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मानक

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Mazdoor Kisan Shakti Sangathan

“The Right to Information, The Right to Live”

“पुराने को छोड़ नये के तरफ”

Jawaharlal Nehru

“Step Out From the Old to the New”

IS 2105 (1994): Letterpress Ink, Black, General Purpose  
[CHD 14: Printing, Inks, Stationary and Allied Products]



“ज्ञान से एक नये भारत का निर्माण”

Satyanarayan Gangaram Pitroda

“Invent a New India Using Knowledge”



“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”



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भारतीय मानक

सामान्य उपयोग के लिए लैटर प्रेस  
काली स्याही — विशिष्टि

( दूसरा पुनरीक्षण )

*Indian Standard*

**LETTERPRESS INK, BLACK, GENERAL  
PURPOSE — SPECIFICATION**

*( Second Revision )*

UDC 667.521

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**BUREAU OF INDIAN STANDARDS**  
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG  
NEW DELHI 110002

## FOREWORD

This Indian Standard ( Second Revision ) was adopted by the Bureau of Indian Standards, after the draft finalized by the Printing Inks Sectional Committee had been approved by the Chemical Division Council.

The ink covered in this standard is intended for printing on white printing paper, newsprint, etc, of varying substance and texture by letterpress flat-bed printing machines, where the printing dries by absorption.

This standard was originally published in 1962 and subsequently revised in 1975. In this second revision of the standard , the requirements of composition and fineness of dispersion have been modified. In the first revision of the standard, the requirement of blackness was deleted from the standard as the nigrometer prescribed for its determination had become obsolete instrument. It was, however, decided that the requirement would be reintroduced as and when a suitable method of test for its determination is evolved.

The composition of the technical committee responsible for the preparation of this standard is given in Annex A.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values (*revised*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

## *Indian Standard*

# LETTERPRESS INK, BLACK, GENERAL PURPOSE — SPECIFICATION

( *Second Revision* )

### 1 SCOPE

This standard prescribes requirements and methods of sampling and test for letterpress ink, black, for general purposes for use in flat-bed letterpress printing machines.

### 2 REFERENCES

The Indian standards listed below are necessary adjuncts to this standard:

<i>IS No.</i>	<i>Title</i>
3680 : 1987	Round printing ink containers ( <i>first revision</i> )
4395 : 1987	Glossary of terms relating to inks and allied industries ( <i>first revision</i> )
6931 : 1972	Methods of test for printing inks

### 3 TERMINOLOGY

3.1 For the purpose of this standard, the definitions given in IS 4395 : 1987, in addition to the following, shall apply.

#### 3.1.1 *Approved/Standard Sample*

The sample accepted by the indenter or inspection authority as the basis of supply/manufacture.

### 4 REQUIREMENTS

4.1 The material shall be well ground and non-abrasive. It shall distribute freely, work sharp and dry satisfactorily by penetration.

#### 4.2 *Composition*

The ink shall contain not less than 15 percent by mass of solvent extracted residue when determined by the method prescribed in 4.12 of IS 6931 : 1972.

4.2.1 There are various kinds of letterpress printing machines and the inks shall have good print characteristics and good machine runnability on papers which are white printing (machine finished), antique and similar papers.

4.2.2 The ink shall have sufficient colour strength to produce print matters of 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 16, and 18 points range. The ink shall be able to produce clear and sharp prints with no 'filling-in'

or 'spreading-of' of type matters, and uniform print lay in the solid prints with no uncovered areas. The prints shall be easy to read and shall neither be too black nor too light.

NOTE — Normally inks which produce good prints in the 5, 6, 7 and 8 point type range will also produce prints with the higher type points.

#### 4.3 *Hue*

The hue shall be comparable with the approved/standard ink when tested by the method prescribed in 4.1 of IS 6931 : 1972.

#### 4.4 *Tinting Strength*

The tinting strength of the ink shall be within  $\pm 5$  percent of the approved standard ink, when tested by the method prescribed in 4.2 of IS 6931 : 1972.

#### 4.5 *Fineness of Dispersion*

The material shall not be coarser than 13 microns when tested for fineness of dispersion of pigment particles in the medium by the method prescribed in 4.5 of IS 6931 : 1972.

#### 4.6 *Density*

The density of the ink when tested by the method prescribed in 4.3.3 of IS 6931 : 1972 shall be within  $\pm 5$  percent of the approved/standard ink.

#### 4.7 *Printing Strength and Covering Power*

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 when tested by the method prescribed in 4.6 of IS 6931 : 1972.

#### 4.8 *Strike Through and Show Through*

The ink shall not exhibit and strike through and show through when tested by the method prescribed in 4.7 of IS 6931 : 1972.

#### 4.9 *Drying Time*

The ink shall dry as quickly as the approved/standard ink when tested by the method prescribed in 4.9 of IS 6931 : 1972.

#### 4.10 Setting Time

The setting time of the ink shall be equal to that of approved/standard ink when tested by the method prescribed in 4.10 of IS 6931 : 1972.

### 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 : 1966).

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

- a) Name and colour (black) 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 containers may also be marked with the Standard Mark of the Bureau.

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

### 6 SAMPLING

6.1 Representative samples of the material shall be drawn and adjudged as prescribed in Annex A of IS 6931 : 1972.

**ANNEX A**  
**(Foreword)**  
**COMMITTEE COMPOSITION**

**Printing Inks Sectional Committee, CHD 029**

<p><i>Chairman</i> DR P. K. DUTT</p> <p><i>Member</i> SHRI S. DUTT (<i>Alternate</i> to Dr P. K. Dutt)</p> <p>SHRI C. D. ANAND SHRI J. S. RAWAT (<i>Alternate</i>) SHRI JASBIR SINGH (<i>Alternate</i>) SHRI H. A. BARODAWALA SHRI Z. A. SABIR (<i>Alternate</i>) SHRI V. N. CHABRA SHRI J. P. SINGH (<i>Alternate</i>) SHRI Y. M. CHANDHOK SHRI M. CHANDHOK (<i>Alternate</i>) SHRI H. L. CONTRACTOR SHRI P. P. KUMAR (<i>Alternate</i>) SHRI HBERALAL SHRI D. R. ROHILLA (<i>Alternate</i>) SHRI U. D. LAAD SHRI ANUPAM DAS (<i>Alternate</i>) SHRI P. MAJUMDAR SHRI B. M. SOOD (<i>Alternate</i>) SHRI GANGA PRAKASH SHRI S. M. KORDE (<i>Alternate</i>) SHRI V. RAMACHANDRAN SHRI R. K. SHAH SHRI D. M. SATHAYE (<i>Alternate</i>) SHRI D. M. SATHAYE SHRI S. S. SATHAYE (<i>Alternate</i>) SHRI D. M. SHARMA SHRI G. D. DHINGRA (<i>Alternate</i>) SHRI K. SATYANARAYANA SHRI P. N. N. MENON (<i>Alternate</i>) SHRI V. K. SHARMA SHRI P. SUBRAMANIAM SHRI SURINDAR KUMAR SHRI S. TALAPATRA DR K. K. TALWAR SHRI S. K. VERMA SHRI H. A. ZADAR (<i>Alternate</i>) SHRI K DENAL K. BASU ROY SHRI P. K. HEADER (<i>Alternate</i>) REPRESENTATIVE REPRESENTATIVE DR R. K. SINGH, Director (Chem)</p>	<p><i>Representing</i> Coates of India Ltd, Calcutta</p> <p>Directorate General of Technical Development, New Delhi</p> <p>Zenith Tin Works, Bombay</p> <p>All India Federation of Master Printers, New Delhi</p> <p>Asian Ink Company, New Delhi</p> <p>Rainbow Ink &amp; Varnish Mfg Co Pvt Ltd, Bombay</p> <p>Bank Note Press, Dewars</p> <p>Poyesha Industrial Co Ltd, Thane</p> <p>National Test House, Calcutta</p> <p>Currency Note Press, Nashik Road</p> <p>ITC Printing &amp; Packaging Division, Madras All India Printing Ink Manufacturing Association, Bombay</p> <p>United Inks &amp; Varnish Company, Bombay</p> <p>India Security Press, Nashik Road</p> <p>Publications and Information Directorate (CSIR), New Delhi</p> <p>Kriskem Industries, Ghaziabad Thomson Press (India) Ltd, Faridabad The Hindustan Times, New Delhi Survey of India, Dehra Dun Paper Products Company Ltd, Bombay Directorate of Printing, New Delhi</p> <p>JBA Printing Inks Ltd, Bombay</p> <p>The Statesman, New Delhi Organic Coatings Pvt Ltd, Bombay Director General, BIS (<i>Ex-officio Member</i>)</p> <p><i>Member Secretary</i> SHRI T. RANGASAMY Joint Director (Chem), BIS</p>
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