



**PRODUCT MANUAL**  
**FOR WRITING AND PRINTING PAPERS —SPECIFICATION PART 2 AIR MAIL/MANIFOLD, CARTRIDGE**  
**DRAWING AND CARTRIDGE WHITE, DUPLICATING ABSORBENT AND DUPLICATING**  
**SEMI-ABSORBENT AND POSTER MACHINE GLAZED TYPES**  
**ACCORDING TO IS 1848 (Part 2) : 2018**

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.	<b>Product</b>	:	IS 1848 (Part 2) : 2018
	<b>Title</b>	:	Writing and printing papers —specification part 2 air mail/manifold, cartridge drawing and cartridge white, duplicating absorbent and duplicating semi-absorbent and poster machine glazed types
	<b>No. of Amendments</b>	:	NIL
2.	<b>Sampling Guidelines:</b>		
a)	Raw material	:	No specific requirement
b)	Grouping guidelines	:	Sample of any trimmed size and nominal substance may be tested and varieties of other trimmed sizes and nominal substance may also be added to the scope of licence on its basis, subject to availability of testing and manufacturing facilities for the varieties to be covered.  Separate samples to be drawn for coloured, printed and white papers.  During operation of licence, samples of each variety to be tested in rotation.
c)	Sample Size	:	50 sheets of 560 x 650 mm
3.	<b>List of Test Equipment</b>	:	Please refer Annex –A
4.	<b>Scheme of Inspection and Testing</b>	:	Please refer Annex - B
5.	<b>Possible tests in a day :</b>	:	Sizes , Brightness , Opacity , Thickness , Smoothness

<b>6. Scope of the Licence :</b>	
Licence is granted to use Standard Mark as per IS 1848 (Part 2) : 2018 with the following scope:	
Name of the product	Writing and printing papers —specification part 2 air mail/manifold, cartridge drawing and cartridge white, duplicating absorbent and duplicating semi-absorbent and poster machine glazed types
Trimmed Sizes of the paper	In mm x mm
Substance of the paper	In g/m <sup>2</sup>
Other Aspects	Coloured/Printed/White paper

**ANNEX-A**  
**PRODUCT MANUAL**  
**FOR WRITING AND PRINTING PAPERS —SPECIFICATION PART 2 AIR MAIL/MANIFOLD, CARTRIDGE**  
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**LIST OF TEST EQUIPMENTS**  
**Major test equipment required to test as per the Indian Standard**

Sr. No.	Test Equipment	Tests used in with Clause Reference
1	Apparatus for fibre analysis of paper and board consisting of a microscope, weighing balance, hot plate, light source, dissecting needles, Artist's brush, slides, droppers, and other glassware and reagents as per IS 5285	Mechanical Pulp Content (Cl 4.1)
2	Apparatus for determination of grammage consisting of Cutting device, weighing balance as per IS 1060 (Pt 5/Sec 5)	Substance (Cl 4.2)
3	Dead weight micrometer with dial gauge correct to 0.01 mm or micrometer with dial gauge correct to 0.0005 in, and sheet holder as per 7 of IS 1060 (Pt 1/Sec 1)	Thickness (Cl 4.3)
4	Vernier calipers, measuring scale or tape	Sizes and Tolerances on Size (Cl 4.4)
5	pH meter, glassware and reagents as per 10 of IS 1060 (Pt 1/Sec 1)	pH value (Cl 4.5)
6	Tensile Testing Apparatus as per 12.3 of IS 1060 (Pt 1/Sec 1)	Tensile Index (Cl 4.6, Table 1)
7	Reflectometer with calibration and working standards as per IS/ISO 2470-1 : 2009	Brightness ISO (Cl 4.6, Table 1)
8	Reflectometer with calibration and working standards as per IS/ISO 2471 : 2008	Opacity (Cl 4.6, Table 1)
9	Cobb test apparatus, thermometer, water as per 13.2.2 of IS 1060 (Pt 1/Sec 1)	One minute Cobb test (Cl 4.6, Table 1)
10	Double fold testing machine such as the Schopper type as per 12.6 of IS 1060 (Pt 1/Sec 1)	Double Fold (Cl 4.6, Table 1)
11	Gloss meter with Gloss standards as per IS /ISO 8254-1:1999	Gloss (Cl 4.6, Table 1)
12	Bendtsen Type instrument as per IS 9894:1981	Smoothness (Bendtsen) (Cl 4.6, Table 1)
13	Ballistic Type of Tear Tester such as the Elmendorf as per 12.7 of IS 1060 (Pt 1/Sec 1)	Tear Index (Cl 4.6, Table 1)

**The list above is indicative and may not be taken as exhaustive**

ANNEX – B

**SCHEME OF INSPECTION AND TESTING  
FOR CERTIFICATION OF  
WRITING AND PRINTING PAPERS  
Part 2 Air Mail/Manifold, Cartridge Drawing and Cartridge White,  
Duplicating Absorbent and Duplicating Semi-absorbent and  
Poster Machine Glazed Types  
ACCORDING TO IS1848 (Part 2):2018  
(Fifth Revision)**

- 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. PACKING AND MARKING** -The Standard Mark as given in Schedule of the license shall be incorporated shall be stenciled or printed on each ream or reel of white printing paper or printed on the label applied to it in such a way that the mark is destroyed on opening the ream or reel; provided always that the paper in the ream or reel so marked conforms to every requirement of the specification,
  - 3.1 Packing and Marking shall be done as per the provisions of IS1848 (Part 2):2018. In addition, details of BIS Licence No. CM/L-\_\_\_\_ and 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, 50 tonnes of production or part thereof made on a particular machine continuously in period not exceeding 48 hours, shall constitute a control unit
  - 4.1 On the basis of test results, decision shall be taken regarding conformity of the control unit as a whole to the requirements of the specification.
- 5. LEVELS OF CONTROL** - The tests, as indicated in 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. STORAGE** – Instruction for storage as given in the Indian Standard shall be complied.
- 7. REJECTION** - 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. Any rejected material which is potentially re-salable be sheared or cut or deformed in such a manner that it cannot be used for any other purpose. A separate record shall be maintained giving information on quantity and batch number/control unit number, as applicable, relating to all such rejections/defective/sub-standard material of the production not conforming to the requirements of the Specification and the method of its disposal. 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: LEVELS OF CONTROL (Para 5 of the Scheme of Inspection and Testing)**

(1) Test Details			(2)	(3)		(4)	
			Test equipment requirement R:required (or) S: Sub-contracting permitted	Levels of Control		Remarks	
Clause	Requirements	Test Method		No. of Samples	Frequency		
		Clause	Reference				
4.1	General	4.1	IS 1848:2007	R	Each ream or reel -		
4.2	Substance	4.2	-do- , IS 1763:1961and IS 1060 (Part 5/Sec 5)	R	Six	Each control unit	
4.3	Thickness**	7	IS 1060 (Part 1)	R	-do-	-do-	* * Specified tolerance shall be permitted on the nominal thickness, if specified by the purchaser.
4.4	Size	4	IS 1064	R	Each ream or reel -		
4.5	pH	10	IS 1060 (Part 1)	R	Six	Each control unit	
4.6,4.7 & Table	a) Tensile Index i) Cross Direction ii) Machine direction		IS 1060 (Part 5/Sec 6)	R	-do- -do-	-do- -do-	

	b) Brightness*		IS/ISO 2470 (Part 1)	R	-do-	-do-	* In the case of coloured paper, the colour should be an approximate match to the shade approved by the purchaser. The requirement for brightness shall not apply in case of coloured paper and printed paper. Applicable only for white paper.
	c) Opacity%		IS/ISO 2471	R	-do-	-do-	
	d) One minute Cobb test		IS 1060 (Part 5/Sec 4)	R	-do-	-do-	
	e) Double Fold i) Cross Direction ii) Machine direction	12.6 12.6	IS 1060 (Part 6/Sec 3)	R	One ream or reel	Each control unit -do-	
	f) Gloss percent	15	IS/ISO 8254 (Part 1)	R	-do-	-do-	Applicable only for white paper.
4.6,4.7 & Table 1	g) Wax pick	8	IS 1060 (Part 3)	R	One ream or reel	Each control unit	
	h) Smoothness (Bendtsen)	3	IS 9894	R	-do-	-do-	
	j) Tear Index i) Cross Direction ii) Machine Direction		IS 1060 (Part 6/Sec 1)	R	-do- -do-	-do- -do-	

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 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.