



**Product Manual for Thinner, General Purpose, for Synthetic Paints  
and Varnishes- Specification**

**According to IS 14314:1995**

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.

<b>1.</b>	<b>Product</b>	:	IS 14314: 1995
	Title	:	Thinner, General Purpose, for Synthetic Paints and Varnishes- Specification
	No. of Amendments	:	Nil
<b>2.</b>	<b>Sampling Guidelines:</b>		
a)	Raw material	:	No specific requirement
b)	Grouping guidelines	:	Not Applicable since there are no varieties
c)	Sample Size	:	4 X500 ml
<b>3.</b>	<b>List of Test Equipment</b>	:	Please refer ANNEX –A
<b>4.</b>	<b>Scheme of Inspection and Testing</b>	:	Please refer ANNEX –B
<b>5.</b>	<b>Possible tests in a day:</b>		
	(i) Colour (ii) Odour (iii) Spot Test (iv) Relative density at 27 °C (v) Flash Point (vi) Water Content (vii) Copper Corrosion		
<b>6.</b>	<b>Scope of the Licence :</b>		
	"Licence is granted to use Standard Mark as per IS 14314: 1995 with the following scope:		
	Name of the product	Thinner, General Purpose, for Synthetic Paints and Varnishes- Specification	

Annex - A

List of Test Equipment

Major test equipment required to test as per the Indian Standard.

Sr. No.	Test / Cl. Ref.	Test Equipment
1.	Description/CI 4.1	No specific requirement
2.	Colour/CI 4.2 Table 1 SI No 1	Nessler Cylinder (50 ml) Volumetric Flask Class A (1000 ml) D.M Water Potassium Dichromate Filter Paper (Whatman No 31) Comparator Box
3.	Odour/CI 4.2 Table 1 SI No 2	No specific requirement
4.	Spot Test/ CI 4.2 Table 1 SI No 3	White Filter Paper Sheet
5.	Relative density/CI 4.2 Table 1 SI No 4	Relative Density Bottle or Pyknometer (25 ml)/Standard Hydrometer/Westphal Hydrostatic Balance D.M Water Weighing Balance, LC-0.1mg Thermometer Upto 110°C, LC 0.1°C
6.	Distillation range with a minimum 95 % recovery by volume/CI 4.2 Table 1 SI No 5	Thermometer 100 - 250°C, LC- 2°C Graduated Receiver (100 ml) Distillation Flask, 125 ml (Without Ground Joint Neck) Distillation Apparatus with Condenser and Electric Heater Asbestos Sheet
7.	Flash Point/CI 4.2 Table 1 SI No 6	Abel Flash Point apparatus with Closed Cup and Stirrer with Bath Thermometer 10 to 65 °C, LC-0.5 °C
8.	Residue on evaporation/CI 4.2 Table 1 SI No 7	Weighed Glass/Silica Crucible 150 ml Oven upto 250 °C, LC- 1°C Water Bath Desicator Weighing Balance, LC-0.1mg
9.	Hydrocarbon Content/CI 4.2 Table 1 SI No 8	Graduated Cylinder with Stopper, 100 ml Conc. Sulphuric Acid Refrigerator/Ice
10.	Water Content /CI 4.2 Table 1 SI No 9	<b>Karl Fischer Method</b> - Karl Fischer Titrator with end point detection (as per 6 of IS 2362) - Electrically operated oven (capable of being controlled at 130°C) - Dessicator and dessicant - Karl Fischer reagent as prescribed in 5.7 of IS 2362 - Laboratory glassware and reagents as per IS 2362

		<b>Dean &amp; Stark Method</b> <ul style="list-style-type: none"><li>- Dean and Stark Apparatus as per 3.1 to 2.5 of IS 1211</li><li>- Analytical Balance</li><li>- Carrier Liquid – Dry Toluene, Ethyl or Anyl Acetate</li></ul>
11.	Copper Corrosion/CI 4.2 Table 1 SI No 10	Copper Foil (40x30x0.8 mm) Test Tube Temperature controlled through AC Water Bath Emery powder 75 micron IS Sieve Liebeg Condenser Dig. Thermo Hygrometer(-10 to 50°C / 10 To 99 % RH, LC-0.1 °C / 1% RH
12.	Keeping Quality/CI 5	All of the above

Note-1 : The least count and range of test equipment should match value/parameters/ tolerances mentioned in the Indian Standard.

Note 2: The list is meant for guidance only and may not be taken 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 Table1) and staffed, where different tests given in the specification shall be carried out in accordance with the methods given in the specification.

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. **PACKING AND MARKING** -The Standard Mark, as given in the Schedule of the license shall be printed on each container and on the label applied to the container; provided always that the material in each container on which this Mark is thus applied conforms to every requirement of the specification.

3.1 The Standard Mark as given in Schedule of the license and Licence Number (i.e. CM/L .....), labeling/marketing and packing shall be done as per the provision of the Indian Standard, provided always the product thus marked conforms to all the requirement of the specification. In addition, details of BIS website shall be marked as follows: "For details of BIS certification please visit [www.bis.gov.in](http://www.bis.gov.in)"

4. **CONTROL UNIT**- For the purpose of this scheme, the entire quantity of the material mixed in mixer at a time in one operation shall be considered as a control unit.
5. **LEVELS OF CONTROL**-The tests, as indicated in Table 1 and the levels of control in column 3 of Table1, 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. **REJECTION**-Disposal of non-conforming products shall be done in such a way so as to ensure that there is no violation of provisions of BIS Act, 2016. A separate record providing the detailed information regarding the rejected control units and mode of their disposal shall be maintained. Such material shall in no case be stored together with that conforming to the specification. The Standard Mark (if already applied) on rejected material should be defaced.

**TABLE 1: LEVEL OF CONTROL**  
(Para 5 of the Scheme of Inspection and Testing)

(1)				(2)	(3)		
Test Details				Test equipment requirement R:required (or) S: Sub-contracting permitted	Levels of Control		
Clause	Requirements	Test Method			No. of Samples	Frequency	Remarks
		Clause	Reference				
4.1	Description	4.1	IS 14314				Undertaking from Firm is required.
4.2 & Table 1 SI No 1	Colour	5	IS 82	R	One	Each Control Unit	
SI No 2	Odour	-	IS 14314	R	One	-do-	
SI No 3	Spot Test	-	IS 14314	R	One	-do-	
SI No 4	Relative density at 27 °C	6	IS 82	R	One	-do-	
SI No 5	Distillation range with a minimum 95 % recovery by volume	7	IS 82	R	One	-do-	
SI No 6	Flash Point	-	IS 101( Part 1/Sec 6)	R	One	-do-	
SI No 7	Residue on evaporation	8	IS 82	R	One	Once in a week	
SI No 8	Hydrocarbon Content	Annex-B	IS 14314	R	One	-do-	
SI No 9	Water content	-	IS 101( Part 2/Sec 1)	R	One	Each Control	

						Unit	
SI No 10	Copper corrosion	11	IS 82	R	One	-do-	
Clause 5	Keeping Quality	-	IS 14314	R	One	Once in a year	
Clause 6	Packing and marking	6	IS 14314	S	One	Each control unit	No testing required if containers are received with manufacturer's/supplier's test certificate indicating conformity to the requirement of the IS or if they are ISI marked.

Note-1: Whether test equipment is required or sub-contracting is permitted in column 2 shall be decided by the Bureau and shall be mandatory. Sub-contracting is permitted to a laboratory recognized by the Bureau or Government laboratories empaneled 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 B.O.Head.