

Pre-Insulated KiTEC Composite Pipes



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KiTEC Industries (India) Private Limited has been manufacturing **PE-AL-PE Composite Pipes in India since 1996**. Manufacturing and marketing of competitive world class range of products is the result of continual product Research and Development. Manufacturing efficiencies and dedication to quality is the driving force at KiTEC.

KiTEC products are trusted to exceed performance expectations and are designed to meet or exceed the applicable Codes of the Countries, States, Provinces or industry categories where they are specified and installed.

As it is KiTEC philosophy to offer technically correct products to the customer, KiTEC has developed a Pre-insulated Composite Pipe to reduce the heat loss. The **Pre-insulated KiTEC Composite Pipes** has been developed to meet the demanding standards of commercial hot and cold water reticulating systems. With excellent thermal insulation performance, **Pre-insulated KiTEC Composite Pipes** provides the energy retention properties required by current specifications. **Pre-insulated KiTEC Composite Pipes** meets the needs of the specifier that requires a high performing product.

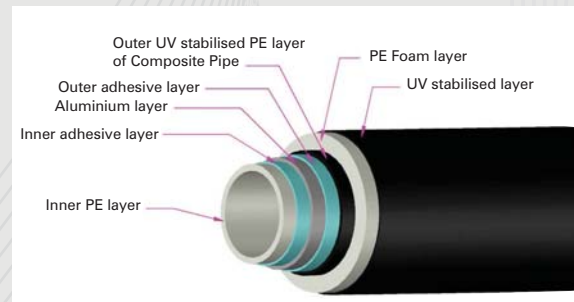
Introduction of Insulated Pipes

Anti-sun & heat preservation Composite Pipes.

They are called anti-sun & heat preservation Composite Pipes because this product combines anti-sun function and heat preservation effect rolled in one.

- The Outer UV stabilised layer protects the foam from UV.
- The Foam Layer having thermal conductivity as low as $0.04 \text{ W/(m}^2\text{K)}$ reduces the heat loss.
- The inner **PE-AL-PE or PE-AL-PEX Composite Pipe** combines the best features of metal and plastic.

Pre-insulated KiTEC Composite Pipes are insulated with Closed Cell Foam Insulation with a protective coating of EVA. Closed Cell Foam Insulation (CCF) has



been used successfully in HVAC products as a thermal insulation. CCF offers many benefits over fibreglass insulation, which is the typical insulation used in HVAC products today. CCF insulating products are produced by using molten polymeric materials and non-CFC based blowing agents. When the blowing agent is introduced into the molten polymer, closed cell air pockets are formed. CCF has a smooth, durable external surface that resists dirt and moisture accumulation, thus reducing the potential for fungal or biological pathogen growth.

Because the surface is tough and resilient, it has a higher degree of puncture resistance when compared to fibreglass products. Even if the insulation surface is punctured, torn or otherwise damaged, the product still resists moisture absorption and microbial growth. CCF does not require an outer moisture vapour barrier or liner because the closed cell structure will not absorb moisture. The surface is easily cleaned if necessary to further resist microbial growth. CCF resists compression due to its rigidity and hence retains its thermal insulating capacity to a greater degree than fibreglass will under compressive forces.

Physical Properties

Closed Cell Foam insulation (CCF) is a generic term used for Polyethylene based insulation having a closed cell structure. CCF is routinely used in the HVAC and plumbing industry to prevent surface condensation.

Service Temperature

Polyethylene based materials are classified as thermoplastic. This material begins to soften as the

temperature approaches the service temperature limit. The temperature limit is based on the melting point of the polyethylene material used in the insulation. When the service temperature limit is reached, the product becomes plastic and catastrophically melts, shrinks, and slumps.

Thermoplastic materials are very susceptible to temperature spikes even for a short period above their service limit. Even when the temperature is reduced, the material will not return to its previous shape because the cell walls collapse and hence will no longer perform as an insulator.

The use of Closed Cell Foam Insulation in HVAC appliances is a viable alternative to fibreglass insulation. CCF offers several advantages over fibreglass with regard to moisture absorption and its resistance against microbiological contamination. It is a superior product in its durability when compared to fibreglass. CCF however does not perform as well as fibreglass acoustically. If acoustics are not the primary concern on a project then CCF is an acceptable alternative. CCF costs more than fibreglass however, when one reviews the benefits of CCF as an inhibitor of microbial growth, first cost concerns are usually waived.

Product Range

Pipe Size	Coil Length (Mtrs)		
	6	9	13
Insulation Thickness (mm)→	6	9	13
1216 KiTEC Composite Pipe	200	200	100
1620 KiTEC Composite Pipe	200	100	100
2025 KiTEC Composite Pipe	200	100	100
2532 KiTEC Composite Pipe	100	100	50

Technical Data

Property	Value	Unit
Gross density	30.8	kg/m ³
Thermal conductivity	0.04 - 0.042	W/(m ^o K)
Reaction to fire acc.to /EN 13501-1/	E	-
Maximum Service Temperature acc. To /EN14706/, /EN 14707	95	°C
Minimum Service Temperature	0	°C
Water absorption acc. to /EN 13472/	WS005	
Traces quantities of water soluble ions and pH-value acc. to /EN 13468/	CL15 - F10 - pH 5.5	

Advantages

- Pre-insulated for fast installation
- UV resistant outer layer
- Available in 50 to 100 meters coil
- Closed cell pre-formed thermal pipe insulation
- Higher density foam for longevity and durability
- Suitable for underground applications
- Low installation cost
- Maximum energy savings
- Resistant to moisture with high vapour resistance
- Resistant to hydrocarbons and most chemicals
- Anti-microbial

Pre-insulated KiTEC Composite Pipe Applications

- Luxury accommodation buildings
- Hospitals & Aged care facilities
- Hotel & Entertainment
- Hot and cold water supply
- Transportation of chemicals
- Commercial buildings & offices etc
- Public service facilities & Buildings
- Shopping centre complexes
- Multi-level unit housing

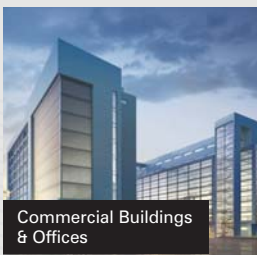
APPLICATIONS



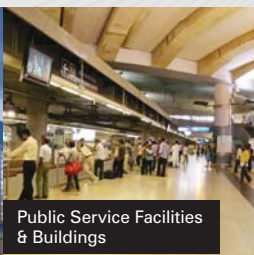
Hotel & Entertainment



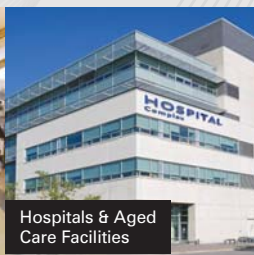
Multi-Level Unit Housing



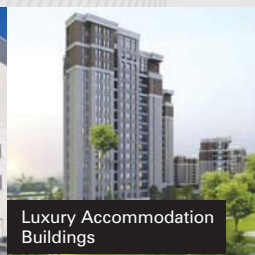
Commercial Buildings & Offices



Public Service Facilities & Buildings



Hospitals & Aged Care Facilities



Luxury Accommodation Buildings



Shopping Centre Complexes



Transportation of chemicals

KiTEC Accreditations



EUROPEAN QUALITY AWARD AND CERTIFICATE



PRODUCT OF THE YEAR 1996



WATER DIGEST AWARD AND CERTIFICATE 2008-09, 2009-10



THE MAJESTIC FALCON AWARD FOR QUALITY & EXCELLENCE, FRANCE 2017



THE MAJESTIC FALCON AWARD FOR QUALITY & EXCELLENCE, FRANCE 2017



EUROPEAN BUSINESS ASSEMBLY BEST ENTERPRISE 2013 AWARD



BIZZ 2013 AWARD FROM WORLD FEDERATION BUSINESS, HOUSTON (USA)

Rewriting the Standards

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To the best of our belief, the technical data set out in this publication is accurate. However it is purely for guidance purpose