



**PRODUCT MANUAL FOR
BITUMINOUS COMPOUNDS FOR
WATERPROOFING AND CAULKING PURPOSES
ACCORDING TO IS 1580: 1991**

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 1580 : 1991
	Title	:	Bituminous Compounds for Waterproofing and Caulking Purposes
	No. of Amendments	:	NIL
2.	Sampling Guidelines:		
a)	Raw material	:	NA
b)	Grouping guidelines	:	Sample of each Grade shall be tested to cover that Grade in the Scope of the Licence.
c)	Sample Size	:	Qty: 2 kg + One packed container for keeping quality
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 1580 : 1991 with the following scope:		
	Name of the product	Bituminous Compounds for Waterproofing and Caulking Purposes	
	Grade	Grade 1/ Grade 2	

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.	Water content [Clause 4.2.2, Sl. No. (i) of Table 1]	a) Flask as per Fig. 1 of IS 1211 : 1978 b) Condenser as per Fig. 2 of IS 1211 : 1978 c) Receiver as per Fig. 3 or 4 of IS 1211 : 1978 d) 100 ml graduated cylinder e) Heater f) Solvent: Blend of 20 percent by volume of industrial grade toluene and 80 percent by volume of industrial grade xylene. or Petroleum or coal tar naphtha (IS 213 : 1968) free from water yielding not more than 5 percent distillate at 125 °C and not less than 20 percent at 160 °C. or Petroleum spirit with a boiling range of 100 to 120 °C.
2.	Ash content [Clause 4.2.2, Sl. No. (ii) of Table 1]	a) Silica crucible of 30 ml capacity b) Hot air oven c) Weighing scale d) Hot plate e) Muffle furnace f) Desiccator g) 600 micron IS sieve h) Toluene i) Ashless Filter paper no. 40
3.	Flow [Clause 4.2.2, Sl. No. (iii) of Table 1]	a) 150 mm × 100 mm × 0.3 mm mild steel panel b) Air conditioner c) Thermometer d) Hot air oven e) Deep freezer
4.	Flash point [Clause 4.2.2, Sl. No. (iv) of Table 1]	a) Pensky-Martens closed tester as per Clause.3.1.1 and Fig. 1 of IS 1209 : 1978 b) Flash point tester c) Thermometer d) Pensky-Martens open tester as per Clause.5.1 of IS 1209 : 1978

5.	Flexibility and adhesion [Clause 4.2.2, Sl. No. (v) of Table 1]	<ul style="list-style-type: none"> a) 150 mm ×100 mm × 0.3 mm mild steel panel b) Air conditioner c) Thermometer d) Hot air oven e) Deep freezer f) 25mm diameter rod
6.	Consistency [Clause 4.2.2, Sl. No. (vi) of Table 1]	<ul style="list-style-type: none"> a) Penetrometer as per Fig. 1 of IS 1580 : 1991 b) Penetration cone as per Fig. 2 of IS 1580 : 1991 c) Weighing balance d) Air conditioner to maintain temp. of 27 ± 2 °C e) Thermometer

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 1580: 1991.

4. CONTROL UNIT – Bituminous compound of same Grade produced in a day under similar conditions of manufacturing shall constitute one 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				
4.2.2, Table 1	Requirements for bituminous compound						
(i)	Water content	4.2.2	IS 1580 IS 1211	R	One composite sample	Each control Unit	
(ii)	Ash content	4.2.2	IS 1580 IS 1217	R	One composite sample	Each control Unit	
(iii)	Flow	4.2.2, Annex A	IS 1580	R	One composite sample	Each control Unit	
(iv)	Flash point	4.2.2	IS 1580 IS 1209	R	One composite sample	Each control Unit	
(v)	Flexibility and adhesion	4.2.2, Annex B	IS 1580	R	One composite sample	Each control Unit	
(vi)	Consistency a) Before setting (Test after 1 h) b) After setting (Test after 24 h)	4.2.2, Annex C	IS 1580	R	One	Every fifth control Unit	
4.3	Keeping quality	4.3	IS 1580	R	One	Once in six months	

Note-1: A composite sample shall be made by drawing equal quantity of material from each mixing in a day

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) Water content [Clause 4.2.2, Table 1, SI No (i)]
- (ii) Ash content [Clause 4.2.2, Table 1, SI No (ii)]
- (iii) Flow Test [Clause 4.2.2, Table 1, SI No (iii)]
- (iv) Flash point as per Cl.4.2.2 and SI. No. iv) of Table 1
- (v) Flexibility and adhesion test [Clause 4.2.2, Table 1, SI No (v)]
- (vi) Consistency test (before setting) [Clause 4.2.2, Table 1, SI No (vi)]