



常州隽隆复合材料有限公司  
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## Product Description:

PET structural foam is a closed-cell, thermoplastic structural foam with excellent mechanical properties and can be used as structural core material. It can not only enhance the strength and rigidity of the structure, but also reduce the weight of the whole structure. The series PET foam has good workability. Its strong resin affinity (good bonding/infusion with various resins ) is suitable for various processes and is difficult to produce deformation at higher temperatures. It is the best choice for many sandwich structure solutions. Because of its green recyclable properties, it has become a rare sustainable core material for structural foam.

## Features:

- **Outstanding thermal stability:** PET foam can withstand +200° high temperature for a short time during processing, and can withstand +120° high temperature for a long time during service life. At 120° for two hours, the expansion rate in all directions is very small, which is conducive to post curing, more effective elimination of internal stress and improvement of adhesive strength.
- **Superior mechanical properties:** Higher compressive, tensile, shear strength and modulus. High modulus means that it is not easy to produce deformation.

- **Good applicability:** Very friendly to most resins and most materials. It can not only be well combined with FRP, but also be well bonded with aluminum, iron, wood, stone and so on.
- **Excellent weight loss effect:** PET foam combined with fiberglass prepreg or wood can effectively reduce the weight of structural parts in order to save costs effectively.
- **Recyclability:** Supercritical CO2 physical foaming technology is adopted, no emission is generated and no harmful substances are added in the production process. It's a thermoplastic foam, which can be recycled after being scrapped.

## **Applications:**

- **Clean energy:** wind turbine blade, large wind turbine cabin cover
- **Transportation:** high-speed rail front, high-speed rail floor, refrigerated truck body, logistics truck body, ship deck, transport pallet
- **Construction and furniture:** exhibition stand, bathroom stand, high-grade furniture, building curtain wall, interior structure

<b>PET MECHANICAL PROPERTIES</b>										
<b>Test Item</b>	<b>Standard</b>	<b>Unit</b>	<b>Value</b>	<b>80</b>	<b>100</b>	<b>100H</b>	<b>120</b>	<b>150</b>	<b>200</b>	<b>250</b>
<b>Density</b>	<b>ISO 845</b>	<b>kg/m3</b>	<b>AVG INTERVAL</b>	<b>80 80-90</b>	<b>100 100-110</b>	<b>105 100-110</b>	<b>120 120-130</b>	<b>150 150-160</b>	<b>200 190-210</b>	<b>250 235-260</b>
<b>Compressive Strength</b>	<b>ISO 844</b>	<b>MPa</b>	<b>AVG MIN</b>	<b>0.85 0.80</b>	<b>1.20 1.10</b>	<b>1.20 1.10</b>	<b>1.80 1.55</b>	<b>2.40 2.20</b>	<b>3.90 3.40</b>	<b>5.20 4.80</b>
<b>Compression Modulus</b>	<b>ISO 844</b>	<b>MPa</b>	<b>AVG MIN</b>	<b>75 65</b>	<b>100 90</b>	<b>100 90</b>	<b>115 105</b>	<b>140 125</b>	<b>200 170</b>	<b>235 210</b>
<b>Tensile Strength</b>	<b>ASTMC297</b>	<b>MPa</b>	<b>AVG MIN</b>	<b>1.40 1.30</b>	<b>1.80 1.60</b>	<b>1.80 1.60</b>	<b>2.20 1.90</b>	<b>2.50 2.20</b>	<b>3.20 2.60</b>	<b>4.00 3.60</b>
<b>Tensile Modulus</b>	<b>ASTMC297</b>	<b>MPa</b>	<b>AVG MIN</b>	<b>90 80</b>	<b>110 100</b>	<b>110 100</b>	<b>120 105</b>	<b>160 130</b>	<b>210 180</b>	<b>275 250</b>
<b>Shear Strength</b>	<b>ISO1922</b>	<b>MPa</b>	<b>AVG MIN</b>	<b>0.55 0.45</b>	<b>0.80 0.75</b>	<b>0.80 0.75</b>	<b>0.90 0.80</b>	<b>1.25 1.05</b>	<b>1.70 1.50</b>	<b>2.05 1.80</b>
<b>Shear Modulus</b>	<b>ISO1922</b>	<b>MPa</b>	<b>AVG MIN</b>	<b>13.5 12.0</b>	<b>23.0 21.0</b>	<b>23.0 21.0</b>	<b>27.0 24.0</b>	<b>35.0 31.0</b>	<b>51.0 48.0</b>	<b>70.0 60.0</b>
<b>Shear elongation at break</b>	<b>ISO1922</b>	<b>%</b>	<b>AVG MIN</b>	<b>20 12</b>	<b>10 5</b>	<b>30 25</b>	<b>8.0 6.0</b>	<b>7 5</b>	<b>6.0 5.0</b>	<b>5.0 4.0</b>

<b>Standard Specification</b>								
<b>Technical Process</b>	<b>Dimensions</b>	<b>Unit</b>	<b>80</b>	<b>100</b>	<b>120</b>	<b>150</b>	<b>200</b>	<b>250</b>
<b>Plain Sheet</b>	<b>Length</b>	<b>mm</b>	<b>1220/2440</b>	<b>1220/2440</b>	<b>1220/2440</b>	<b>1220/2440</b>	<b>1220/2440</b>	<b>1220/2440</b>
	<b>Width</b>	<b>mm</b>	<b>1150</b>	<b>1150</b>	<b>1150</b>	<b>1150</b>	<b>1150</b>	<b>1150</b>
<b>Contour Sheet</b>	<b>Length</b>	<b>mm</b>	<b>1220/2440</b>	<b>1220/2440</b>	<b>1220/2440</b>	<b>1220/2440</b>	<b>1220/2440</b>	<b>1220/2440</b>
	<b>Width</b>	<b>mm</b>	<b>1150</b>	<b>1150</b>	<b>1150</b>	<b>1150</b>	<b>1150</b>	<b>1150</b>

Remarks: Size and shape can be customized according to customer requirements.

