

भारतीय मानक मसौदा
लेटरप्रेस हाफ़टोन स्याही, काली — विशिष्टि
(IS 7771 का दूसरा पुनरीक्षण)

Draft Indian Standard
Letterpress halftone ink, black — Specification
(*Second Revision of IS 7771*)

(*Not to be reproduced without the permission of BIS or used as an Indian Standard*)

ICS 87.080

Printing Inks, Stationery and Allied Products Sectional
Committee, CHD 14

Last date of comments: 10th December 2024

Printing Inks, Stationery and Allied Products Sectional Committee, CHD 14

FOREWORD

(*formal clauses will be added later*)

This standard was first published in 1975 and revised in 2004 to assist the printing ink manufacturers to prepare an ink satisfying the specific requirements of the printer and the print buyer. The requirements for composition, strike through and printing quality were modified and a new requirement for tack was added.

In this revision, Reference clause and Packing & Marking clause have been updated. Now, the standard has been updated based on the technological advancements that may have taken place since the last publication of the Standard.

Letterpress halftone ink is a special category of letterpress ink which has been widely used in halftone photo reproduction printing, generally on art paper. The major factors governing the quality of this class of ink are blackness, dispersion, covering power, drying time and printability of the ink.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the results of a test or analysis, shall be rounded off in accordance with IS 2 : 2022 'Rules for rounding off numerical values (*second revision*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Draft Indian Standard
LETTERPRESS HALFTONE INK, BLACK — SPECIFICATION
(First Revision)

1 SCOPE

This standard prescribes requirements and methods of sampling and test for Letterpress halftone ink, black.

2 REFERENCES

The standards listed below contain provisions, which through reference in this text, constitute provisions of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision and parties to agreement based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below:

<i>IS No.</i>	<i>Title</i>
IS 3680: 1987	Round printing ink containers (<i>first revision</i>)
IS 4395: 1987	Glossary of terms relating to inks and allied industries (<i>first revision</i>)
IS 4658: 2019	Specification for coated paper and board (Art and Chromo) (<i>second revision</i>)
IS 6931: 2023	Printing inks — Methods of test (<i>first revision</i>)

3 TERMINOLOGY

3.1 For the purpose of this standard, the definitions given in IS 4395, in addition to the following shall apply.

3.1.1 *Approved Sample* — The sample accepted by the indentor or inspection authority as the basis for supply/manufacture.

4 REQUIREMENTS**4.1 Composition**

The ink shall consist of a suitable dispersion of carbon black in oleoresinous varnish, vegetable and/or hydrocarbon oils and additives or toners (if required), as deemed to qualify for letterpress halftone printing on coated stock.

4.1.1 There are various kinds of letterpress printing machines and the inks shall have good print characteristics and good machine runnability on coated paper (*see* IS 4658).

4.1.2 The ink shall have sufficient colour strength to produce print matters of 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 16, 18 points range and shall be able to produce clear and sharp prints with no tilling-in or spreading of halftones, the prints shall be comparable to the prints obtained with approved standard sample with uniform print lay.

4.2 Hue

When tested by the method prescribed in IS 6931, the hue shall be comparable with the approved standard ink.

4.3 Tinting Strength

The tinting strength of the ink shall be within ± 5 percent of the approved/standard ink, when tested by the method prescribed in IS 6931.

4.4 Fineness of Dispersion

When tested for fineness of dispersion of pigment particles in the medium by the method prescribed in IS 6931 the material shall not be coarser than 6 μm .

4.5 Tack

When tested by the method prescribed in IS 6931 on any standard tack measuring instrument, the tack of the ink shall be within ± 5 percent of the approved/standard ink.

4.6 Printing Strength, Distribution and Covering Power

When tested by the method prescribed in IS 6931 on a standard printability tester, the ink shall be considered to possess satisfactory covering power and distribution property if no white areas or specks show through the dried film of the ink.

4.7 Strike Through

The ink shall not exhibit any strike through when tested by the method prescribed in IS 6931.

4.8 Drying Time

The ink shall dry as quickly as the approved/standard ink when tested by the method prescribed in IS 6931.

4.9 Setting Time

The setting time of the ink shall be equal to that of approved/standard ink when tested by the method prescribed in IS 6931.

4.10 Printing Quality

4.10.1 The ink shall pass the test prescribed in **4.10.1.1**.

4.10.1.1 Make a suitable block or plate of a series of rectangular screen 54, 40, 35 and 25 lines/cm for printing on coated paper (*see* IS 4658) to be used on a standard printability tester or a small proofing machine with measured volume of ink.

4.10.2 The ink shall pass the requirement of the test, if the prints are identical to those obtained with approved standard sample.

NOTE — Screen 54 is ruled in such a manner that it has 54 opaque and 54 clear lines/cm, the opposite sides of which are equal and parallel, and all four angles are at right angles.

5 PACKING AND MARKING

5.1 Packing

The material shall be suitably packed in containers as agreed to between the purchaser and the supplier (*see* IS 3680).

5.2 Marking

The material shall be securely closed and legibly marked with the following details:

- a) Description of the material;
- b) Indication of the source of manufacture;
- c) Month and year of manufacture, and effective shelf life;
- d) Net mass of the material; and
- e) Lot number in code or otherwise to enable the batch of manufacture to be traced from records.

5.2.1 BIS Certification Marking

The use of the Standard Mark is governed by the provisions of the *Bureau of Indian Standard Act, 1986* and the Rules and Regulations made thereunder. The details of conditions under which the license for use of the Standard Mark may be granted to manufacturers or producers may be obtained from the Bureau of Indian Standards.

6 SAMPLING

Representative samples of the material shall be drawn and adjudged as prescribed in IS 6931.