



RESISTA AK Insulation Board

1. Description

The Firestone RESISTA AK insulation board consists of a closed-cell polyiso foam core laminated on both sides to a gastight multi-layered aluminium complex. The foam technology does not contribute to the depletion of the ozone layer (zero ODP) and uses a HCFC-free blowing agent with a low Global Warming Potential (GWP). The RESISTA AK insulation board is suitable for adhered, ballasted and mechanically fastened Firestone single-ply roofing systems. It provides outstanding thermal resistance, dimensional stability and compressive strength.

2. Preparation

Before insulation is placed on the roof deck, the substrate must be clean, dry, free of debris, water, ice or snow and suitably prepared by removing all defects that might affect the quality of the application. Any unusual deck conditions or defects should be brought to the architect or building owner's attention prior to installation.

3. Application

RESISTA AK insulation boards must be installed using fasteners and plates or Firestone-approved insulation adhesives. Insulation shall be neatly fitted to all roof perimeters, penetrations and abutments. No more insulation should be installed than can be covered with membrane and completed before the end of each day's work or before the onset of inclement weather. Make sure boards are installed with branded facer upwards in case of a fully adhered membrane application.

- **Mechanically Attached Single-Ply Systems:** fasten the insulation boards with a minimum of:
 - 2 approved fasteners and plates per 600 mm x 1200 mm board
 - 4 approved fasteners and plates per 1200 mm x 1200 mm board
 - 6 approved fasteners and plates per 1200 mm x 2400 mm board

Additional fasteners may be required in areas of high wind loads or around the perimeter of the roof. Please refer to local wind uplift requirements and/or contact Firestone's Technical Department.

- **Ballasted Single-Ply Systems:** insulation boards may be loose laid. If mechanical attachment is specified, please contact Firestone's Technical Department.
- **Fully Adhered Single-Ply Systems:** the number of fasteners per board needs to be determined based on a wind uplift calculation in accordance with local building codes and taking into account the following minimum requirements:

Thickness	600 mm x 1200 mm board	1200 mm x 1200 mm board	1200 mm x 2400 mm board
30 mm	min. 4 fasteners/board	min. 8 fasteners/board	min. 16 fasteners/board
50 mm		min. 6 fasteners/board	min. 12 fasteners/board
> 50 mm		min. 5 fasteners/board	min. 8 fasteners/board

The number of fasteners per board will be arranged according a predefined fixing pattern. Please contact Firestone's Technical Department. When boards are adhered using an approved insulation adhesive, refer to installation instructions of the adhesive manufacturer.



4. Characteristics

Properties	Class acc. EN 13165	Test method	Unit	Value
Declared thermal conductivity coefficient	$\lambda_D, 10^\circ\text{C}$	EN 12667	W/mK	0.023
Compressive strength	CS(10\Y)150	EN 826	kPa	≥ 150
Water absorption	WL(T)1	EN 12087	%	≤ 1
Thickness	T2	EN 823	mm	e < 50: ± 2 50 \leq e \leq 75: ± 3 e > 75: +5, -2
Dimensional stability (48h, 70°C, 90% RH)	DS(70,90)3	EN 1604	%	$\Delta_{\text{length}}, \Delta_{\text{width}} \leq 2$ $\Delta_{\text{thickness}} \leq 6$
Reaction to fire		EN 13501-1	-	Euroclass E
Reaction to fire (in end-use)		EN 15715	-	B-s ₂ ,d ₀ (standard assembly n°3)

Product Range

Thickness	Ranging from 30 to 140 mm
Dimensions	600 x 1200; 1200 x 1200; 1200 x 2400 mm
Finishing	Flat boards with straight edges

Thermal Resistance

Thickness (mm)	R-Value (m ² . K/W)	Thickness (mm)	R-Value (m ² . K/W)
30	1.30	100	4.35
50	2.15	104	4.50
60	2.60	110	4.80
70	3.05	120	5.20
80	3.45	140	6.10
90	3.90		

Specification Compliance

- CE as per EN 13165:2012 + A1:2015
- FM Class 1 Approved
- Manufactured in an ISO 9001 registered facility
- ACERMI (N° 16/222/1236)
- Ozone Depleting Potential (ODP): 0
- Low Global Warming Potential
- Asbestos-free, Chlorine-free, Formaldehyde-free

5. Packaging / Storage / Shelf life

Packaging: Bundles. Shrink-wrap packaging provides a protective covering to all sides of the bundle.

Storage: Cool and dry. Store material in unopened packaging in a dry area away from sources of physical damage or chemical contamination. Bundles need to be elevated above the water line to prevent moisture infiltration.

Shelf life: Unlimited.

6. Precautions

Combustible. RESISTA AK is non-structural and non-load-bearing material. The finished roof assembly should be protected from excessive roof traffic with proper walkway materials. Keep insulation dry at all times. Do not install over wet, damp or uneven substrates. Refer to Safe Use Instruction Sheet for more information.

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