



BSI Standards Publication

Test methods for repair materials for water-leakage cracks in underground concrete structures

Part 5: Test method for watertightness

National foreword

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A list of organizations represented on this committee can be obtained on request to its committee manager.

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Technical Specification

ISO/TS 16774-5

Test methods for repair materials for water-leakage cracks in underground concrete structures —

Part 5: Test method for watertightness

*Méthodes d'essai pour matériaux de réparation pour fissures
dues à l'eau dans les structures en béton —*

Partie 5: Méthode d'essai de l'étanchéité à l'eau

**Second edition
2024-08**



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Contents

Page

Foreword.....iv

Introduction.....v

1 Scope.....1

2 Normative references.....1

3 Terms and definitions.....1

4 Principle.....1

5 Apparatus.....2

6 Preparation.....2

6.1 Test specimen and artificial crack conditions.....2

6.2 Ambient conditions.....2

7 Procedure.....3

8 Presentation of results.....3

9 Test report.....3

9.1 Information on the repair material of the test target.....3

9.1.1 General.....3

9.1.2 Other information.....3

9.2 Information on the test.....4

Annex A (informative) Example test method.....5

Bibliography.....15

Foreword

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This document was prepared by Technical Committee ISO/TC 71, *Concrete, reinforced concrete and pre-stressed concrete*, Subcommittee SC 7, *Maintenance and repair of concrete structures*.

This second edition cancels and replaces the first edition (ISO/TS 16774-5:2017), which has been technically revised.

The main changes are as follows:

- in 6.1 a), a recommendation regarding the specification of the fine aggregate, as well as the necessary reference to the relevant standard, has been added;
- in 6.1 d), the text has been revised to provide clearer context.

A list of all parts in the ISO 16774 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

This document is linked to ISO/TR 16475. ISO/TR 16475 outlines six basic properties and the required performance levels of water-leakage repair materials; The ISO/TS 16774 series proposes sample testing methods for evaluating the respective properties of the repair materials.

The test methods in this document are intended to serve as reference for nations that have not yet developed a test method for the six required performance properties of water-leakage repair materials. Many of the dependent variables outlined in the reference test methods of this document are subject to change in accordance with the environmental conditions (temperature and humidity, chemical solution and concentration, width of movement activity, water pressure or water flow velocity, etc.) outlined in the standards used in respective countries.

In this document, ISO/TS 16774-1 and ISO/TS 16774-6, for the purpose of objectively comparing the performance of injected repair materials, artificial cracks of same width, height, and volume are used to control the usage of repair materials for each testing cycle and enable repetition of the same test methods under the same conditions. In this document, target ingredients are limited to injection materials outlined in ISO/TR 16475.

These permeability test procedures follow applied conditions outlined in different national testing parameters and requirements. As such, the results are only intended to provide a comparative performance evaluation of the waterproofing repair materials between different products of the same type of repair material with the same environmental conditions.

NOTE 1 This test method classifies and categorizes materials that are tested into families of similar properties for the purpose of making relative comparisons with the data results.

NOTE 2 Each individual repair material can be further tested in an actual construction site application for a complete assessment.

