

Building and construction sealants —

Part 1: Methods of test for homogeneity, relative density and penetration

Confirmed
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Committees responsible for this British Standard

The preparation of this British Standard was entrusted by the Elements and Components (of Diverse Materials) for Buildings Standards Policy Committee (ECB/-) to Technical Committee ECB/3, upon which the following bodies were represented:

- Aluminium Window Association
- Association of Sealant Applicators
- British Adhesives and Sealants Association
- Building Employers Confederation
- Department of the Environment (Building Research Establishment)
- Department of the Environment (Property Services Agency)
- Flat Glass Manufacturers' Association
- Glass and Glazing Federation
- Institution of Civil Engineers
- Refined Bitumen Association Ltd.
- Society of Architectural and Associated Technicians
- Society of Chemical Industry
- Water Services Association of England and Wales

This British Standard, having been prepared under the direction of the Elements and Components (of Diverse Materials) for Buildings Standards Policy Committee, was published under the authority of the Standards Board and comes into effect on 30 August 1991

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Foreword

This Part of BS 3712, prepared under the direction of the Elements and Components (of Diverse Materials) for Buildings Standards Policy Committee, is a new edition of and supersedes BS 3712-1:1985 which is withdrawn. This new edition has been necessitated by the need to delete the methods of test for extrudability (which has been published as BS EN 28394) and slump (which has been published as BS EN 27390). Attention is also drawn to BS EN 29048. No review of or technical amendment to the remaining methods of test in this Part of BS 3712 has been made.

BS 3712 provides a body of test methods suitable for the wide range of sealants of different types and properties now available on the market. The primary aim of these test methods is to enable the properties of sealants to be assessed and for their quality to be controlled, particularly in relation to their compatibility with other materials and to their suitability for application to building joints.

Methods of test are included in other Parts of this British Standard for the following sealant properties:

- *Part 2: Methods of test for seepage, staining, shrinkage, shelf life and paintability;*
- *Part 3: Methods of test for application life, skinning properties and tack-free time;*
- *Part 4: Method of test for adhesion in peel.*

It is recognized that the movement capability of a joint sealant is a cardinal property when specifying a material for a specific application. However, there are no generally applicable test methods for the assessment of this property within British Standards, since the withdrawal of DD 69:1980 in November 1989. Two new test methods for movement capability have been developed by ISO Technical Sub-Committee TC 59/SC8, which are to be adopted as European and British Standards. These are ISO 9046:1987 (BS EN 29046) “*Building construction — Sealants — Determination of adhesion/cohesion properties at constant temperature*”, which is appropriate for the assessment of sealants of predominantly plastic properties; and ISO 9047:1989 “*Building construction — Sealants — Determination of adhesion/cohesion properties at variable temperature*”, which is suitable for elastomeric sealants. Further work is in progress by the ISO Technical Sub-Committee to develop a test method for the assessment of the movement capability of high-performance elastomeric sealants capable of withstanding total movement of amplitudes greater than 25 % of the joint width. It is likely that in due course the resulting international standard will be adopted as a European Standard and as a British Standard.

Test methods to allow the assessment of durability of sealants in service are also needed, though progress in this field is likely to be gradual.

At present the following British Standard specifications for sealants are available:

- BS 2499, *Specification for hot applied joint sealants for concrete pavements.*
- BS 4254, *Specification for two-part polysulphide-based sealants.*
- BS 5212, *Cold applied joint sealant systems for concrete pavements.*
- BS 5215, *Specification for one-part gun grade polysulphide-based sealants.*
- BS 5889, *Specification for one-part gun grade silicone-based sealants.*

Although it is expected that in due course these prescriptive specifications will be superseded by appropriate performance specifications, they contain some methods of test appertaining to performance in service which are not at present included in BS 3712.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, pages i to iv, pages 1 to 8, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.