



Knauf Breatheline

Description

Knauf Breatheline is a flexible sheet material consisting of a breather membrane with a polypropylene non-woven coating on both sides. The upper surface has a light grey anti-glare finish.

Application

Knauf Breatheline is used as a vapour permeable underlay in sealed and ventilated pitched roofs. It can also be used as a vapour permeable membrane in timber frame construction.

The high vapour permeability of Knauf Breatheline means that the roof space does not have to be ventilated to remove water vapour. This keeps the roof space warmer and makes it less prone to condensation and the build up of dust and dirt from the outside air. Knauf Breatheline can be used whether the thermal insulation is placed at ceiling level or rafter level.

Knauf Breatheline is non-wicking and so can be laid in direct contact with insulation and roof boarding with no risk of moisture penetration.

Product Data

Length (m)	Width (mm)	Area per roll (m ²)	Roll weight (kg)	Water vapour resistance	
				BS 3177 (MNs/g)	(Sd value m)
50	1500	75	10.5	0.22	0.02

All dimensions are nominal

Performance

Water vapour resistance

Knauf Breatheline has a vapour resistance Sd value of 0.02m.

Water vapour permeability

Knauf Breatheline has a vapour permeability of 935 gm² day.

Benefits

- Highly vapour permeable
- Waterproof to wind driven rain
- Non-wicking
- Resistant to tearing
- Flexible at low temperatures
- Lighter than bituminous felts and extremely tough



Physical properties

Test	Method(1)	Mean result	units
Mullen burst strength	BS 3137	552	kNm ²
1 metre head of water for 24 hours	BBA ⁽¹⁾	no penetration	
Water vapour permeability	BS 3177, 25°C/75% RH	935	gm ² day)
Water vapour resistance	BS 3177, 25°C/75% RH	0.22	MNsg
Resistance to water spray	T1/15 ⁽²⁾	pass	
Hydrostatic pressure	BS EN 20811		
– mean		4.53	kNm ²
– minimum		3.08	kNm ²

(1) Based on MOAT No 27 : Method 5.1.4.

(2) BBA test method.

Physical properties – directional

Test	Method(1)	Mean results		Units
		long ⁽¹⁾	trans ⁽²⁾	
Tensile strength (N 50 mm ²)	BS 2782-3: 320A			
– unaged (control)	(100 mm min)	252	159	N 50 mm ²
– aged ⁽³⁾		250	158	N 50 mm ²
– water soak ⁽⁴⁾		254	153	N 50 mm ²
– wet strength ⁽⁵⁾		267	179	N 50 mm ²
– UV 200 light hours ⁽⁶⁾		207	138	N 50 mm ²
– UV 500 light hours ⁽⁶⁾		108	64	N 50 mm ²
Elongation at break	BS 2782-3: 320A			
– unaged (control)	(100 mm min)	23	49	%
– aged ⁽³⁾		18	35	%
– water soak ⁽⁴⁾		25	50	%
– wet strength ⁽⁵⁾		22	51	%
– UV 200 light hours ⁽⁶⁾		13	32	%
– V 500 light hours ⁽⁶⁾		5	31	%
Resistance to nail tear	MOAT 27 : 5.4.1			
– unaged (control)		95	73	N
– aged ⁽³⁾		71	64	N
– water soak ⁽⁴⁾		84	94	N

(1) Longitudinal direction.

(2) Transverse direction.

(3) Heat aged at 70°C for 56 days.

(4) Water immersion at 23°C for 56 days – tested dry.

(5) 24 hours at 23°C – tested wet.

(6) UV aged – 4 hours UV at 50°C followed by 4 hours condensation at 50°C.

Service performance

Test	Method	Mean result	Units
Low temperature flexibility	MOAT 27 : 5.4.2	–21	°C
Resistance to water penetration (Eosin test)	BS 4016	pass – no staining/wetness	
Puncture resistance	BBA T1/01 ⁽¹⁾	satisfactory	
Resistance to wind loads	BBA T1/03 ⁽¹⁾		
350 mm batten spacing	– vertical	≤1.5	kPa
330 mm batten spacing	– vertical	≤1.0	kPa
	– horizontal	≤1.0	kPa
300 mm batten spacing	– vertical	≤2.5	kPa
	– horizontal	≤1.5	kPa
250 mm batten spacing	– horizontal	≤2.5	kPa

(1) BBA test methods.

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Certification

Knauf Breatheline is certified by the following British Board of Agrément Certificates:

03/4011 – for timber frame

03/4014 – for unsupported or fully supported roof tile underlay

03/4017 – as underlay in unventilated cold pitched roofs

Durability

Knauf Breatheline is odourless, rot proof, non-hygroscopic, does not sustain vermin and will not encourage the growth of fungi, mould or bacteria.

Knauf Breatheline has excellent tear and nail strength, yet remains flexible, even at low temperatures.

Environmental

Knauf Breatheline is free from CFCs, HCFCs and any other material with ozone depletion potential in its manufacture and content and represents no known threat to the environment. Knauf Breatheline is 100% recyclable

Handling and Storage

Knauf Breatheline is light in weight yet easy to handle, cut and install.

Knauf Breatheline is supplied wrapped in polythene, which is designed for short term protection only. For longer term protection on site, the product should be stored either indoors, or under cover and off the ground.

For more information please refer to
www.knaufinsulation.co.uk

Ref: KND90307