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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

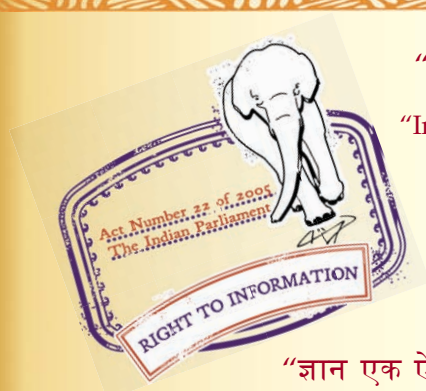
“Step Out From the Old to the New”

IS 13435-3 (1992): Acrylic based polymer waterproofing material - Methods of test, Part 3: Determination of capillary water take-up [CED 41: Waterproofing and Damp-Proofing]

“ज्ञान से एक नये भारत का निर्माण”

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“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

एक्रिलिक पर आधारित पॉलिमर
जल-सह सामग्रियाँ — परीक्षण पद्धति

भाग 3 कैपिलरी में पानी का उठान ज्ञात करना

Indian Standard

ACRYLIC BASED POLYMER WATERPROOFING
MATERIALS — METHODS OF TEST

PART 3 DETERMINATION OF CAPILLARY WATER TAKE-UP

UDC 691.175.774.32 : 699.82 : 543.54

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BUREAU OF INDIAN STANDARDS
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FOREWORD

This Indian Standard (Part 3) was adopted by the Bureau of Indian Standards, after the draft finalized by Waterproofing and Damp-Proofing Sectional Committee had been approved by the Civil Engineering Division Council.

Acrylic based polymers are now extensively used in the country for waterproofing and damp-proofing purposes, necessitating the need of formulating a specification on the product. For evaluating the quality and performance characteristics of the product, standardized test methods are necessary to guide manufacture and users of the product.

Methods of tests for acrylic based polymer waterproofing material have been covered in the following parts:

- Part 1 Determination of solid content
- Part 2 Determination of coarse particles
- Part 3 Determination of capillary water take-up
- Part 4 Determination of pH value
- Part 5 Determination of minimum film forming temperature and white point
- Part 6 Alkali resistance test

While formulating the above standards the Committee has taken into consideration the facilities available in the country and the practice prevailing in other countries.

In reporting the results of a test or analysis made in accordance with this standard, if the final value, observed or calculated, is to be rounded off, it shall be done in accordance with IS 2 : 1960 'Rules for rounding off numerical values (revised) '.

Indian Standard

ACRYLIC BASED POLYMER WATERPROOFING MATERIALS — METHODS OF TEST

PART 3 DETERMINATION OF CAPILLARY WATER TAKE-UP

1 SCOPE

1.1 This standard describes method of determination of capillary water take-up, that is the amount of water that penetrates an acrylic based polymer waterproofing material as a function of time and area.

2 REFERENCES

The Indian Standard IS 2185 (Part 3) : 1984 'Specification for concrete masonry units: Part 3 Autoclaved cellular aerated concrete blocks (first revision)' is necessary adjunct to this standard.

3 APPARATUS

Following apparatus shall be used for performing the test:

- a) Aerated concrete slabs of density 500 kg/m³ having size 240 mm × 240 mm × 45 mm, manufactured as per IS 2185 (Part 3) : 1984; and
- b) Plastic pan capable of accommodating one or more horizontal specimen.

4 PREPARATION OF SPECIMEN AND PROCEDURE

4.1 For preparing specimen a coating of the dispersion to be tested shall be applied on the aerated concrete slab and shall be let dry. After the specimen coating has dried, the sides of the concrete slab shall be sealed with polyurethane finish.

4.2 The coated slabs shall be kept for 28 days at $27 \pm 2^{\circ}\text{C}$ and 65 ± 5 percent relative humidity and weighed. Weighed slabs shall then be placed with the coating downwards in water of 10 mm depth in the plastic pan.

4.3 After 24 h, the slabs shall be removed from the water and reweighed.

NOTE — At least three samples shall be used for such observation.

5 RESULTS

$$\begin{aligned}\text{Capillary water take-up} &= \frac{w_2 - w_1}{\sqrt{24}} \\ &= 0.204 (w_2 - w_1)\end{aligned}$$

where

w_1 = weight of coated slab after 28 days of conditioning, and

w_2 = weight of coated slab after keeping it in water for 24 h.

6 REPORTING OF RESULTS

The test report shall give the following information:

- a) Date of preparation of sample,
- b) Date of putting in water,
- c) Date of testing, and
- d) Average capillary water take-up.

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Doc : No CED 41 (5069)

Amendments Issued Since Publication

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**AMENDMENT NO. 1 DECEMBER 2000
TO
IS 13435 (PART 3) : 1992 ACRYLIC BASED
POLYMER WATERPROOFING MATERIALS —
METHODS OF TEST**

PART 3 DETERMINATION OF CAPILLARY WATER TAKE-UP

[*Page 1, clause 3(a)*] — Substitute the following for the existing:

‘a) Specimen of size 240 mm × 240 mm × 45 mm to be cut from aerated concrete block of density 451 to 550 kg/m³, grade 1, having size 600 mm × 250 mm × 200 mm conforming to IS 2185 (Part 3).’

(CED 41)

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