

Table 2: European Standard test methods for protection and repair materials		Status	coating & surface treatment	repair mortars	structural bonding	injection products	andhorin g products	reinforce ment protectio
Standard <sup>1</sup>	Title		1504-2	1504-3	1504-4	1504-5	1504-6	1504-7
BS EN ISO 1517	Paints and varnishes. Surface -drying test. Ballotini method	P	√					
BS EN 1542	Measurement of bond strength by pull-off	P		√				
BS EN 1543	Determination of tensile strength development for polymers	P				√		
1544	Determination of creep under tensile stress at 23 & 50°C	Q					√	
BS EN 1766	Reference concretes for testing	P	√	√	√	√		
BS EN 1767	Infrared analysis	P	√					
BS EN 1770	Determination of coefficient of thermal expansion	P			√			
1771	Determination of injectability: wet medium – dry medium	F				√	√	
BS EN 1799	Tests to measure the suitability of structural bonding agents for application to concrete surface	P			√			
BS EN 1877-1	Reactive functions related to epoxy resins – Part 1: Determination of epoxy equivalent	P	√					
BS EN 1877-2	Reactive functions related to epoxy resins – Part 2: Determination of amine functions using the total basicity number	P	√					
1881-1	Pull-out test - Part 1: Uncracked concrete	Q					√	
BS EN 12188	Determination of adhesion steel-to-steel for characterisation of structural bonding agents	P			√			
BS EN 12189	Determination of open time	P			√			
BS EN 12190	Determination of compressive strength of repair mortar	P		√				
BS EN 12192-1	Granulometry analysis – Part 1: Test method for dry components of premixed mortar	P		√				
BS EN 12192-2	Granulometry analysis – Part 2: Test method for fillers for polymer bonding agents	P			√			
BS EN 12614	Determination of glass transition temperature of polymers	P						√
BS EN 12615	Determination of slant shear strength	P			√			

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<b>Standard <sup>1</sup></b>	<b>Title</b>		<b>1504-2</b>	<b>1504-3</b>	<b>1504-4</b>	<b>1504-5</b>	<b>1504-6</b>	<b>1504-7</b>
BS EN 12617-1	Part 1: Determination of linear shrinkage for polymers and surface protection systems	P	✓					
12617-2	Shrinkage of crack injection product formulated with polymer binder – Part 2: Volumetric shrinkage	F						✓
BS EN 12617-3	Part 3: Determination of early age linear shrinkage for structural bonding agents	P			✓			
BS EN 12617-4	Part 4: Determination of shrinkage and expansion	P		✓				
BS EN 12618-1	Adhesion and elongation capacity of injection products, with limited ductility	P						✓
12618-2	Determination of the adhesion of injection products, with or without thermal cycling – Part 2: Tensile bond method	F						✓
12618-3	Determination of the adhesion of injection products, with or without thermal cycling – Part 3: Slant shear method	F						✓
BS EN 12636	Determination of adhesion concrete to concrete	P			✓			
BS EN 12637-1	Compatibility of injection products – Part 1: Compatibility with concrete	P						✓
BS EN 12637-3	Compatibility of injection products – Part 3: Effect of injection products on elastomers	P						✓
BS EN 13057	Determination of resistance of capillary absorption	P		✓				
BS EN 13062	Thixotropy	P	✓					
BS EN 13294	Determination of stiffening time	P		✓				
BS EN 13295	Determination of resistance to carbonation	P		✓				
BS EN 13395-1	Determination of workability – Part 1: Test of flow of thixotropic repair mortars	P		✓				
BS EN 13395-2	Determination of workability – Part 2: Test for flow of grout or mortar	P		✓				

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BS EN 13395-3	Determination of workability – Part 3: Test for flow of repair concrete	P		✓				
BS EN 13395-4	Determination of workability – Part 4: Application of repair mortar overhead	P		✓				
BS EN 13396	Measurement of chloride ion ingress	P		✓				
BS EN 13412	Determination of modulus of elasticity in compression	P		✓				
BS EN 13529	Resistance to severe chemical attack	p	✓					
BS EN 13578	Compatibility on wet concrete	P	✓					
BS EN 13579	Drying test for hydrophobic impregnation	P	✓					
BS EN 13580	Water absorption and resistance to alkali for hydrophobic impregnations	P	✓					
BS EN 13581	Determination of loss of mass of hydrophobic impregnated concrete after freeze-thaw salt stress	P	✓					
BS EN 13584	Creep in compression	P		✓				
BS EN 13687-1	Determination of thermal compatibility – Part 1: Freeze-thaw cycling with de-icing salt immersion	P		✓				
BS EN 13687-1	Determination of thermal compatibility – Part 1: Freeze-thaw cycling with de-icing salt immersion	P		✓				
BS EN 13687-2	Determination of thermal compatibility – Part 2: Thunder shower cycling (thermal shock)	P		✓				
BS EN 13687-3	Determination of thermal compatibility – Part 3: Thermal cycling without de-icing salt impact	P		✓				
BS EN 13687-4	Determination of thermal compatibility – Part 4: Dry thermal cycling	P		✓				
BS EN 13687-5	Determination of thermal compatibility – Part 5: Resistance to temperature shock	P	✓					
BS EN 13733	Determination of the durability of structural bonding agents	P			✓			

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BS EN 13894-1	Determination of fatigue under dynamic loading – Part 1: During cure	P			√			
BS EN 13894-2	Determination of fatigue under dynamic loading – Part 2: After hardening	P			√			
BS EN 14068	Determination of watertightness (of injection products)	P						√
BS EN 14117	Determination of viscosity of cementitious injection products	P				√		
BS EN 14406	Determination of the expansion ratio and expansion evolution	P				√		
14497	Determination of the filtration stability	F				√		
14498	Volume and weight changes after air drying and water storage cycles	F				√		
14629	Determination of chloride content in hardened concrete	Q						√
14630	Determination of carbonation depth in hardened concrete by the phenolphthalein method	Q						√
ISO 2811-1	Methods of test for paints. Determination of density by the pyknometer method. Also available as BS 3900-A19:1998		√					
ISO 2811-2	Methods of test for paints. Determination of density by the immersed body (plummet) method. Also available as BS 3900-A20:1998		√					
EN ISO 3219	Determination of viscosity using a rotational viscometer with defined shear rate	P	√					
EN ISO 3251	Paints and varnishes - Determination of non-volatile matter of paints, varnishes and binders for paints and varnishes		√					
EN ISO 3451-1	Plastics - Determination of ash - Part 1: General methods		√					
BS EN ISO 6272	Paints and varnishes. Falling-weight test	P	√					

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EN ISO 9514	Paints and varnishes. Determination of the pot-life of liquid systems. Preparation and conditioning of samples and guidelines for testing	P	√		√			
EN ISO 11358	Plastics - Thermogravimetry (TG) of polymers - General principles		√					

## Notes

The current status column indicates whether standards are published or under development, as follows: Published (and available), at Formal Vote (likely to be available within a few months), at CEN Enquiry. For previous users, there are now no documents at the working Draft stage.

After CEN Enquiry standards are prepared for formal vote by the Standards bodies and CEN Central Secretariat. This takes an indeterminate time. It is not possible to predict when a draft will be issued for formal vote.

Issue of a Draft for Comment is advertised in BSI's Standards Update and public comment is invited. The draft is also circulated to B/517/8, on which the CRA, Concrete Society, ICE and IStructE are represented.

Guide to the numbering of British and European Standards

European Standards are numbered according to the following convention:

BS EN 98765-1:2020      Where 98765 is the number of the standard  
    1 indicates that this is part 1  
    2020 is the year in which this version was published