



PRODUCT MANUAL FOR TWO PART POLYSULPHIDE BASED SEALANTS ACCORDING TO IS 12118 (PART 1): 1987

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 12118 (PART 1) : 1987
	Title	:	TWO PART POLYSULPHIDE BASED SEALANTS
	No. of Amendments	:	NIL
2.	Sampling Guidelines:		
a)	Raw material	:	-
b)	Grouping guidelines	:	Each Grade (Pouring Grade / Gun Grade) shall be tested to cover that particular Grade in the Scope of Licence
c)	Sample Size	:	4 kg for all tests
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 :		
	None (in view of the initial curing time required for sample preparation)		
6.	Scope of the Licence :		
	“Licence is granted to use Standard Mark as per IS 12118 (Part 1) : 1987 with the following scope:		
	Name of the product	TWO PART POLYSULPHIDE BASED SEALANTS	
	Grade	Pouring Grade / Gun Grade	

ANNEX AList of Test Equipment*Major test equipment required to test as per the Indian Standard*

S. No.	Tests used in with Clause Reference	Test Equipment
1	Rheological properties (Clause 5.1.1)	<ul style="list-style-type: none"> - Aluminium rectangular cross section channel 200 x 25 x 12 mm - Channel 20 mm wide x 12 mm deep - Enclosures capable to maintain humidity $65 \pm 5 \%$ and temperature $27 \pm 2 \text{ }^\circ\text{C}$ and temperature $5 \pm 2 \text{ }^\circ\text{C}$ & $35 \pm 2 \text{ }^\circ\text{C}$ - Cylinder containers - Power stirrer/ Spatula and Pallet knife - Balance
2	Plastic deformation test (Clause 5.1.2)	<ul style="list-style-type: none"> - Hot air oven - Tensile testing machine - Aluminium test surface (strip/plate) - Acetone - Air conditioner - Humidifier - Softwood spacer - Vernier calliper
3	Adhesion and tensile modulus test (Clause 5.1.3)	<ul style="list-style-type: none"> - Aluminium test surface (strip/plate) - Acetone - Air conditioner - Humidifier - Softwood spacer bars - Vernier calliper - Hot air oven - Tensile testing machine - Glass test surface - Portland cement mortar - Enclosures capable to maintain humidity $50 \pm 5 \%$ and temperature $27 \pm 2 \text{ }^\circ\text{C}$ and humidity $65 \pm 5 \%$ - Power stirrer/ Spatula and Pallet knife - Filler gauge 0.025 mm and width 2 mm - OPC cement - Standard Sand - IS sieve 850 μm and 600 μm - Plastic moulds 50 x 50 x 25 mm and 125 x 125 x 125 mm

		<ul style="list-style-type: none"> - Vibrator - Distilled water - Sun lamp cabinet - Arrangement for maintain temperature of $- 15 \pm 2 \text{ }^{\circ}\text{C}$
4	Application life test (Clause 5.1.4)	<ul style="list-style-type: none"> - Cylindrical container - Container - Aluminium plate/strip - Aluminium test surface - Weighing balance - Enclosures capable to maintain humidity $50 \pm 5 \%$ and temperature $27 \pm 2 \text{ }^{\circ}\text{C}$ - Power stirrer/ Spatula and Pallet knife
5	Adhesion in peel test (Clause 5.1.5)	<ul style="list-style-type: none"> - Tensile testing machine - Paper masking tape - Metal spacer bars - Thin flexible backing screens - Glass rod - Aluminium plate /strips - Aluminium test surface - Glass test surface - Portland cement mortar test surface - Razor blade - Distilled water - Enclosures capable to maintain humidity $65 \pm 5 \%$ and temperature $27 \pm 2 \text{ }^{\circ}\text{C}$
8	Loss of mass after heat ageing test (Clause 5.1.6)	<ul style="list-style-type: none"> - Hot air oven - Single pan balance - Metal dish - Aluminium strips/plate - Spatula
9	Staining test	<ul style="list-style-type: none"> - Split ring mould - Cylindrical mandrel of polythene or similar material - Enclosures capable to maintain humidity $65 \pm 5 \%$ and temperature $27 \pm 2 \text{ }^{\circ}\text{C}$ - White portland cement - Hydrated hi calcium lime - Standard sand - Distilled water

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 equipment.

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

3. LABELLING AND MARKING – As per the requirements of IS 12118 (Part 1): 1987

4. CONTROL UNIT – The entire quantity of each Grade processed at a time (after filling of base component and curing component as per specified ratio) 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 Standard 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 Methods			No. of Sample	Frequency	Remarks
		Clause	Reference				
5.1.1	Rheological properties	5.1.1.1 & 5.1.1.2	IS 12118 (Part 1)	R	One	5 th control unit for each grade	Please also see Note 1
		2	IS 12118 (Part 2)				
5.1.2	Plastic deformation	5.1.2 3	IS 12118 (Part 1) IS 12118 (Part 2)	R	One	5 th control unit for each grade	-
5.1.3	Adhesion and Tensile Modulus	5.1.3 4	IS 12118 (Part 1) IS 12118 (Part 2)				
	Before ageing test	4.6.2	IS 12118 (Part 2)	R	One	10 th control unit for each grade	-
	After water immersion test	4.6.3	IS 12118 (Part 2)	R	One	10 th control unit for each grade	-
	After heat ageing test	4.6.4	IS 12118 (Part 2)	R	One	10 th control unit for each grade	-
	After cycles of extension at -15 °C and compression at 27 °C test	4.6.5	IS 12118 (Part 2)	S	One	Once in six months for each grade	-
	After sunlamp exposure through glass test	4.6.6	IS 12118 (Part 2)	S	One	Once in six months for each grade	-
5.1.4	Application life	5.1.4 5	IS 12118 (Part 1) IS 12118 (Part 2)	R	One	5 th control unit for each grade	-
5.1.5	Adhesion in peel	5.1.5 6	IS 12118 (Part 1) IS 12118 (Part 2)	R	One	5 th control unit for each grade	-

5.1.6	Loss of mass after heat ageing	5.1.6 7	IS 12118 (Part 1) IS 12118 (Part 2)	R	One	5 th control unit for each grade	--
5.1.7	Staining	5.1.7 8	IS 12118 (Part 1) IS 12118 (Part 2)	R	One	5 th control unit for each grade	-

Note-1: Rheological properties test shall be conducted on three consecutive control units whenever there is change in formulation in the base component or curing component or any change in process condition. The original frequency may be restored only after the samples from these three control units pass.

Note – 2: Sub-contracting is permitted to a laboratory recognized by the Bureau or Government laboratories empanelled by the Bureau.

Note-3: 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.