

## INSUL-PHEN PHENOLIC PIPE SUPPORTS TECHNICAL DATA SHEET

### Introduction

ISOPARTNER Technical Insulation Solutions has developed the INSUL-PHEN Phenolic Foam range of closed cell insulation products focusing on achieving the highest possible thermal insulation value. INSUL-PHEN Phenolic Pipe Supports are available in a range of densities from 80 kg/m<sup>3</sup> to 120 kg/m<sup>3</sup>.

Increased awareness of energy consumption is driving the construction industry to higher standards of thermal insulation. INSUL-PHEN 40 kg/m<sup>3</sup> excels in thermal insulation value with an aged thermal conductivity of 0.025 W/mK.

High density material such as INSUL-PHEN 80 kg/m<sup>3</sup> and over provide high mechanical strength required for applications such as the use of Pipe Supports and other industrial applications. INSUL-PHEN provides solutions to achieve higher insulation values at minimum thickness.

All products in the INSUL-PHEN product range have one other unique feature apart from the highest thermal insulation value and mechanical strength, its fire performance. Independent testing concludes INSUL-PHEN has an extremely low smoke emission and does not create burning droplets. In fire situations it will develop a carbonaceous layer on the exposed surface which protects the deeper layers of the material.

### › Type

Pipe Supports insulation based on closed cell phenolic foam.

### › Temperature Range

INSUL-PHEN phenolic foam will maintain its performance at continuous operating temperatures of -50°C to +110°C. Under special installation conditions INSUL-PHEN can be used in petrochemical applications.

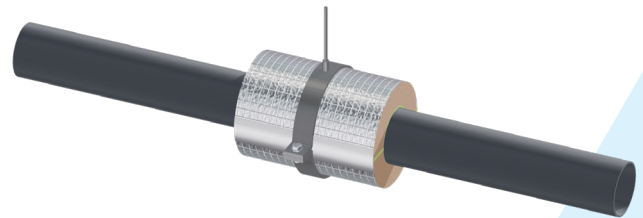
In circumstances where short term exposures could exceed the recommended continuous operating temperatures, please contact ISOPARTNER for advice.

### › Application

INSUL-PHEN Phenolic Pipe Supports can be cut to any pipe bore and thickness with various lengths. ISOPARTNER has developed a standardised system with adhesive and aluminium facing which is certified and delivers thermal insulation, fire safety and durability. The aluminium facing on INSUL-PHEN Pipe Insulation ensures ease of installation.

### › Benefits

- Excellent insulation performance
- High fire resistance and fire behaviour
- Excellent thermal stability
- Resistance to thermal shock
- High strength
- Easily cut to size



Properties measured at ambient conditions	Standard	Unit	INSUL-PHEN, Typical Values	
			80	120
Nominal Dry Density	EN ISO 845	KG/m3	80	120
Continuous use temperature		°C	-50 to +110	
Compressive Strength - Parallel to rise	EN826 @ 23°C	kPa	700	1000
Compressive Strength - Perpendicular to rise	EN826 @ 23°C	kPa	600	850
Closed Cell Content	EN ISO 4510	%	90	85
Dimensional Stability	EN 1601	%	<1	
Water Absorption	EN 13087	%	<3	
Water Vapour Transmission	EN 1286	µm	50	60
Fire Properties: Euroclass (SBI) - Naked Product	EN 13501-1		BL-s1, d0	BL-s1, d0
Fire Properties: Euroclass (SBI) - Pipe Section with Alu Facing	EN 13501-1		BL-s1, d0	BL-s1, d0
Thermal Conductivity (λ-value) - Initial (Verified within 8 days after production)	EN 12667 @ 10°C	W/mK	0.028	0.034
Thermal Conductivity (λ-value) - Aged (Verified after 26 weeks @ 70°C)	EN 12667 @ 10°C	W/mK	0.036	0.044

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