

Polyisocyanurate PIR

1. Product Introduction

PIR foam is a rigid insulation material, produced through the reaction of isocyanate and polyether. It has better fire resistance performance than polyurethane foam. In addition, PIR foam has low thermal conductivity, wide service temperature range, and excellent dimension stability properties. It can be cut into a pipe cover and flat or board easily. ZES PIR foam insulation meets the standards of ASTM C591 and CINI 2.7.01.



2. Properties

Item	Unit	Technical Data	Testing Method	
Density	kg/m ³	≥40	ASTM D1622/ ISO 845	
Thermal Conductivity at Ambient Temperature (180 Days Aged)	W/(m K)	≤0.035 (+100℃)	ASTM C177	
		≤0.029 (+50℃)		
		≤0.025 (+10℃)		
		≤0.024 (0℃)		
		≤0.023(-50℃)		
		≤0.022(-100℃)		
		≤0.017 (-150℃)		
Compressive Strength (All Directions)	+23℃	kPa	≥200	ASTM D 1621
	-165℃			
Tensile Strength (All Directions)	+23℃	kPa	≥320	ASTM D 1623
	-165℃		≥265	
Flame Spread Index		< 25	ASTM E84	
Oxygen Index		≥30	GB/T 2406.2	
Water Absorption by Vol	%	≤2	ASTM D2842	

Water Vapor Permeability	ng/(Pa s m)	≤5.5	ASTM E96
Closed Cell Content	%	≥95	ASTM D6226
Linear Thermal Expansion Coefficient	m/ (m K)	≤70×10 ⁻⁶	ASTM D696
PH Value		5.5-7	ASTM C871
Chloride and Fluoride Content		Meet the Standard Specification of Thermal Insulation Materials for Use over Austenitic Stainless Steel	GB/T 11835
Elasticity Modulus	MPa	≤16	ASTM D1623
Service Temp	°C	-196~+120	

3. Product Application

It is a kind of ideal organic thermal insulation materials applied at low temperature, result from its low thermal conductivity, lightweight, anti-vibration and compatibility. It is widely used as insulation in oil refinery, chemical, ethylene and fertilizer industries, as well as refrigeration house and LNG systems.

4. Packing and Storage

- (1) Store in a dry, lightproof, shady, and ventilated place, keep away from heat source and protect from sun exposure.
- (2) Inner Packing: Polythene bags
Outer Packing: Cartons

5. Application and Cautions

- (1) PIR shall be handled gently, avoid rolling, collision and heavy pressure during moving.
- (2) When applied to pipe and equipment insulation, PIR shall be fastened with glass fiber tape or steel band.
- (3) Cut it with saw during application.