

Uniclass	
L5214	
CI/SIB	
(47)	Ne5

August 2008

Legislation

CE marking

The CE marking is applied to many products sold or used within the European Economic Area as a declaration by the manufacturer that the product meets the requirements of any relevant European Directives.

Products used for building and construction work are covered by the European Construction Products Directive. This specifies that roofing slate must comply with a European Standard, EN 12326* and, if it does so, it qualifies for a CE marking.

In the UK, the Building Regulations specify that if a British or European Standard exists for a construction product, these standards must be complied with. As a result, only roofing slate tested to EN 12326 and, therefore, carrying a CE marking can be used.

* This European Standard has been adopted by the UK as a British Standard, BS EN 12326, and supersedes other British Standards relating to these products.

European Standard EN 12326

EN 12326 ensures that all roofing slates sold throughout Europe are tested in the same way, using the same methodology, regardless of their origin. Providing they meet some very basic requirements they qualify for a CE marking which means they can be used for building work within the UK.

However, the fact that they've been tested and have received a CE marking does not give an indication of their relative quality or likely performance in use – this can only be assessed by interpreting the results of the EN 12326 tests.

This test information has to be provided with the slates and appears on both a test certificate and a label fixed to the crate.

Understanding the results – what makes a good slate?

Providing you understand the significance of the various tests and know what to look for, making a good, considered judgement is relatively straightforward.

The notes against the test certificate illustrated (overleaf) show what to look for to be able to tell the difference between a 'great slate', a mediocre one and 'one for the bin'. And if a test certificate isn't available then it's best to play safe and reject the slates.

Although the format of the test certificate and crate label varies from company to company, the same information should appear as it reports the results of a specific set of tests.

Dimensiones y Variación Dimensional: Cumple	Dimension and Dimensional Variation: Complies
Espesor nominal y variación: Cumple	Nominal thickness and Variation: Complies
Resistencia Mecánica (MoR): Transversal: 55.88 MPa Longitudinal: 80.51 MPa	Mechanical Resistance (MoR): Transversal: 55.88 MPa Longitudinal: 80.51 MPa
Absorción de Agua: Cumple A1: 0.22%	Water Absorption: Complies A1: 0.22%
Contenido en Carbonato: Cumple: 0.4%	Carbonate Content: Complies: 0.4%
Ciclo Térmico: T1	Thermal Cycling: T1
Exposición al SO₂: S1	Exposure SO₂: S1
Contenido en Carbono elemental: Cumple: 0.52%	Non-Carbonate Content: Complies: 0.52%
Comportamiento al fuego externo: Se considera que cumple	External Fire Performance: Deemed to satisfy
Reacción al fuego: Cumple clase A1	Reaction to Fire: Complies Class A1
Emisión de sustancias peligrosas: Ninguna en las condiciones de uso especificadas	Release of Dangerous Substances: None in specified conditions of use



Año / Year
2008

EN 12326

PIZARRA NO CARBONATA
PARA CUBIERTAS Y FACHADAS
NON-CARBONATED SLATE
FOR ROOFING AND CLADDING

Carbaljal de la Romana
La Baña
León
Spain



EXCLUSIVE NATURAL SLATE

ULTRA

DEL CARMEN BLUE-BLACK

T: +44 (0) 20 8961 7725 W: www.ssqgroup.com

Piezas / Pieces
Medida / Size





ULTRA

DEL CARMEN BLUE-BLACK



Carbajal de la Romana - La Baña - León - Spain

Date of Test: 2008

EN 12326 - 1:2004

Roofing and External Cladding Slate

Dimensions and dimensional variation		Complies			
Nominal thickness and variation		Complies			
Mechanical Resistance	MoR	Transverse	55.88 MPa	Longitudinal	80.51 MPa
	Mean Failure Load	Transverse	511 N/mm	Longitudinal	684 N/mm
Carbonate content		Complies : 0.4%			
Durability / Water absorption		Complies with code A1 : 0.22%			
Durability / Freeze thaw cycling		Complies			
Durability / Thermal cycling		Complies with code T1			
Durability / Sulfur dioxide exposure		Complies with code S1			
Durability / Non - carbonate carbon content		Complies: 0.52%			
Release of dangerous substances		None in conditions of use as roofing or external cladding			
External fire performance		Deemed to satisfy			
Reaction to fire		Deemed to satisfy class A1			

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The following notes refer to the SSQ roofing slate test certificate shown opposite: where appropriate, **blue is good, red is bad!**

- 1 The CE marking. This shows that the product complies with the relevant European Directive which, in the case of roofing slate, means that it's been tested in accordance with EN 12326.
- 2 The address of the supplier.
- 3 The date the tests were carried out. Note: EN 12326 specifies that roofing slate is tested every two years.
- 4 The European Standard that the product has been tested to – which, of course, is EN 12326.
- 5 The products the standard refers to.
- 6 Confirmation that the roofing slates meet the dimensions advertised by the manufacturer and are within the tolerances stated.
- 7 Confirmation that the roofing slates meet the nominal thickness advertised by the manufacturer.
- 8
 - i) This indicates the strength of the slates. Samples are put under load until they break (see note 9), the data being used to calculate the Modulus of Rupture (MoR) both across their width and along their length. **Strong slates have a MoR above 60MPa.**
 - ii) The Modulus of Rupture test is also used to calculate the lower expected strength value which is then used to calculate the minimum thickness of the slate.
- 9 These are the average loads needed to break the samples across their width and along their length. These results are used to calculate the MoR (see the previous note).
- 10 This gives an indication of the amount of carbonate in the slate. There are three classifications: **< 5% / 5-20% / > 20%** – **generally the lower the figure, the better the slate.** The result also determines how the Sulphur Dioxide Test is carried out (see note 14).
- 11 This gives an indication of the rock's water absorbency and how a slate may react when wet. Values of **≤ 0.6%** are classed as **A1**; values above **0.6%** are classed as **A2**.
- 12 The Freeze / Thaw Test is only carried out if the slate is graded A2 in the Water Absorption Test. The test tries to predict the loss of strength caused as water in the slate freezes, damaging its structure. **A2 roofing slates are potentially a high risk in the UK.**
- 13 The Thermal Cycle Test relates to the stability of any pyrite in the slate, predicting its reaction and whether it will oxidise (rust). There are three classifications – **T1 / T2 / T3** – which indicate the extent of the damage this may cause to the slate. **T1 denotes the slate is free of pyrite – T3 indicates potential structural damage, eg: holes, or runs of discolouration.**
- 14 The Sulphur Dioxide Test indicates how the slate will perform in an acidic environment, which is more typical in cities. Acidic deposition can dissolve carbonate in the slate causing material loss and structural weakness. Slate with a carbonate content of up to 20% is classified as either **S1 / S2 / S3**, a result that directly affects the thicknesses of the roofing slate that can be produced. **Slates with a carbonate content above 20% are tested in a different way and should be considered as probably not fit for purpose.**
- 15 This indicates the amount of carbon in non-carbonate form that's present in the slate eg: graphite, oil and other organic matter. The standard stipulates a **maximum limit of 2%** so **the lower the percentage beneath this the better.**
- 16 Release of Dangerous Substances. Self-explanatory.
- 17 External Fire Performance. Self-explanatory.
- 18 Reaction to Fire. Self-explanatory.

Reassuringly, all SSQ slates have been tested to EN 12326, carry the CE marking and have received A1, T1 and S1 classifications in the three key tests.

Quick quality checklist

A brief summary to make sure you choose a good-quality roofing slate:

Feature	Test result	Note	Item
Strength (MoR)	> 60MPa	–	8
Carbonate content	< 3 %	< 3% and the lower better	10
Water absorption	A1	< 0.3% and the lower better	11
Free from oxidisation	T1	–	13
Sulphur dioxide (resistance to pollution)	S1	Avoid S2 or S3	14
Proof	A proven history of successful use in the UK		