



Bitumen Mastic Pad as per IS:1838 (Part 1) and IS:4365

TECHNICAL DATASHEET

SANDHYAFLEX INDIA PVT LTD is involved in the dealing and supply of Jolly Board expansion Joint Filler. The Jolly Board Expansion Joint Filler is manufactured from cane fibre which is water resistant and has mastic pad bitumen. The range of sizes available– 10 MM, 12 MM, 18 MM, 19 MM and 25 MM (both boards and strips in thickness).

Joint Expansion Joint Filler have excellent resistance to compression and outstanding recovery characteristics. Also, they are environment-friendly contrary to the destructive thermocol/plastic expansion joint filler.

Available Thicknesses:

Sandhyaflex Jolly Board Expansion Joint Fillers are available in both board and strip forms in the following thicknesses:

Thickness	Typical Application
6 mm	Light-duty structural cushioning and minor load distribution applications
10 mm	Bridge bearing installations and standard infrastructure projects
12 mm	Medium-load infrastructure applications requiring enhanced cushioning
20 mm	Heavy-duty load distribution in bridges, flyovers, and industrial structures
25 mm	High-load bridge structures, industrial foundations, and critical infrastructure applications

Custom sizes can also be supplied upon request.

Key Features:

- Manufactured from premium quality cane fibre and bitumen.
- Excellent compressibility and recovery properties.
- High resistance to moisture and water penetration.
- Accommodates expansion and contraction movements effectively.

- Durable and long-lasting performance.
- Easy to cut, handle, and install.
- Environment-friendly alternative to thermocol and plastic fillers.
- Suitable for heavy-duty civil engineering applications.
- Resistant to weathering and aging.
- Provides reliable joint separation and cushioning.

Applications of Jolly Board Expansion Joint Fillers:

External Wall Cladding

Used for filling expansion and structural separation joints in blockwork, masonry, and reinforced concrete construction.

Traffic Surfaces

Ideal for expansion joints in:

- Highways
- Roads
- Airport Runways
- Pedestrian Walkways
- Bridges
- Kerbs and Pavements

Internal Concrete Floors

Used for expansion joints across concrete floors, including screed floors and underfloor heating systems.

Roofs and Floor Finishes

Provides effective movement accommodation in concrete floor slabs and roofing systems.

Building Superstructures

Suitable for expansion joints in:

- Basements
- Retaining Walls
- Site Slabs
- Subways

- Water Excluding Structures

Expansion Strips

Used between adjacent structures and around concrete elements such as:

- Drains
- Manholes
- Channels
- Kerbs
- Utility Chambers

Industrial Flooring

Provides expansion joint separation in warehouses, factories, manufacturing facilities, and industrial floors.

Internal Finishes

Suitable for various flatwork applications and concrete flooring systems in accordance with project specifications and local regulations.

Physical Properties:

Sandhyaflex Jolly Board Expansion Joint Fillers exhibit:

- Excellent Recovery Characteristics
- High Compression Resistance
- Good Dimensional Stability
- Low Water Absorption
- Superior Weather Resistance
- High Bitumen Retention
- Long Service Life

Quality Standards:

Sandhyaflex Jolly Board Expansion Joint Fillers conform to the requirements of the following standards:

Standard	Description
ASTM D1751	Preformed Expansion Joint Fillers for Concrete Paving and Structural Construction
ASTM D545	Testing Requirements for Expansion Joint Fillers
Department of Transport (London), 1986	Specification for Highway Works – Part 3, Clause 1015
BS 1142	Standard Specification for Expansion Joint Fillers
IS 1838 (Part 1):1983	Specification for Preformed Expansion Joint Fillers for Concrete Structures

Advantages of Sandhyaflex Jolly Board:

- Prevents cracking due to thermal movement.
- Maintains joint integrity over long periods.
- Reduces maintenance costs.
- Suitable for both horizontal and vertical expansion joints.
- Provides effective cushioning and separation between concrete sections.
- Trusted solution for infrastructure, transportation, and building projects.

Sandhyaflex Jolly Board Expansion Joint Fillers offer a reliable, economical, and long-lasting solution for accommodating structural movement in concrete construction while ensuring durability and performance under varying service conditions.

History of Mastic Pads:

- **1950s – Early Infrastructure Development:** Bitumen-based cushioning materials began to be used in civil engineering applications for sealing and waterproofing.
- **1960s – Growth of Bridge Construction:** Increased highway and railway bridge projects created demand for durable load-distribution and waterproofing materials.
- **1970s – Modified Bitumen Technology:** Polymer additives were introduced to improve flexibility, durability, and resistance to environmental conditions.

- **1980s – Expansion in Infrastructure Projects:** Mastic pads gained popularity in bridge bearings, expansion joints, and structural support systems.
- **1990s – Enhanced Manufacturing Processes:** Improvements in production technology resulted in better consistency, dimensional accuracy, and performance.
- **2000s – Wider Adoption in Transportation Infrastructure:** Extensive use in highways, flyovers, metro rail projects, and industrial construction.
- **2010s – Advanced Polymer Modification:** Development of high-performance polymer-modified bitumen compounds enhanced service life and mechanical properties.
- **2020s – Modern Infrastructure Protection Solutions:** Mastic pads continue to play a vital role in bridges, transportation networks, and critical infrastructure projects worldwide.

Materials:



The **Sandhyaflex Mastic Pad** is manufactured from carefully selected materials designed to provide effective load distribution, cushioning, waterproofing, and long-term durability in bridge and structural applications.

Composition:

- **Cane Fibre Board (Cellulosic Fibre Core):**

Manufactured from high-quality compressed cane fibres that provide structural strength,

resilience, and compressibility. The fibre board acts as the primary load-bearing and cushioning component of the pad.

▪ **Bitumen Binder:**

Premium-grade oxidized bitumen is used to impregnate and bond the fibre matrix. The bitumen enhances water resistance, flexibility, and durability while providing protection against moisture penetration.

▪ **Mineral Fillers:**

Selected mineral fillers may be incorporated to improve density, dimensional stability, compressive strength, and overall performance under sustained loading conditions.

▪ **Waterproofing Compounds:**

Special waterproofing additives are used to increase resistance to water absorption, weathering, and environmental exposure.

▪ **Protective Surface Coating:**

The finished pad is coated with a uniform layer of bituminous mastic to provide additional waterproofing, surface protection, and resistance to deterioration.

Material Characteristics:

- Excellent load distribution capability
- High compressive strength
- Effective cushioning and shock absorption
- Low water absorption
- Good dimensional stability
- Resistance to moisture and weathering
- Long service life under bridge and structural loading conditions
- Suitable for bridge bearings, expansion joints, precast concrete structures, and infrastructure projects

The finished **Sandhyaflex Mastic Pad** is manufactured to provide reliable performance in bridges, highways, railways, industrial structures, and other civil engineering applications where load transfer, cushioning, and waterproofing are essential.

TABLE 1 PHYSICAL REQUIREMENTS OF BITUMEN IMPREGNATED FIBRE FILLERS

(Clause 5.1)

Sl. No.	CHARACTERISTIC	REQUIREMENT	METHOD OF TEST (REF TO INDIAN STANDARD)
(1)	(2)	(3)	(4)
i)	Resistance to handling	Strips shall not be deformed or broken by twisting, bending or other types of ordinary handling when exposed to atmospheric conditions (see Note)	—
ii)	Recovery	Shall recover at least 70 percent of its thickness before the test	IS : 10566-1983*
iii)	Compression	a) Load required to compress the specimen to 50 percent of its original thickness before the test shall be 7 kgf/cm ² (0.7 N/mm ²), <i>Min</i> 53 kgf/cm ² (5.3 N/mm ²), <i>Max</i> b) Loss in bitumen 3 percent, <i>Max</i>	IS : 10566-1983*
iv)	Extrusion	Amount of extrusion of the free edge shall not exceed 6.5 mm	IS : 10566-1983*
v)	Water absorption	20 percent, <i>Max</i>	IS : 10566-1983*
vi)	Density	300 kg/m ³ , <i>Min</i>	IS : 10566-1983*
vii)	Bitumen content	35 percent, <i>Min</i>	IS : 10566-1983*
viii)	Weathering	a) Shall show no sign of disintegration, delamination or separation of fibres after the test b) Shall satisfy the requirement of recovery, compression and extrusion after the test	IS : 10566-1983*
ix)	Penetration of re-covered bitumen	Shall be between 25 to 100 at 25°C	IS : 10566-1983*

NOTE — Pieces of the joint filler that have been damaged shall be rejected.

*Methods of test for preformed fillers for expansion joints in concrete paving and structural construction.

Packing Standard of Insulating Mat:

S No	Dimension	Weight /Nos	Each PKD/ Nos	Packing in Total Box	Weight Kg/Pkd	Length	Width	Thickness	CBM
1	8mm x2ftx4ft	2.016	15	15	30.240	0.60	1.20	0.120	0.0864
2	10mm x2ftx4ft	2.520	15	15	37.800	0.60	1.20	0.150	0.108
3	12mm x2ftx4ft	3.024	15	15	45.360	0.60	1.20	0.180	0.1296
4	14mm x2ftx4ft	3.520	15	15	52.800	0.60	1.20	0.210	0.1512
5	16mm x2ftx4ft	4.032	15	15	60.480	0.60	1.20	0.240	0.1728
6	18mm x2ftx4ft	4.536	10	10	45.360	0.60	1.20	0.180	0.1296
7	20mm x2ftx4ft	5.040	10	10	50.400	0.60	1.20	0.200	0.144
8	22mm x2ftx4ft	5.440	10	10	54.400	0.60	1.20	0.220	0.1584
9	25mm x2ftx4ft	6.300	10	10	63.000	0.60	1.20	0.250	0.180

Packing Details of Sandhyaflex :

S. No.	Size	20 Feet Container (33 CBM)	Weight	40 Feet Container (66 CBM)	Weight
1	12 mm × 2 ft × 4 ft	3,820 Nos	11,842 kg	7,639 Nos	23,684 kg
2	18 mm × 2 ft × 4 ft	2,546 Nos	11,549 kg	5,092 Nos	23,097 kg
3	20 mm × 2 ft × 4 ft	2,292 Nos	11,512 kg	4,584 Nos	23,103 kg
4	25 mm × 2 ft × 4 ft	1,833 Nos	11,548 kg	3,666 Nos	23,096 kg

Usage Tips:

- Select the correct pad thickness as per load requirements.
- Install on a clean, dry, and level surface.
- Ensure proper alignment for uniform load distribution.
- Avoid damage during handling and installation.
- Protect from excessive heat and chemical exposure.
- Maintain full contact between the pad and supporting surfaces.
- Inspect the pad for defects before installation.
- Follow project specifications and engineering guidelines.

Maintenance and Care:

Maintaining Sandhyaflex Mastic Pads is simple and helps ensure long service life and reliable performance:

- **Regular Inspection:** Check for cracks, deformation, edge damage, or signs of deterioration.
- **Keep Clean:** Ensure bearing surfaces are free from dust, debris, oil, and contaminants.
- **Proper Storage:** Store in a cool, dry place away from direct sunlight and excessive heat.
- **Avoid Chemical Exposure:** Prevent contact with solvents, oils, and aggressive chemicals.
- **Prevent Mechanical Damage:** Handle carefully during transportation and installation.
- **Replace Damaged Pads:** Replace pads showing excessive wear, cracking, or loss of performance.

Applications by Countries:

India

- Widely used in highway bridges, railway bridges, flyovers, and infrastructure projects.
- Commonly installed in NHAI, metro rail, and urban development projects.
- Increasing demand in smart cities and transportation infrastructure.

China

- Extensively used in highway networks, railway bridges, and urban transit systems.
- Preferred for large-scale infrastructure and industrial construction projects.
- Widely adopted in bridge and transportation developments.

United States

- Used in highway bridges, parking structures, and industrial facilities.
- Commonly installed in transportation and civil engineering projects.
- Preferred for load distribution and structural cushioning applications.

Europe

- Widely used in bridges, tunnels, and transportation infrastructure.
- Commonly specified for expansion joint and bearing applications.
- Strong demand due to stringent construction quality standards.

Middle East

- Used in bridges, elevated roadways, and infrastructure developments.
- Suitable for harsh climatic conditions and heavy-load applications.
- Increasing adoption in smart city and transportation projects.

Africa

- Applied in road bridges, railway infrastructure, and public works projects.
- Used in industrial and civil engineering construction.
- Growing demand due to expanding infrastructure development programs.

Get in touch:

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