Firestone ISO 95+ GL Insulation Board

1. Description

Firestone ISO 95+ GL consists of a closed-cell Polyisocyanurate foam core laminated on both sides to a glass reinforced mat facer. The foam technology does not contribute to the depletion of the earth's ozone layer (zero ODP) and uses a HCFC-free blowing agent. The ISO 95+ GL insulation board is suitable for adhered, ballasted and mechanically attached 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 surface 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.

3. Application

ISO 95+ GL Insulation boards must be installed by using fasteners and plates, hot bitumen or Firestone approved insulation adhesives. Insulation shall be neatly fitted to all roof perimeters, penetrations and abutments. No more insulation shall 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. The ISO 95+ GL board is suitable for adhered, ballasted and mechanically attached single-ply roofing systems.

Mechanically Attached System

Fasten the insulation boards with a minimum of 5 approved fasteners and plates per 1.22 x 2.25 m 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 the Firestone Technical Department.

Ballasted System

For ballasted roof systems, the top layer of Firestone insulation may be loose laid or adhered. If mechanical attachment is specified, contact Firestone Technical Department.

Fully Adhered System

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:

- Thicknesses less than 38.1 mm: minimum 16 fasteners per 1.22 m x 2.25 m board
- Thicknesses less than 50.8 mm: minimum 12 fasteners per 1.22 m x 2.25 m board
- Thicknesses less than 101.4 mm: minimum 8 fasteners per 1.22 m x 2.25 m board

4. Characteristics

Physical		ASTM test	Typical Value	EN test	Typical Value
	■ Density	D-1622	32 kg/m^3	823	32 kg/m^3
	■ Compressive strength	D-1621	> 138 kPa	826	> 138 kPa
	■ Dimensional stability	D-2126	< 2%		
	■ Water absorption	C-209	< 1% (by volume)	12087	< 3% (by volume)
	■ Service temperature		-73°C to 121°C		
Technical	■ Compatible with ballasted, fully adhered and mechanically attached single-ply systems.				
	■ Available in flat boards of 1.22 m x 2.25 m (4' x 7'4.5") and in thicknesses ranging from 25.4 mm to 101.6 mm (1" to 4").				
	■ Coated and perforated glass fleece facer of approx. 150 g/m^2.				
	■ EPDM and TPO Roofing Systems installed over Firestone ISO 95+ GL obtain B_{ROOF}(t1) fire rating.				

Thermal resistance	Thickness		R-Value
	[mm]	[inches]	[m². K/W]
	25,4	1,00	1,11
	31,7	1,25	1,35
	38,1	1,50	1,58
	44,5	1,75	1,82
	50,8	2,00	2,05
	58,4	2,30	2,26
	63,5	2,50	2,44
	71,1	2,80	2,71
	76,2	3,00	2,89
	82,6	3,25	3,02
	88,9	3,50	3,24
	95,3	3,75	3,45
	101,6	4,00	3,68

5. Packaging / Storage / Shelf Life

Packaging: Bundles. Tuff-wrap packaging provides a durable protective covering to the top and four sides of the bundle, as well as a portion of the bottom board.

Storage: Cool and dry. Store material in unopened packaging in a dry area away from sources of physical damage or chemical contamination.

Shelf life: Unlimited.

6. Precautions

Combustible. Firestone ISO 95+ GL is a non-structural, non-load-bearing material. Therefore, keep insulation dry at all times. Bundles need to be elevated above the water line to prevent moisture infiltration from the bottom side. Do not install over wet, damp or uneven substrates. The finished roof assembly should be protected from excessive roof traffic with proper walkway materials.