

Cold applied joint sealant systems for concrete pavements —

Part 2: Code of practice for the application and use of joint sealants

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- Association of Consulting Scientists
- British Adhesives and Sealants Association
- British Airports Authority
- British Tar Industry Association
- County Surveyors' Society
- Department of the Environment (Property Services Agency)
- Department of Transport
- Department of Transport (Transport and Road Research Laboratory)
- Institution of Civil Engineers
- Institution of Highways and Transportation
- Coopted members

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Foreword

This Part of BS 5212 has been prepared under the direction of the Road Engineering Standards Policy Committee. BS 5212:1975 has been revised in three Parts, namely:

- *Part 1: Specification for joint sealants;*
- *Part 2: Code of practice for the application and use of joint sealants;*
- *Part 3: Methods of test.*

BS 5212-1, BS 5212-2 and BS 5212-3 supersede BS 5212:1975 which is withdrawn.

Hot applied joint sealants are specified in BS 2499.

It has been assumed in the drafting of this standard that the execution of its provisions is entrusted to appropriately experienced people.

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.

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Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, 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.

1 Scope

This Part of BS 5212 gives recommendations for the preparation of joint sealant slots and for the application and site testing of cold applied joint sealants for use in joints in roads, airfields and other exposed concrete pavements. Although it applies mainly to new work the principles it contains apply to both new work and repairs, and recommendations for resealing are given in clause 8.

NOTE The titles of the publications referred to in this standard are listed on the inside back cover.

2 Definitions

For the purposes of this Part of BS 5212 the definitions given in BS 5212-1 apply together with the following.

2.1

bond breaker

a film or thin strip material applied at the base of a slot to prevent the bottom of the sealant from adhering

2.2

adhesion

the property of a sealant to stick to the sealant slot surfaces

2.3

ageing

the deterioration of a sealant on exposure to a specific environment

2.4

application life

the time after mixing the components of a sealant within which the material may successfully be applied to a joint at a stated temperature

2.5

cohesion

the property of a sealant to hold together by intermolecular attraction when subjected to tensile strain

2.6

compatibility

the property of a sealant to remain in contact with another material without unfavourable physical or chemical interactions

2.7

cure

irreversible transformation of a sealant from a liquid or plastic-like state into a hardened or rubber-like solid state

2.8

expansion joint

joint with compressible joint filler material placed full depth between pavement slabs to allow the slabs to expand and move closer together, and contract and move apart (see Figure 1)

2.9

contraction joint

joint to allow pavement slabs to contract and move apart, and subsequently expand and move together (see Figure 2)

2.10

tied joint

a joint where differential lateral or vertical displacement between pavement slabs is restrained by a tie, but rotation can occur

2.11

construction joint

joint between pavement slabs which have been constructed at different times where one face is cast against a construction form (see Figure 3)

2.12

longitudinal joint

joint between the edges of pavement slabs (see Figure 3)

3 Joint selection considerations

3.1 General

3.1.1 A seal is formed by applying liquid material into a sealant slot constructed at the top of a joint between concrete pavement slabs. The construction and preparation of the sealant slot is an important part of joint sealant formation, as the slot limits the dimensions and geometry of the sealant, and the joint sides are the surfaces to which the sealant will bond.

3.1.2 The dimensions and geometry of sealants used in road and airfield pavements should be specified and should take account of the length of slabs between joints and whether the joint is a contraction, tied or expansion joint.

3.1.3 When the joint sealant is compressed by closure of the joint it will tend to bulge upwards since the volume of the sealant remains constant. For this reason a sealant should be applied so that its top surface is below the level of the adjacent pavement surface in order that at no time during the joint movement cycle will the sealant extrude above the top surface of the concrete pavement and be subjected to vehicular damage.