

- ✓ RIGHT PRODUCTS
- ✓ RIGHT PLACE
- ✓ RIGHT TIME



Kingspan Phenolic Blocks

Phenolic Blocks are foil covered, load bearing installation rings for steel, copper and plastic pipes. They provide efficient insulation offering energy saving benefits for heated or chilled systems. They offer optimal load bearing capacity whilst also protecting against insulation compression. Designed for use in pipe clips, they will support the compressive loads imposed by horizontal pipework carrying water or other liquids.

Manufactured from High Density Phenolic Foam the blocks have a temperature resistance of -50C to 110C.



Technical data supplied by the manufacturer

Remark: This technical data sheet replaces all previous versions. The technical data contained herein is given in good faith and we cannot be held liable for any errors, inaccuracies, omissions or editorial failings. The information detailed in this technical data sheet is given by way of indication and is not exhaustive, users should contact either the seller or the manufacturer of the product for additional technical information concerning its use, if they think the information in their possession needs to be clarified in any way.

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Kooltherm™ FM Pipe Insulation

CFC/HCFC Free Rigid Phenolic Insulation with a factory applied aluminium foil vapour barrier

General Technical Properties

Property	Test Method	Unit	Typical Value
Nominal Dry Density	EN ISO 845	kg/m ³	35-40
Thermal Conductivity	EN 12667 at +10°C Initial Aged (25 weeks @ 70°C)	W/m.K W/m.K	0.021 0.025
Closed Cell Content	EN ISO 4590 Meth. 1	%	≥ 90
Operating Temperature Limits	Upper Limit Upper Limit	°C °C	+110 -50
Compressive Strength	EN 826 at +23°C Parallel Perpendicular	kPa kPa	≥ 150 ≥ 90
Tensile Strength	ASTM D 1623 - Spec. A at +23°C Parallel Perpendicular	kPa kPa	≥ 150 ≥ 110
Linear Dimensional Stability	EN 1604 +93°C for 24 hours -30°C for 24 hours	% %	≤ 1 ≤ 1
Linear Expansion Coefficient	ASTM D 696	K-1	40-70 x 10 ⁻⁶

Technical Properties of the reinforced vapour barrier foil

Property	Test Method	Unit	Typical Value
Weight	EN ISO 536	gr/m ²	70-105
Thickness	EDANA	µm	210-310
Elongation	DIN EN ISO 1924-2	%	< 7
Water Vapour Transmission	ASTM F 1249	gr/m ² .24hr	< 0.1

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Fire Classifications

Property	Test Method	Typical Value
Reaction to fire	EN 13501-1	BL - s1, d0
Fire propagation	BS 476-6	Index of performance (I) not exceeding 12 and sub-index (i1) not exceeding 6*
Flame spread	BS 476-7	<Class 1*
Surface burning characteristics	ASTM E84	Flame spread index \leq 25 Smoke developed index \leq 50

*These test results combined enable a Class 0 classification to the Building Regulations in England & Wales, Northern Ireland and the Republic of Ireland, and a Low Risk classification to the Building Standards in Scotland.

** Based on test results according to EN 13501-1. Conversion in accordance with publication of MPA-NRW Materialprüfungsamt Nordrhein-Westfalen.

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Kooltherm™ 37

CFC/HCFC Free Rigid Phenolic Insulation

Material Property	Test Method	Method Unit	Typical Value
Nominal Dry Density	EN ISO 845	kg/m ³	37
Thermal Conductivity	EN 12667 at +10°C Initial Aged (25 weeks @ 70°C)	W/m.K W/m.K	0.021 0.025
Colour			Grey
Closed Cell Content	EN ISO 4590 Meth. 1	%	≥ 90
Operating Temperature Limits	Upper Limit Lower Limit	°C °C	+110 -50
Compressive Strength	EN 826 at +23°C Parallel Perpendicular	kPa kPa	≥ 150 ≥ 90
Tensile Strength	ASTM D 1623 - Spec. A at +23°C Parallel Perpendicular	kPa kPa	≥ 150 ≥ 110
Linear Dimensional Stability	EN 1604 +93°C for 24 hours -30°C for 24 hours	% %	≤ 1 ≤ 1
Linear Expansion Coefficient	ASTM D 696	K-1	40-70 x 10 ⁻⁶

Fire Properties	Test Method	Typical Result
Fire Propagation	BS 476-6	Index of performance (I) not exceeding 12 and sub-index (I1) not exceeding 6*
Surface Spread of Flame	BS 476-7	Class 1*
Horizontal Burning	EN ISO 3582	≤ 10 mm
Oxygen Index Temperature Index	EN ISO 4589-2 EN ISO 4589-3	≥ 50 % > 390°C
Surface Burning Characteristics	ASTM E 84	Flame Spread Index: ≤ 25 Smoke Developed Index: ≤ 50
Epiradiateur	NF P92-501	M1
Vertical Burning	DIN 4102-1	B2

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Kooltherm™ 60

CFC/HCFC Free Rigid Phenolic Insulation

Material Property	Test Method	Method Unit	Typical Value
Nominal Dry Density	EN ISO 845	kg/m ³	60
Thermal Conductivity	EN 12667 at +10°C Initial Aged (25 weeks @ 70°C)	W/m.K W/m.K	0.021 0.025
Colour			Grey
Closed Cell Content	EN ISO 4590 Meth. 1	%	≥ 90
Operating Temperature Limits	Upper Limit Lower Limit	°C °C	+110 -50
Compressive Strength	EN 826 at +23°C Parallel Perpendicular	kPa kPa	≥ 320 ≥ 170
Tensile Strength	ASTM D 1623 - Spec. A at +23°C Parallel Perpendicular	kPa kPa	≥ 300 ≥ 210
Linear Dimensional Stability	EN 1604 +93°C for 24 hours -30°C for 24 hours	% %	≤ 1 ≤ 1
Friability	ASTM C 421 (10 min.)	%	≥ 30
Linear Expansion Coefficient	ASTM D 696	K-1	40-70 x 10 ⁻⁶

Fire Properties	Test Method	Typical Result
Fire Propagation	BS 476-6	Index of performance (I) not exceeding 12 and sub-index (I1) not exceeding 6*
Surface Spread of Flame	BS 476-7	Class 1*
Horizontal Burning	EN ISO 3582	≤ 10 mm
Oxygen Index Temperature Index	EN ISO 4589-2 EN ISO 4589-3	≥ 50 % > 390°C
Epiradiateur	NF P92-501	M1
Vertical Burning	DIN 4102-1	B2

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Kooltherm™ 80

CFC/HCFC Free Rigid Phenolic Insulation

Material Property	Test Method	Method Unit	Typical Value
Nominal Dry Density	EN ISO 845	kg/m ³	80
Thermal Conductivity	EN 12667 at +10°C Initial Aged (25 weeks @ 70°C)	W/m.K W/m.K	0.030 0.034
Colour			Grey
Operating Temperature Limits	Upper Limit Lower Limit	°C °C	+110 -50
Compressive Strength	EN 826 at +23°C Parallel Perpendicular	kPa kPa	≥ 470 ≥ 340
Tensile Strength	ASTM D 1623 - Spec. A at +23°C Parallel Perpendicular	kPa kPa	≥ 520 ≥ 350
Linear Dimensional Stability	EN 1604 +93°C for 24 hours -30°C for 24 hours	% %	≤ 1 ≤ 1
Friability	ASTM C 421 (10 min.)	%	≥ 30
Linear Expansion Coefficient	ASTM D 696	K-1	40-70 x 10 ⁻⁶

Fire Properties	Test Method	Typical Result
Fire Propagation	BS 476-6	Index of performance (I) not exceeding 12 and sub-index (I1) not exceeding 6*
Surface Spread of Flame	BS 476-7	Class 1*
Horizontal Burning	EN ISO 3582	≤ 10 mm
Oxygen Index Temperature Index	EN ISO 4589-2 EN ISO 4589-3	≥ 50 % > 390°C
Epiradiateur	NF P92-501	M1
Vertical Burning	DIN 4102-1	B2

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Kooltherm™ 120

CFC/HCFC Free Rigid Phenolic Insulation

Material Property	Test Method	Method Unit	Typical Value
Nominal Dry Density	EN ISO 845	kg/m ³	120
Thermal Conductivity	EN 12667 at +10°C Initial Aged (25 weeks @ 70°C)	W/m.K W/m.K	0.043 0.045
Colour			Grey
Operating Temperature Limits	Upper Limit Lower Limit	°C °C	+110 -50
Compressive Strength	EN 826 at +23°C Parallel Perpendicular	kPa kPa	≥ 1000 ≥ 800
Tensile Strength	ASTM D 1623 - Spec. A at +23°C Parallel Perpendicular	kPa kPa	≥ 800 ≥ 600
Linear Dimensional Stability	EN 1604 +93°C for 24 hours -30°C for 24 hours	% %	≤ 1 ≤ 1
Friability	ASTM C 421 (10 min.)	%	≥ 15
Linear Expansion Coefficient	ASTM D 696	K-1	40-70 x 10 ⁻⁶

Fire Properties	Test Method	Typical Result
Fire Propagation	BS 476-6	Index of performance (I) not exceeding 12 and sub-index (I1) not exceeding 6*
Surface Spread of Flame	BS 476-7	Class 1*
Horizontal Burning	EN ISO 3582	≤ 10 mm
Oxygen Index Temperature Index	EN ISO 4589-2 EN ISO 4589-3	≥ 50 % > 390°C
Epiradiateur	NF P92-501	M1
Vertical Burning	DIN 4102-1	B2

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