

Rockinsul™

Twigainsul®

INNOVATION IN INSULATION




SAINT-GOBAIN

SAINT-GOBAIN AT A GLANCE



INSULATION

- Started in 1937
- World leader in mineral wool (Isover)
- Presence in 32 countries
- 10,000+ employees

INSULATION BUSINESS IN INDIA

Formed through
acquisition of



- 2 Stone Wool
Factories
- 2 Glass Wool
Factories



Silvassa



Kaveli
(near Hyderabad)



Ambernath
(near Mumbai)



Sikandrabad
(near Delhi)



WHY INSULATION

1

Thermal Insulation

- Very low thermal conductivity, K value
- High thermal resistance, R value

Benefits




-  Thermal comfort
-  Energy savings

2

Acoustic Insulation

- Good sound absorption, NRC
- Low sound transmission, STC
- High impact sound insulation, IIC

Benefits



-  Quieter ambience
-  Acoustic privacy
-  Better for ear health

3

Fire Safety

- Non-combustible
- Least fire and flame propagation
- Least smoke emission

Benefits


-  Gives occupants time to escape
-  Low smoke / Toxic gases

4

Personnel Protection

- Prevents contact injuries and skin burns when working in vicinity of hot pipe and equipment surfaces

Benefits

-  Enhances employees' safety

KEY TECHNICAL FACTORS



Building

ECBC compliant

- Roof: $U < 0.33 \text{ W/m}^2\cdot\text{K}$
- Wall: $U < 0.4 \text{ W/m}^2\cdot\text{K}$

NBC 2016 (building material, thermal insulation, all buildings)

- Non-combustible
- No toxic smoke

PEB

- R: 0.64 to $3.33 \text{ m}^2\cdot\text{K/W}$
- Least Fire Spread: Class A, Class 0/Class 1
- FM Approved

Infrastructure building

- U : 0.261 to $0.3 \text{ W/m}^2\cdot\text{K}$
- STC: 39 to 48 dB



Industry

IS 8183

- Thermal conductivity, K value :
 - $K < 0.078 \text{ W/m}\cdot\text{K}$ at 200°C
 - $K < 0.11 \text{ W/m}\cdot\text{K}$ at 300°C
- Max. Service Temperature: Up to 750°C
- Shot Content:
 - 500 micron $< 2\%$
 - 250 micron $< 10\%$
 - 150 micron $< 13\%$
- Sulphur Content $< 0.2\%$
- Corrosion under insulation (CUI) : Chloride Content $< 10 \text{ ppm}$
- Moisture Content $< 2\%$

For personal protection

Exposed surface $< 60^\circ\text{C}$

Water absorption

By mass $< 0.5 \text{ Kg/m}^2$ (BS 2972)



Mobility

Fire safety for Trains

- HL3 compliance (EN 45545-2)

Interior wall acoustic

STC $> 45 \text{ dB}$

Metro coaches

- Water absorption $< 2\%$

Vibration and Jolting

- Fiber settlement $< 3\%$



HVAC

ECBC compliant

- Supply duct: $R > 1.4 \text{ m}^2\cdot\text{K/W}$
- Return duct: $R > 0.6 \text{ m}^2\cdot\text{K/W}$
- Pipe : 0.7 to $1.2 \text{ m}^2\cdot\text{K/W}$
- FM Approved for duct wrap

NBC 2016 (Duct insulation)

- Non-combustible
- No toxic smoke

PRODUCT RANGE

Rockinsul™

Twigainsul®



Wide range of mineral wool insulation



Suited across applications



Solution for thermal, acoustic and fire insulation



Maximum Service Temperature

Glass Wool : upto 230°C

Stone Wool : upto 750°C

LRB Mattress (Wired Mat)

High density,
low binder based
semi-flexible mat for
high temperature
applications



Range

Density	:	70 to 160 Kg/m ³
Thickness	:	25 to 100 mm
Width	:	1.22 m
Length	:	1.52 to 5 m
Facing	:	GI Wire Mesh, SS Wire Mesh

Application

Industry / OEM:	Steam Pipe
	Boiler
	Furnace
	Tank
	Other hot applications

RB Slab

Rigid, strong
and durable slab :
plain or with factory
applied facings



Range

Density	:	40 to 180 Kg/m ³
Thickness	:	25 to 150 mm
Width	:	0.6 m
Length	:	0.6 to 1.2 m
Facing	:	Aluminium : FSK, Aluglass Tissue: BGT

Application

Building	:	Metal building (roof, wall), RCC underdeck, Overdeck, Masonry wall, Drywall, Facade
HVAC	:	Fire duct
Industry/OEM	:	Furnace, Tank, Boiler, Appliance, Acoustic enclosure

Pipe Section

Pre-formed product
for easy installation
on pipe : plain and with
factory applied facing



Range

Density	:	100 to 160 Kg/m ³
Thickness	:	25 to 100 mm
Diameter	:	15 to 600 mm (NB)
Length	:	1.2 to 1.25 m
Facing	:	FSK

Application

Industry / OEM:	Steam pipeline, Process pipeline (medium to high temperature)
HVAC	: Chilled water pipe

Tuffinsul slab

Slab with high
compressive
strength suitable for
load bearing application



Range

Density	:	80 to 150 Kg/m ³
Thickness	:	50 to 100 mm
Width	:	0.6 m
Length	:	1 to 1.2 m

Application

Building	:	Overdeck application Floor insulation Sandwich panels
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Tuffinsul Lamella Bat

Rigid bat used
as the core of fire
rated sandwich panel



Range

Density	: 80 to 150 Kg/m ³
Thickness	: 25 to 110 mm
Width	: 100 to 110 mm
Length	: 1 to 1.2 m

Application

Building	: Sandwich panel, Fire door
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Building Roll

Long and flexible
blanket : plain
or with factory
applied facings



Range

Density	: 40 to 80 Kg/m ³
Thickness	: 50 to 100 mm
Width	: 1.1 to 1.2 m
Length	: 5 to 10 m
Facing	: Aluminium : FSK, Aluglass

Application

Building	: Metal building (roof, wall) RCC underdeck Drywall Masonry wall
HVAC	: Fire duct

Loose wool

Loose stone wool fibers for in-fill applications in the Industry



Range

Unbonded stone wool fibers without any specific density or thickness

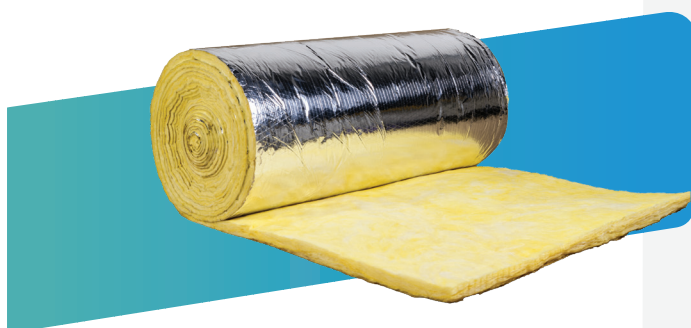
Suitable for high temperature applications where shape or contour of the process equipments, valves etc. are complex

Application

Industry : Oven, Tile manufacturing,
Brake pad, Casting riser,
Valves insulation, In-fill to insulate
complex shape / irregular surface

Roll

Long, resilient and flexible blankets : plain or with factory applied facings



Range

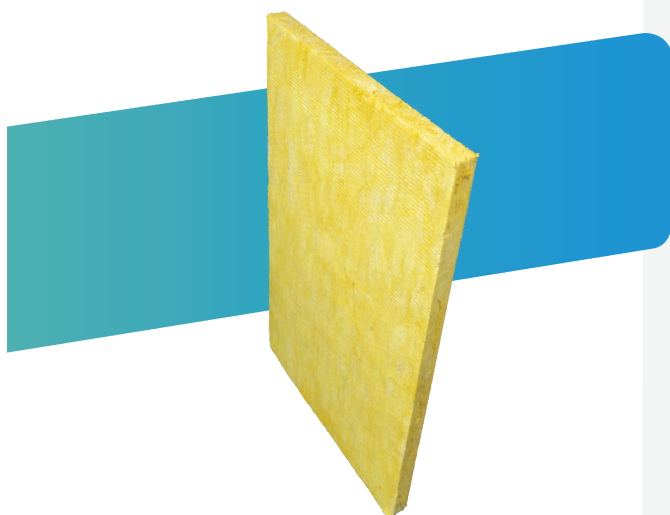
Density	:	10 to 48 Kg/m ³
Thickness	:	25 to 130 mm
Width	:	1.1 to 1.2 m
Length	:	7.5 to 30 m
Facing	:	Aluminium : FSK, R 3035 HD, Aluglass Polypropylene : WMP 10, WMP 50, WMP VR R Plus Tissue : FGT, BGT

Application

Building	:	Metal building (roof, wall) RCC underdeck Masonry wall Drywall
HVAC	:	Duct thermal, Duct acoustic
Industry/OEM	:	Cryogenic/Low temperature applications Geyser, Solar water heater
Mobility	:	Bus body insulation

Board

Rigid and semi-rigid product in short and long sizes



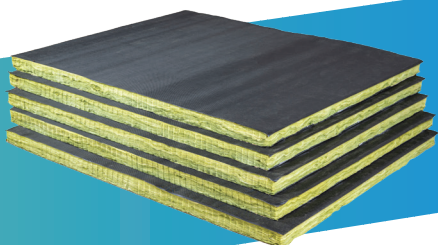
Range

Density	:	32 to 120 Kg/m ³
Thickness	:	15 to 100 mm
Width	:	0.6 m
Length	:	1.2 m
Facing	:	Aluminium : FSK, R 3035 HD, Aluglass Polypropylene : WMP 10, WMP 50, WMP VR R Plus Tissue : FGT, BGT Glass Cloth : WGC, BGC

Application

Building	:	RCC underdeck Masonry wall, Facade & spandrel insulation Drywall
HVAC	:	Duct thermal, Duct acoustic, AHU room
Industry/OEM	:	Cold storage, Small furnaces
Mobility	:	Train coach

Soft product with
green binder in roll
and board form



Boards

Density	:	10 to 48 Kg/m ³	32 to 120 Kg/m ³
Thickness	:	25 to 130 mm	15 to 100 mm
Width	:	1.1 to 1.2 m	0.6 m
Length	:	7.5 to 30 m	1.2 m
Facing	:	Aluminium :	FSK, R 3035 HD, Aluglass
		Polypropylene:	WMP 10, WMP 50, WMP VR R Plus
		Tissue:	FGT, BGT
		Glass Cloth:	WGC, BGC

Building	:	Metal building (roof, wall), RCC underdeck, Masonry wall, Drywall
HVAC	:	Duct thermal, Duct acoustic
Mobility	:	Train coach

Preformed Pipe section
and Lamella mat



Density	: 80 Kg/m ³
Thickness	: 25 to 75 mm
Diameter	: Pipe-Section : 25 to 450 mm (NB) Lamella Mat : 350 to 1400 mm (NB)
Length	: Pipe section : 1.2 m Lamella Mat : 0.9 m
Facing	: Aluminium : FSK

HVAC : Chilled water line
Hot water line

Flexible Duct

Insulated and
Uninsulated



Range

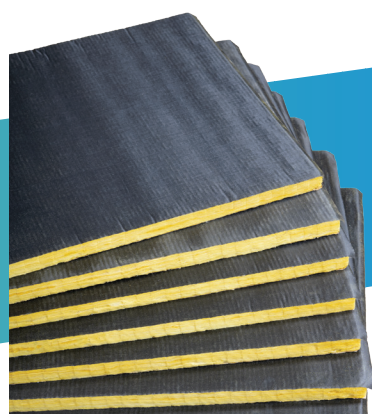
Inner Core	:	Double laminated film on coated wire helix
Outer jacket	:	Alu or Met foil with reinforcement
Insulation	:	Glass wool : 16 to 32 kg/m ³
Diameter	:	4 to 20 inch
Length	:	10 to 25 ft

Application

HVAC	:	Connect Grills and diffuser with Metal ducts
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Acoustic Board

Rigid board with
textile facings for
acoustic sensitive area



Range

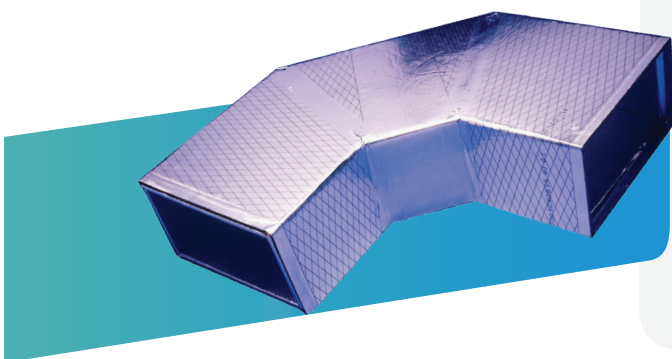
Density	:	70 to 80 Kg/m ³
Thickness	:	25 and 50 mm
Width	:	0.6 and 1.2 m
Length	:	1.2 and 2.5 m
Facing	:	Aluminium: FSK Glass Cloth: BGC

Application

Building	:	Underdeck False Ceiling Masonry wall
HVAC	:	AHU room, Duct acoustic
Industry/OEM	:	Genset Crash testing pit (Automotive lab)
Mobility	:	AC Ducts in metro train coaches

Duct Board

Long insulation boards with both face laminated and having profiled edges. These boards are converted to duct pieces and duct network for comfort air conditioning systems



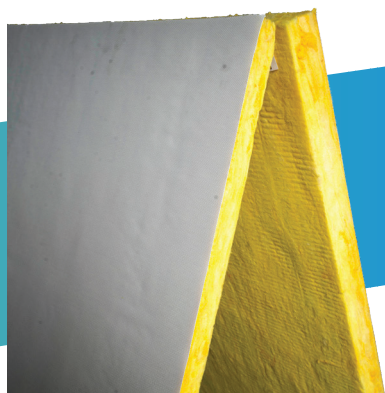
Range

Density	:	70 to 80 Kg/m ³ (120 at profiled edges)
Thickness	:	25 mm
Width	:	1.19 m
Length	:	2.5 to 3 m
Facing	:	External: Aluminium+FGT Internal: Aluminium+FGT BGC+FGT

Application

HVAC	:	Duct thermal, duct acoustic
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Mineral Fiber Marine Board (MFMB)



Range

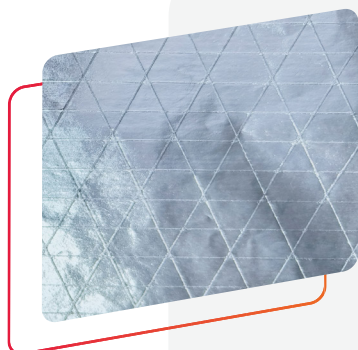
Density	:	56 Kg/m ³
Thickness	:	25 to 75 mm
Width	:	0.6 m
Length	:	0.9 m
Facing	:	Glass Cloth: WGC

Application	:	Ship building
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FACING PRODUCT FOR INSULATION

- Aluminium
- Polypropylene
- Acoustic
- Industry

ALUMINIUM



Foil-Scrim-Kraft, FSK

Description

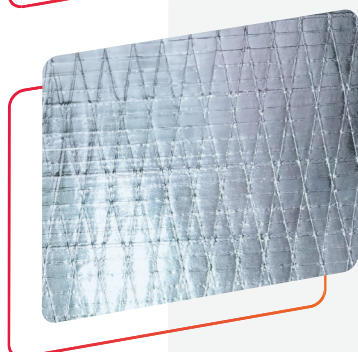
Multi-purpose aluminium facing

Utility

Duct insulation, Underdeck, Pipe insulation, wall insulation

Strength

Up to 7.6 KN/m



R 3035 HD

Description

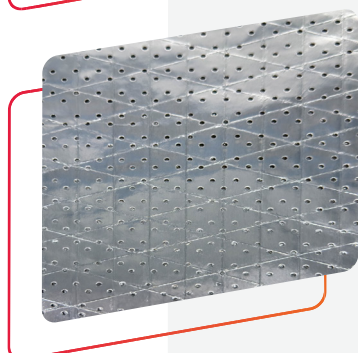
High strength FSK

Utility

PEB roof and wall

Strength

Up to 9.6 KN/m



PERFORATED FSK

Description

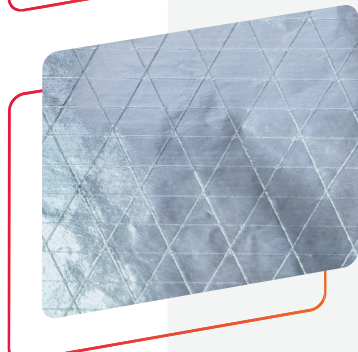
Perforated FSK

Utility

Acoustic application in train coach

Strength

Up to 2.7 KN/m



DOUBLE SIDED FSK

Description

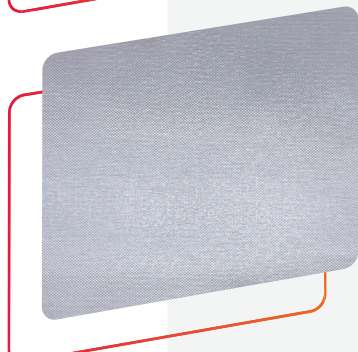
Double sided foil

Utility

Metro train coaches

Strength

Up to 5.5 KN/m



ALU GLASS CLOTH

Description

Aluminium and glass cloth based high strength facing

Utility

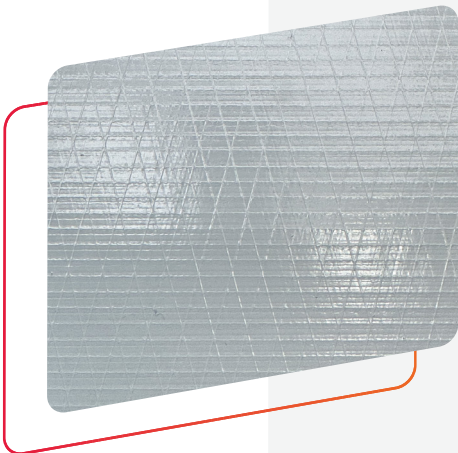
PEB roof and wall

Strength

Up to 16 KN/m

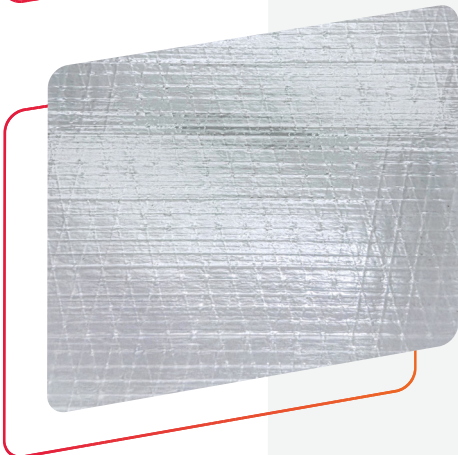
POLYPROPYLENE

White Metalized Polypropylene, WMP



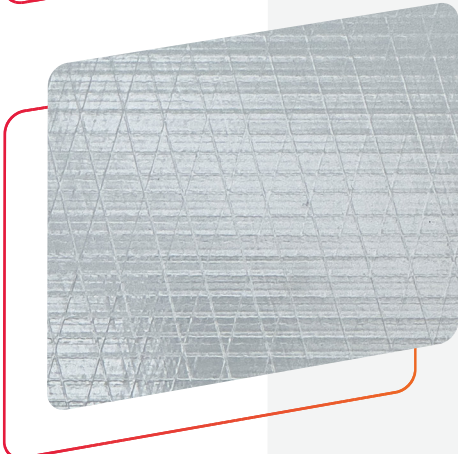
WMP 50

Description	Utility	Strength
High strength white polypropylene with reinforcement, kraft and metalized polyester	PEB roof and wall -weld mesh free application	Up to 11 KN/m



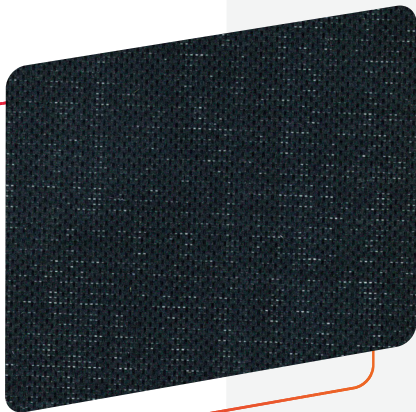
WMP 10

Description	Utility	Strength
White kraft backed polypropylene facing	PEB roof and wall	Up to 7 KN/m



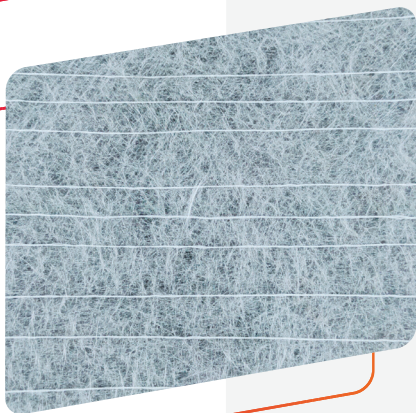
WMP VR R PLUS

Description	Utility	Strength
Kraft free white polypropylene with metalized film lamination on the other side	HVAC duct thermal	Up to 6 KN/m



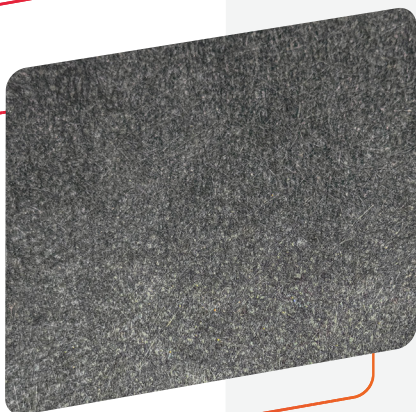
BLACK GLASS CLOTH, BGC

Description	Utility	Advantage
Black coloured textile made of glass yarns	Acoustic sensitive area e.g AHU room, home studio	Perforated metal covering not required



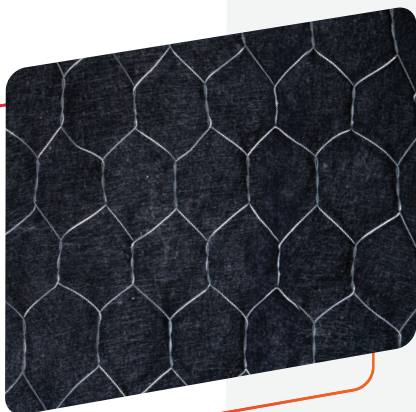
FIBERGLASS TISSUE, FGT

Description	Utility	Advantage
Lightweight white fiberglass tissue	Used as acoustic lamination in duct lining and AHU room, corrosion protection for pipeline, Waterproofing	Can be used in versatile applications



BLACK GLASS TISSUE, BGT

Description	Utility	Advantage
Lightweight black fiberglass tissue	Used as acoustic lamination in duct lining and AHU room behind the perforated metal sheet	Aesthetic, can be used for various acoustic applications



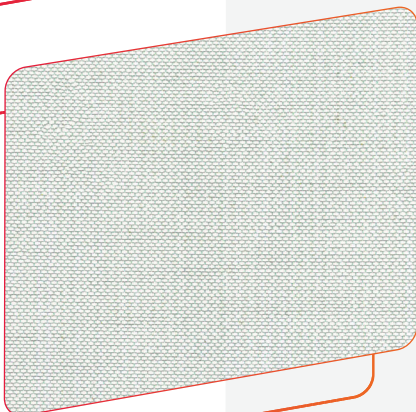
HEXAGONAL WIREMESH- GI

Description	Utility	Advantage
Used with LRB mattress for high temperature application	All major industrial application	Durable facing for high density insulation



HEXAGONAL WIREMESH- SS

Description	Utility	Advantage
Used with LRB mattress for high temperature application	All major industrial application	Durable facing for high density insulation with least risk of corrosion



WHITE GLASS CLOTH

Description	Utility	Advantage
White and paintable glass cloth for marine application	Bulkhead, deck and duct application in ships	Durable facing, superior aesthetic and fire safe

MAJOR CERTIFICATION



Fire safety certification for Metal building and Duct wrap



BIS License in conformance with IS 8183 standard



Health safe fibers: Certification on Bio-solubility



Singapore Green Building Council: Green Product certification



Indian Green Building Council: Green Product certification



The Energy Resource Institute: Green Product certification

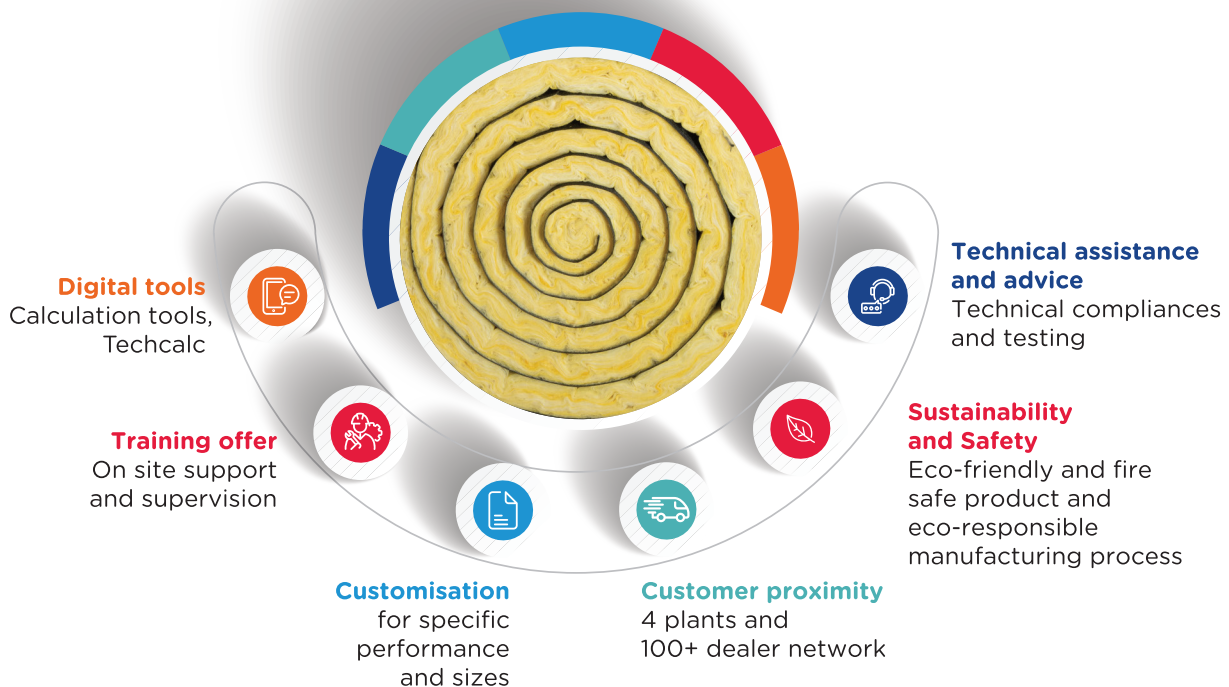


Product quality certification to supply in Malaysia

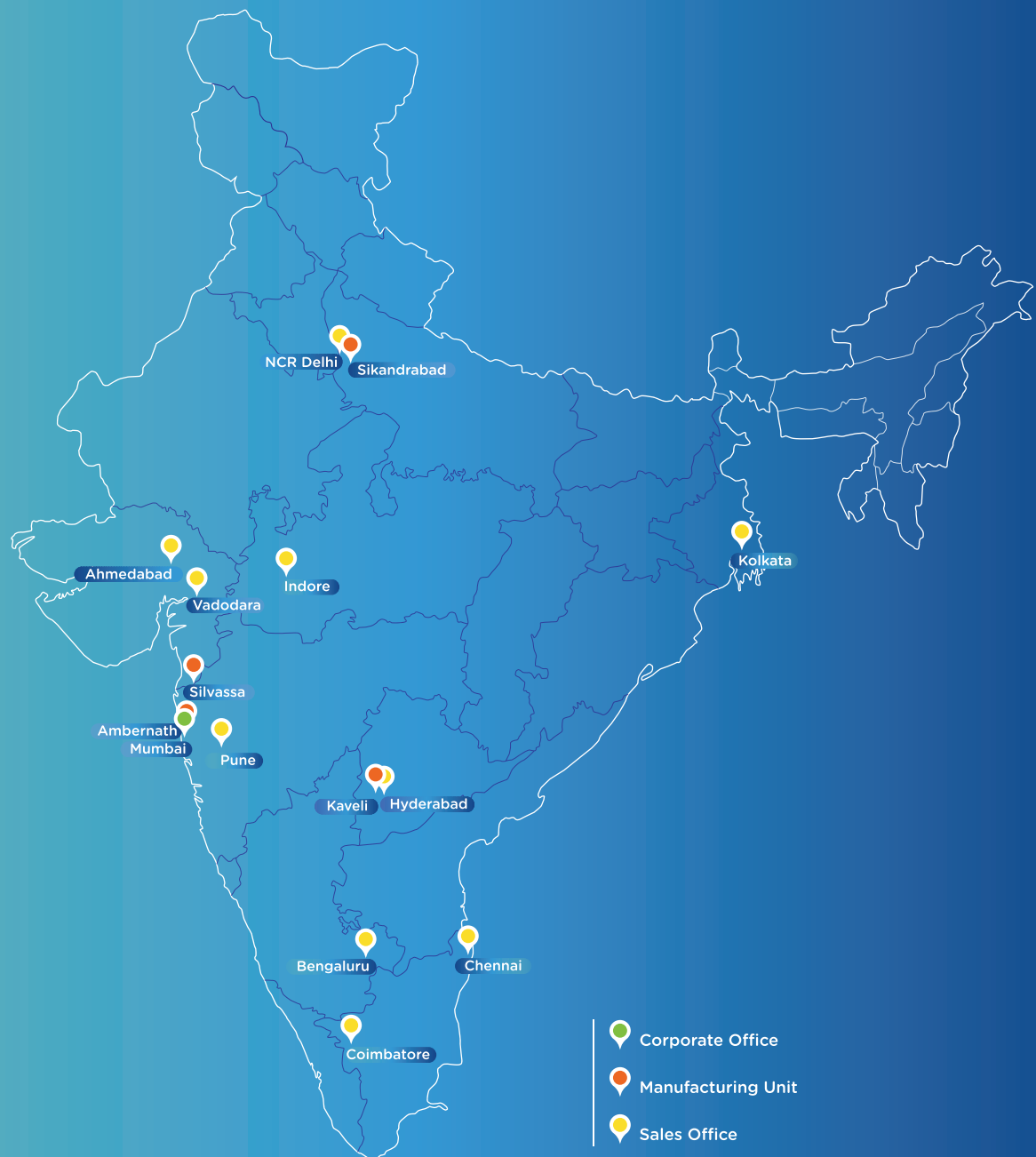


Fire safety certification on Flame spread and Smoke development criteria (UL 723)

WHY SAINT-GOBAIN INSULATION



OUR PRESENCE



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