

# इंटरनेट

# मानक

## Disclosure to Promote the Right To Information

Whereas the Parliament of India has set out to provide a practical regime of right to information for citizens to secure access to information under the control of public authorities, in order to promote transparency and accountability in the working of every public authority, and whereas the attached publication of the Bureau of Indian Standards is of particular interest to the public, particularly disadvantaged communities and those engaged in the pursuit of education and knowledge, the attached public safety standard is made available to promote the timely dissemination of this information in an accurate manner to the public.

“जानने का अधिकार, जीने का अधिकार”

Mazdoor Kisan Shakti Sangathan

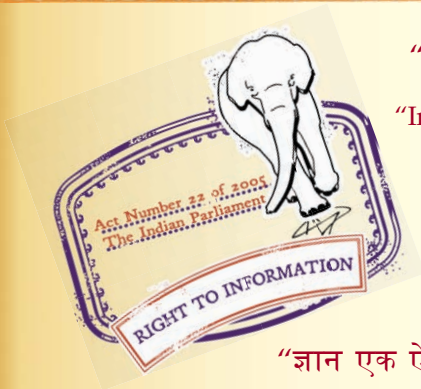
“The Right to Information, The Right to Live”

“पुराने को छोड़ नये के तरफ”

Jawaharlal Nehru

“Step Out From the Old to the New”

IS 10810-27 (1984): Methods of Test for Cables, Part 27:  
Ash Content Test of Insulating Paper [ETD 9: Power Cables]



“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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*Indian Standard*

**METHODS OF TEST FOR CABLES**

**PART 27 ASH CONTENT TEST OF INSULATING PAPER**

**1. Scope** — Covers method for determination of the ash content in insulating paper for electric cables.

**2. Significance** — Any inorganic impurity in insulating paper tends to reduce its dielectric property. Since the presence of inorganic impurities cannot be eliminated, so this test is performed to determine the quantity of inorganic impurities in insulating paper.

**3. Terminology** — The ash content of the paper is expressed as percentage by mass ( calculated on dry basis ).

**4. Apparatus**

**4.1 Crucible** — Of platinum or of fused aluminium or of porcelain or of silica having tightly fitting lid.

**4.2 Desiccator**

**4.3 Muffle Furnace**

**4.4 Balance** — Accuracy 0.1 mg.

**5. Material** — No material other than specimen is required.

**6. Test Specimen** — Paper sample, 1 g *Min.*

**7. Conditioning** — The paper shall be dried to constant mass at a temperature of 100 to 105°C and weighed to an accuracy of 0.1 mg in an ignited and weighed crucible which does not change its mass under ignition conditions.

**8. Procedure**

**8.1** The test sample reweighed after conditioning shall be ignited in the crucible in a muffle furnace or by means of a gas burner. To avoid loss of small particles, the lid of the crucible shall be in place during the initial ignition of the paper. At first the paper shall be heated to charring and then the temperature shall be raised to  $900 \pm 25^\circ\text{C}$ . When this temperature is attained the lid of the crucible shall be slid to one side until combustion is complete, care being taken at all times to protect the contents of the crucible from air draughts.

**8.2** When the paper is completely burnt, as indicated by the absence of black particles, the crucible with its lid on shall be removed to a desiccator and allowed to cool to ambient temperature.

**8.3** The crucible and its contents shall then be weighed to nearest 0.1 mg and the ignition and weighing repeated until the mass is constant.

**9. Tabulation of Observations**

| Sample No. | Weight of the Sample taken ( Conditioned )<br>$W_1$ | Weight of Empty Crucible<br>$W_2$ | Weight of the Crucible after Ignition Including Content<br>$W_3$ | Weight of Ash<br>$W_3 - W_2$ |
|------------|-----------------------------------------------------|-----------------------------------|------------------------------------------------------------------|------------------------------|
|            |                                                     |                                   |                                                                  |                              |
|            |                                                     |                                   |                                                                  |                              |
|            |                                                     |                                   |                                                                  |                              |

Adopted 14 March 1984

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**IS : 10810 ( Part 27 ) -1984**

**10. Calculation** — Ash content, percent =  $\frac{W_3 - W_2}{W_1} \times 100$

**11. Report**

**11.1 Ash Content of Insulating Paper**

Cable Type

Batch No./Lot No.

Cable No./Drum No.

Date of Testing

**11.2 Results**

Reference specification \_\_\_\_\_

| Specimen<br>No. | Percentage of Ash Content |           |
|-----------------|---------------------------|-----------|
|                 | Observed                  | Specified |

**11.3 Conclusion** — The specimen meet/does not meet the requirement of specification.