



Zhongheng New Material Si-tech Co., LTD

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Vokes® NPP (Nanoporous insulation panel)



Characteristics:

Vokes® NPP is a microporous thermal insulating panel with excellent insulating properties. The core material of **Vokes® NPP** is fumed silica which is made by nano technology. It's noncombustible. Furthermore an infrared opacifier is added to minimize thermal transmission by heat radiation.

Advantages:

- Wide insulation range: Long-term working temperature is at the period of -120°C - 1000°C .
- Extremely low and stable thermal conductivity: At normal temperature, the insulated performance is at least 3-5 times better than the traditional materials. At temperatures higher than 300°C , the insulated performance is at least 4-8 times better than the traditional materials.
- Space saving: It drastically reduced insulation thickness.
- Easy installation and maintenance: The small density makes installing safely and easily.
- Corrosion resistant: Products are made of inorganic silicates, it doesn't include soluble chloride ions, won't cause corrosion on equipments, pipes..
- Soundproof/Shockproof: It helps acoustic noise reduction and shock buffer.
- Waterproof: Nano particles of product themselves are super hydrophobic.
- Durable: It has a long working life.

Applications:

Vokes® NPP is specially developed for insulation applications where the space is limited but a high thermal resistance is necessary. Mainly it is used in high temperature insulation. **Vokes® NPP** is a successful insulation solution in the following areas:

- Industrial furnace (rotary kiln, shuttle kiln, steel ladle, tundish, oven door, etc.)
- Metallurgical industry (steel, aluminum, smelting furnace, holding furnace, industrial furnace, electric furnace, furnace door, furnace lid, etc.)
- Instrument (temperature tracker, heat receiver, date protection system, etc.)
- Oil and Energy (piping, reacting furnace, etc.)
- Storage of refrigeration and freezing (freezer, medical thermotank, blood bank, medical kit, refrigerated container, etc.)
- Automotive (train, ship, air plane, etc.)

Product Data:

Property	Value	Standard
Surface Color	White/Grey	
Geometry	Rectangular shape (without protruding flanges*)	
Refractoriness	1300°C	GB/T5486-2008
Working Temperature	≤1000°C	
Density	210kg/m ³ -300kg/m ³	GB/T5486-2008
Thermal Conductivity (Surface temperature: °C)	50	0.016W/(m·k)
	200	0.020W/(m·k)
	300	0.023W/(m·k)
	400	0.025W/(m·k)
	500	0.033W/(m·k)
	600	0.040W/(m·k)
	700	0.049W/(m·k)
	800	0.060W/(m·k)
	900	0.064W/(m·k)
	1000	0.073W/(m·k)
Ambient Compression Strength (Compression 20%)	≥0.40MPa	GB/T5486-2008
Permanent Linear Change (800°C×24h)	≤0.2%	GB/T5486-2008
Standard Dimension (L x W) (mm)	250x600/500x600/1200x600	
Thickness	10mm/15mm/20mm/25mm/30mm/40mm/50mm	
Size Tolerance		
• 0 to 500 mm	±2 mm	
Thickness Tolerance	± 1 mm	
•Service Life	Extrapolated, depending on applications can be up to 50 years.	