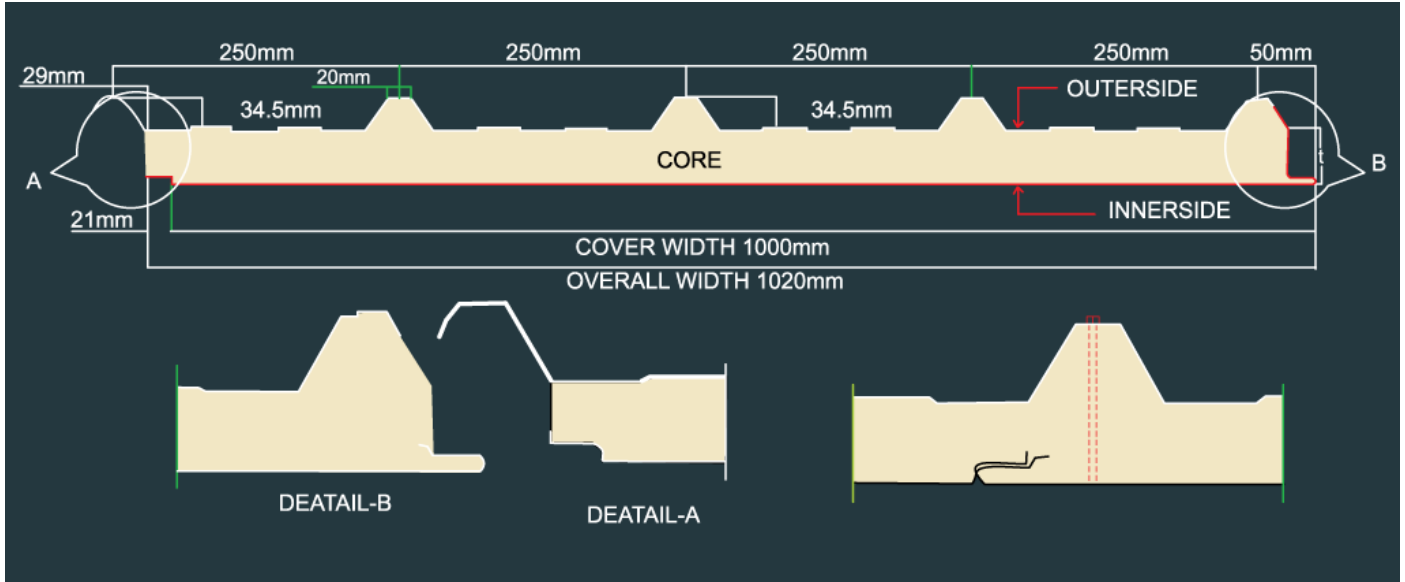
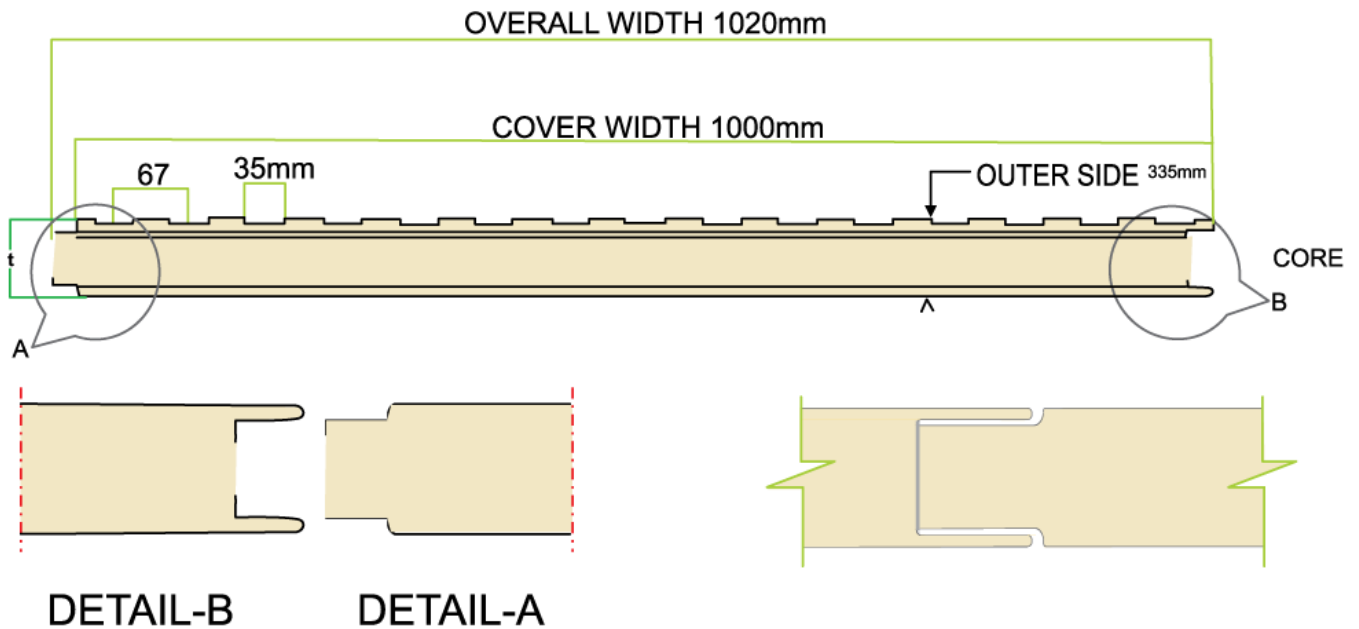


ROOF PUF PANEL



WALL PUF PANEL



Clean Rooms



Insulated Puf Panel



Building Insulation



Insulated Ceiling

Material Specification

Characteristic	Availability
Insulation Thickness	30mm to 150mm
Insulation Type	PUF, PIR, Rockwool
Panel Type	Tongue & Groove, Cam Lock
Outer Skin	PPGI, AL, SS, FRP, GI, PPGL
Inner Skin	PPGI, AL, SS, FRP, GI, PPGL
Sheet Thickness	0.3mm to 2mm
Skin Type	Plain, Ribbed, Corrugated
Colour	Customised

Basic Properties of Insulation Cores

Material	Description	Characteristics
PUF	Rigid Polyurethane Foam	Most popular, widely used, ideal insulator. It is thermosetting material when exposed to fire, does not drip or melt; forms a strong carbonaceous char that protects the core and prevents spread of flame. Additions of FR agents further augment fire retardant properties. It is CFC free & self extinguishing. Conforms to IS-12436-88.
PIR	Polyisocyanurate Foam	Offers higher fire rating and is non-ignitable. Better closed cell structure offered by trimerisation process offers better thermal performance. It is CFC Free, longer lasting, hygienic and food safe. Ideal for Cold Rooms.
ROCKWOOL	Rockwool	Naturally occurring fibre with very high temperature resistance properties. It is fireproof, emits no smoke or gases, is water repellant & Non-capillary. The process re-orientation of vertical fibre structure imparts high Shear, Compressive and Tensile strength, thus making the Panels strong and stable. Rock wool with excellent acoustic properties is chemically neutral, vermin proof, re-cyclable and bio degradable. Ideal for Partitions, Internal walls, Acoustic Insulation, and FR & HT applications for Power Plants etc. Conforms to IS-8183.

K Values of Different Insulation Material

Material	Thermal Conductivity W/m.k	Density KG/M3
Polyurethane	0.020	32
Polystyrene/Thermocole	0.037	30
Glass Wool	0.041	65~160
Polyethylene	0.0348	32~38

PU Panel Properties

Characteristics	Value
Temperature Range	-40°to +80°C
Density	40 +/- 2 kg/m ³
Compressive Strength	110 – 210 kPa
Adhesion Strength	110 -210 kPa
Tensile Strength	370 kPa

Characteristics	Value
Water Absorption	0.2% Max. At R.H98%
Water Vapour Permeability	5.5ng/pasm
Thermal Conductivity	Less than equal to 0.02 W/m.K at 23°C
Fire Property	Self Extinguishing *
Dimensional Stability	0.1% at -30°C
Closed cell Content	>95%
Shear with Metal Sheet	160 kPa

Rockwool Properties

Characteristics	Value
Bulk Density	100+/-10% Kg/m ³
Moisture Content	2.0 Max %
Moisture Absorption	2.0 Max %
Water Absorption	0.5 Kg/m ²
Incombustibility (%) Loss	3.0 Max %
Service Temperature	750°C
Alkalinity (PH)	7 – 10
Shot Contents	
Over 250 Microns	15.0 Max %
Over 300 Microns	5.0 Max %
Chloride Content	0.0020 Max %
Recovery after Compression	Min 90 %
Sulphur Content	Min 90 %
Resistance to Vibration Settlement	1.0 Max %
Jolting Settlement	3.0 Max %

Comparison of Processes

Variables	Particulars	Continuous Process	Dis-Continuous Process
1.	Production Process a) Foaming	Automatic Continuous	Manual Batch
2.	Volumes a) Quality Consistency b) Cell Structure c) Foaming d) Pouring e) Moisture ingress	High Capacity Assured Closed Uniform Open Not Possible	Low Capacity Not Assured Not Fully Closed Non- Uniform Closed Possible
3.	Chemical System	On-Line Blending	Pre- Blended
4.	Customization	Not Possible	Possible
5.	Restriction On Lengths	No Restriction	Restricted
6.	PIR	Possible	Not- Possible