ECA Flexcell

BITUMINOUS RIGID FIBER BOARD

DESCRIPTION

ECA Flexcell is a versatile, preformed board composed of high-quality natural wood fibers impregnated with 10% to 20% bitumen. These fibers are combined to create a compressible, non-extruding board used to fill expansion and isolation joints for in-situ and pre-cast concrete construction.

USES

- Serves as a joint filler in highways, airport runways, and bridges
- Functions as a protection board for waterproof coatings and membranes
- Ideal for structural isolation joints
- Used as an expansion joint filler in concrete pavements, walls, and elevated slabs

ADVANTAGES

- Proven resilience to weathering cycles in concrete applications
- High compression strength
- Available in various thicknesses and sizes
- Environmentally friendly, made from recycled materials
- Economical alternative to polyethylene in dry areas
- Dimensionally stable in extreme temperatures, avoiding softening in heat and brittleness in cold
- Maintains form under loads and resists water absorption due to bitumen impregnation
- Rough texture ensures a reliable bond with poured concrete
- Asphalt impregnation enhances performance in various weather conditions
- Compresses under pressure and rebounds quickly, preventing concrete from cracking

STANDARD

ECA Flexcell complies with the requirements :
ASTM D1751, BS 6093

TYPICAL PROPERTIES	
Density	Approx. 230 kg/m3
Bitumen Content	10% - 20%
Board Composition (ASTM)D1751)	Ligno-cellulosic fibers asphalt
Fire Class (EN 13501-1)	E
24-Hour Volume Water Absorption	
Thickness < 13 mm	≤ 20%
Thickness ≥ 13 mm	≤ 15%

Compression (ASTM D1751): When ECA Flexcell is initially subjected to loads less than 8618 kPa (for thickness < 13 mm) and loads ranging from 689 kPa to 5175 kPa (for thickness ≥ 13 mm) to compress it by 50% of its original thickness, it exhibits a minimal weight loss of ≤ 3% by weight.
Extrusion (ASTM D545): When ECA Flexcell is compressed to 50% of its thickness with three edges restrained, it demonstrates extrusion of ≤ 6.4 mm on its free edge.
Recovery (ASTM D545): When compressed to 50% of its thickness, it recovers to ≥ 70% of its original thickness within 10 minutes after the load is removed.

APPLICATION

To ensure effective utilization of ECA Flexcell in various construction applications, it should be carefully installed.
The product is positioned flush with the concrete slab and extends to the full depth of the slab, with a placement approximately ¾ of an inch below the surface of the concrete.
A suitable sealant can be applied at either the top or bottom of the slab, effectively closing the joint to prevent the ingress of hydrostatic pressure. Additionally, dowel bars are incorporated to maintain the alignment of adjacent sections of the concrete slab.
ECA Flexcell is designed to receive these dowel bars, and the entire joint assembly is set in place before the concrete is poured, ensuring a secure and reliable joint solution for concrete surfaces.

PACKAGING

ECA Flexcell is supplied in the following dimensions:

- 1.22 m x 2.20 m

ECA Flexcell is available in the following thicknesses:
12 mm ,18 mm, 25 mm

STORAGE

ECA Flexcell should be stored in a covered area and protected from water, avoiding damp or humid conditions.

HEALTH AND SAFETY

For more information, please check the Material Safety Data Sheet.

CONTACT

Al-Faiha for Engineering Products is the exclusive licensee manufacturer for ECA.
For more information, please contact us at techsupport@alfaihaengineering.com.

DISCLAIMER

ECA aims to ensure the accuracy of information and recommendations in the product literature. However, due to variations in materials, substrates, and site conditions, and without control over product application, storage, weather, and usage conditions, ECA cannot be held liable for any resulting issues.