Wincell PIR Composites Duct System

Wincell-Duct system experts

AEROFLEX CO., LTD.
Excellent Duct System Manufacturer

Computer numerical control production line and multilayer color steel composite panels production line with the automation production process, information management, business network management pattern, the annual sales of over 10 million square meters of composite duct products. Superior product performance, in all respects, a wide range of applications, such as central air-conditioning duct, cold and heat transfer pipe and clean workshop, shopping mall, the cold storage, the hotel etc, which need to use materials of firefighting, qualitative light, insulation, sound insulation, clean, moistureproof.
Level A Security Fire Performance
The Highest Respect to Life

PIR foam insulation material is called "the king of the insulation", with its good incombustible and superior product function, it becomes the new times safety fire-resistant material.

Wincell-duct  Wincell PIR Compound Type
Duct System Product  Five Security Guarantees

Incombustible performance
PIR foam is composed by flame retardant resin, curing agent and non-combustible packing; Need not join any flame retardant reclamation and agent. The flame retardant grade is non-combustible grade A.

Smokeless
In the burning conditions, scientific formula produced PIR resin system will generate hydrogen, hydrocarbons, vapor and carbon oxide through slow decomposition. In the process of decomposition, smoke is relatively less, and toxicity is also relatively lower. These characteristics make PIR resin suitable for the public transportation where inquiries very strict safety.

Thermal conductivity
The heat transfer way of foam are 3 kinds: the thermal conductivity of gas phase and polymer phase, gas phase convection, the radiation of bubble hole wall. PIR foam is low thermal conductivity, excellent insulating performance and thermal conductivity greatens on products density increasing.

Corrosion resistance and anti-aging
PIR foam already solidified, long-term exposure to the sun, without obvious ageing phenomenon. Using life is significantly longer than other materials. It can only be corrosion by strong alkali, but almost all the inorganic acid, organic acid and salts corrosion can be resisted.

Sound-absorbing performance
Tough PIR foam has excellent sound-absorbing performance, aluminum foil embossed surface also have more advantageous to sound-absorbing.
Wincell-duct  Wincell PIR compound type

Duct System Product  Seven Features

Wincell compound type duct system not only has the five features of PIR foam materials: Non-combustible grade A, smokeless, low thermal conductivity, corrosion resistance and anti-aging and sound-absorbing properties, but also has following seven features:

**Prevent Condensation**
Wincell duct system, transfer cool air through the whole pipeline, forming cool air layer in the outer wall pipe, make same internal and external wall temperature, so that thoroughly solve the condensation problem.

**Beautiful and High-grade**
A variety of embossing aluminum foil layers and a variety of colour steel for your choice, can keep any environmental harmony, contracted and high-grade. At the same time, the system and colour can be completely personalize design and custom-made.

**Light-weight**
Wincell duct system is the foam materials that consists of PIR resin and other additives by various substances by foaming curing. It is light weight, about 1/5 of the traditional metal duct system, especially suitable for new roof without bearing ability or renovation project, effectively save main building cost.

**Short installation period**
In cell duct system adopts the professional matching accessories, easy and quick installation throughly decreased the project period, help the investors make benefit earlier.

**Flame retardant and low smoke**
PIR is the best organic polymeric materials with fireproof performance, fully conforms to the national construction related norms; Environmental protection. PIR foam, excluding CFC, flame retardant and low smoke, avirulent and insipidity.

**Reliable quality**
Adopts the US advanced technology and equipment, the entire process computer monitoring, make the product comprehensively reach basic duct performance requirements like high-pressure resisting, conveying a small resistance, small air volume leakage.

**Environmental protection and energy saving**
Using environmental protection material, the whole manufacturing, installation, using process is green environmental protection, and disassembling preservation is convenient, field engineering material loss is few.
### Wincell PIR compound duct technical specifications list

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<tr>
<th>Performance Item</th>
<th>Technical specifications</th>
<th>Test method</th>
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</thead>
<tbody>
<tr>
<td>Density</td>
<td>40-50 kg/m³</td>
<td>ASTM D 1622</td>
</tr>
<tr>
<td>Thermal Conductivity</td>
<td>0.023-0.026 W/m·K</td>
<td>ASTM C 518</td>
</tr>
<tr>
<td>Toxicity Index</td>
<td>1.81</td>
<td>NES 713</td>
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<tr>
<td>Compressive Strength</td>
<td>173-454 kPa</td>
<td>ASTM D 1621</td>
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</tbody>
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#### Fire Performance

- **Flame Spread**
  - Class 1
  - BS 476 Part 7

- **Fire Propagation index**
  - Total Index (I) ≤ 12
  - BS 476 Part 6
  - Sub Index (i) ≤ 6

- **Fire Classification**
  - Class 0
  - BS 476 Part 6 & 7
Wincell PIR composites duct system