



**PRODUCT MANUAL FOR
SEALING WAX
ACCORDING TO IS 868: 1990**

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 868: 1990
	Title	:	Sealing Wax
	No. of Amendments	:	Nil
2.	Sampling Guidelines:		
a)	Raw material	:	No specific ISS mentioned for Compliance. However, the material used in Sealing Wax shall consist of ingredients which are non-injurious to health and do not harm the surface on which they are used.
b)	Grouping guidelines	:	Every Grade/Type applied for to be tested
c)	Sample Size	:	500 grams x 2 for complete testing.
3.	List of Test Equipment	:	Please refer ANNEX – <u>A</u>
4.	Scheme of Inspection and Testing	:	Please refer ANNEX – <u>B</u>
5.	Possible tests in a day:		
	<ul style="list-style-type: none"> i. Description ii. Composition iii. Colour iv. Odour and Fuming v. Capability of taking impression vi. Heat resistance Test vii. Resistance to heat Polymerization 		
6.	Scope of the Licence:		
	“Licence is granted to use Standard Mark as per IS 868: 1990 with the following scope:		
	Name of the product	Sealing Wax	
	Type/Class/Grades/Sizes	Grade 1 (Type – 1)/ Grade-1(Type - 2) /Grade 2.	

ANNEX AList 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.	Description (Clause 4)	i. Heating Apparatus ii. Melting Spoon/Pot
2.	Composition (Clause 5.2) (i) Mineral Loading Content	(Method – I) i. Weighing Balance (Accurate to 0.01 g) ii. All glass Condenser iii. Siphon Tube iv. Wide mouthed, heat resistant conical flask with 25 mm bored cork to fit the condenser stem (176 ±3 mm Height, 48 ±2 mm I.D.) v. Carbon Filter Tube vi. Fat-free paper extraction cartridge (26 ± 1 mm in dia. And 60 ± 1 mm in height) vii. Weighing bottle, glass-stoppered, 80 ±1 mm in height and 40 ± 1 mm in diameter. viii. Water bath ix. 200 ml tall lipped beaker x. Gas burner xi. 95 % (by Vol.) rectified spirit (Conforming to IS 323: 1959) or 95 % (by Vol.) denatured spirit (Conforming to IS 324: 1959) xii. Fresh Spirit OR (Method - II) i. Weighing Balance (Accurate to 0.01 g) ii. Knoefler Type Siphon Tube iii. Condenser iv. Flask v. 12.5 mm Filter paper (Whatman no. 1 or Equivalent) vi. Weighing bottle, glass-stoppered, 80 ±1 mm in height and 40 ± 1 mm in diameter vii. 95 % (by Vol.) rectified spirit (Conforming to

		<p>IS 323: 1959) or 95 % (by Vol.) denatured spirit (Conforming to IS 324: 1959)</p> <p>viii. Oven (Capable of maintaining 100 ±2 °C)</p> <p>ix. Dessicator</p>
	(ii) Rosin Content	<p>i. 250 ml Volumetric Flask</p> <p>ii. Round Bottom Evaporating Basin</p> <p>iii. Water Bath</p> <p>iv. Air Oven (Capable of maintaining 110 °C)</p> <p>v. Morter pestle</p> <p>vi. Weighing Balance</p> <p>vii. 425 micron (40 mesh) size</p> <p>viii. Whatman Filter paper no. – 1</p> <p>ix. Air Oven (Capable of maintaining 55 – 60 °C)</p> <p>x. Soxhlet apparatus</p> <p>xi. Benzol (Benzene 84 %, Xylene 13 %, Toluene 3 %)</p>
	(iii) Shellac Content	<p>i. 100 – (Percent Loading + Percent Rosin)</p>
	(iv) Pitch Content	<p>i. Mortar pestle</p> <p>ii. Weighing Balance</p> <p>iii. 425 micron (40 mesh) size</p> <p>iv. Whatman Filter paper no. – 1</p> <p>v. Air Oven (Capable of maintaining 55 – 60 °C)</p> <p>vi. Soxhlet apparatus</p> <p>vii. Benzol (Benzene 84 %, Xylene 13 %, Toluene 3 %)</p>
3.	Colour (Clause 5.3)	<p>i. Heating Apparatus</p> <p>ii. Melting Spoon/Pot</p> <p>And should be as agreed to between the manufacturer and the purchaser for Grade 1.</p>
4.	Odour and Fuming (Clause 5.4)	<p>i. Heating Apparatus</p> <p>ii. Melting Spoon</p>
5.	Adhesion to Surface (Clause 5.5)	<p>i. Standard Brass Die as per F-2 of IS 868</p> <p>ii. Melting Spoon/Pot</p> <p>iii. Heating Apparatus</p> <p>iv. Thermometer</p> <p>v. Cylinder of Diameter 60 mm</p> <p>vi. Paper Samples as applicable for Grade 1/Grade 2</p>

6.	Capability of Taking Impressions (Clause 5.6)	<ul style="list-style-type: none"> i. Standard Brass Die as per F-2 of IS 868 ii. Melting Spoon/Pot iii. Heating Apparatus iv. Thermometer v. Cylinder of Diameter 60 mm vi. Paper Samples as applicable for Grade 1/Grade 2
7.	Heat Resistance (Clause 5.7)	<ul style="list-style-type: none"> i. Glass plate/Paper ii. Standard Brass Die as per F-2 of IS 868 iii. Melting Spoon/Pot iv. Heating Apparatus v. Thermometer vi. Hot Air Oven (Capable of maintaining 55 ± 0.5 °C for Grade 1 and 60 ± 0.5 °C for Grade 2)
8.	Resistance to heat of Polymerization (Clause 5.8)	<ul style="list-style-type: none"> i. Weighing Balance ii. Test Tube (dry) iii. Oil Bath (capable of maintaining Temp. - 130 ± 5°C) iv. Glass Rod

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 requirement of clause 6.2 of IS 868.

4. CONTROL UNIT – For the purpose of this Scheme, the total quantity of sealing wax manufactured in a single day and of one grade 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. HYGIENIC CONDITIONS – Not Applicable

7. 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.	Description	Annex - A	IS 868: 1990	R	One	Each Control Unit	-
5.1 & 5.2	Composition	5.1 & 5.2	-do-	R	One	Each Control Unit	-
5.2.1	Mineral Loading Content	Annex - B	-do-	R	One	Every Fifth Control Unit	-
5.2.1	Rosin Content	Annex - C	-do-	R	One	-do-	-
5.2.1	Shellac Content	Annex - D	-do-	R	One	-do-	-
5.2.1	Pitch Content	Annex - E	-do-	R	One	-do-	-
5.3	Colour	5.3	-do-	R	One	Each Control Unit	-
5.4	Odour and Fuming	5.4	-do-	R	One	-do-	-
5.5	Adhesion to Surface	Annex - F	-do-	R	One	-do-	-
5.6	Capability of taking Impressions	Annex - F	-do-	R	One	-do-	-

5.7	Heat Resistance	Annex - G	-do-	R	One	-do-	-
5.8	Resistance to Heat of Polymerization	Annex - H	-do-	R	One	-do-	-

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.