PRODUCT MANUAL FOR
PREFORMED FILLERS FOR EXPANSION JOINT IN CONCRETE PAVEMENT AND STRUCTURES (NON-EXTRUDING AND RESILIENT TYPE) – BITUMEN IMPREGNATED FIBRE ACCORDING TO IS 1838 (PART 1): 1983

This Product Manual shall be used as reference material by all Regional/Branch Offices & licensees to ensure coherence of practice and transparency in operation of certification under Scheme-I of Bureau of Indian Standards (Conformity Assessment) Regulations, 2018 for various products. The document may also be used by prospective applicants desirous of obtaining BIS certification licence/certificate.

1.	**Product**	:	IS 1838 (Part 1): 1983
	Title	:	Preformed Fillers for Expansion Joint in Concrete Pavement and Structures (Non-Extruding and Resilient Type) – Bitumen Impregnated Fibre
	No. of Amendments	:	1
2.	**Sampling Guidelines:**		
a)	**Raw material**	:	As per clause 2 of IS 1838 (Part 1):1983
b)	**Grouping guidelines**	:	NA
c)	**Sample Size**	:	Qty – 300 mm x 300 mm – 2 Nos
3.	**List of Test Equipment**	:	Please refer ANNEX – A
4.	**Scheme of Inspection and Testing**	:	Please refer ANNEX – B
5.	**Possible tests in a day**	:	Please refer ANNEX – C
6.	**Scope of the Licence:**		
	"Licence is granted to use Standard Mark as per IS 1838 (Part 1) :1983 with the following scope:		
	Name of the product		Preformed Fillers for Expansion Joint in Concrete Pavement and Structures (Non-Extruding and Resilient Type) – Bitumen Impregnated Fibre

BUREAU OF INDIAN STANDARDS
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ANNEX A

List of Test Equipment

Major test equipment required to test as per the Indian Standard

Sl. No.	Tests used in with Clause Reference	Test Equipment
1.	Dimensions and Tolerances (Clause 4)	- Steel tape - Micrometer
2.	Recovery, Compression [Clause 5, Table 1(ii) and (iii)]	- Apparatus as per Clause 4.2 and Fig. 1 of IS 10566: 1983
3.	Extrusion [Clause 5, Table 1(iv)]	- Apparatus as per Clause 5.2 of IS 10566: 1983
4.	Water absorption [Clause 5, Table 1(v)]	- Desiccator - Conditioning chamber to maintain temperature of 20 ± 2 °C - Weighing balance - Thermostatically controlled water bath - Blotting paper
5.	Density [Clause 5, Table 1(vi)]	- Desiccator - Conditioning chamber to maintain temperature of 20 ± 2 °C - Weighing balance - Vernier calliper
6.	Bitumen content, Penetration of recovered bitumen [Clause 5, Table 1(vii) and (ix)]	- Centrifugal extractor- Rotarex type - Heat resistance glass flask (round bottom type) - Condenser (water cooled) - Benzene - Distillation apparatus and flask - Weighing balance
7.	Weathering [Clause 5, Table 1(viii)]	- Hot air oven to maintain temperature of 75 ± 1 °C - Pan container - Freezing chamber - Water bath

The above list is indicative only and may not be treated as exhaustive.

ANNEX B

Scheme of Inspection and Testing

1. LABORATORY - A laboratory shall be maintained which shall be suitably equipped (as per the requirement given in column 2 of Table 1) and staffed, where different tests given in the specification shall be carried out in accordance with the methods given in the specification.

1.1 The manufacturer shall prepare a calibration plan for the test equipments.

2. TEST RECORDS – The manufacturer shall maintain test records for the tests carried out to establish conformity.

3. LABELLING AND MARKING – As per the requirement of IS 1838 (Part 1) :1983.

4. CONTROL UNIT – All the fillers produced from identical raw material under similar conditions of manufacturing shall constitute a control unit.

5. LEVELS OF CONTROL - The tests as indicated in column 1 of Table 1 and the levels of control in column 3 of Table 1, shall be carried out on the whole production of the factory which is covered by this plan and appropriate records maintained in accordance with paragraph 2 above.

5.1 All the production which conforms to the Indian Standards and covered by the licence should be marked with Standard Mark.

6. REJECTIONS – Disposal of non-conforming product shall be done in such a way so as to ensure that there is no violation of provisions of BIS Act, 2016.

TABLE 1

(1)				(2)	(3)		
Test Details				**Test equipment requirement R: required (or) S: Sub-contracting permitted**	**Levels of Control**		
Cl.	**Requirement**	**Test Method**			**No. of Sample**	**Frequency**	**Remarks**
		Clause	**Reference**				
2	Material a) Bitumen b) Fibre	2.1, 2.2	IS 1838 (Part 1)	S	One	Each consignment	Further testing is not required, if received with test certificate or ISI marked
3	Manufacture	3.1	IS 1838 (Part 1)	-	All	-	-
4	Dimensions and tolerances	4.1, 4.2	IS 1838 (Part 1)	R	All	-	Length, width and thickness shall be as agreed to between the purchaser and manufacturer
5, Table 1	**Physical Requirements**						
(i)	Resistance to handling	5.1, Table 1	IS 1838 (Part 1)	-	Two	Each control Unit	-
(ii)	Recovery	5.1, Table 1	IS 1838 (Part 1) IS 10566	R	Two	Each control Unit	-
(iii)	Compression	5.1, Table 1	IS 1838 (Part 1) IS 10566	R	Two	Each control Unit	-
(iv)	Extrusion	5.1, Table 1	IS 1838 (Part 1) IS 10566	R	Two	Each control Unit	-

(v)	Water absorption	5.1, Table 1	IS 1838 (Part 1) IS 10566	R	Two	Each control Unit	-
(vi)	Density	5.1, Table 1	IS 1838 (Part 1) IS 10566	R	Two	Each control Unit	-
(vii)	Bitumen content	5.1, Table 1	IS 1838 (Part 1) IS 10566	R	Two	Each control Unit	-
(viii)	Weathering	5.1, Table 1	IS 1838 (Part 1) IS 10566	R	One	Every 10^{th} control Unit	-
(ix)	Penetration of recovered bitumen	5.1, Table 1	IS 1838 (Part 1) IS 10566	R	Two	Each control Unit	-

Note-1: Sub-contracting is permitted to a laboratory recognized by the Bureau or Government laboratories empanelled by the Bureau.

Note-2: Levels of control given in column 3 are only recommendatory in nature. The manufacturer may define the control unit/batch/lot and submit his own levels of control in column 3 with proper justification for approval by BO Head.

ANNEX C

Possible tests in a day

(i) Dimensions and tolerances (Clause 4)

(ii) Resistance to handling (Clause 5, Table 1)

(iii) Recovery (Clause 5, Table 1)

(iv) Compression (Clause 5, Table 1)

(v) Extrusion (Clause 5, Table 1)

(vi) Bitumen content (Clause 5, Table 1)

(vii) Penetration of recovered bitumen (Clause 5, Table 1)