

## ACCOMPANIMENT DOCUMENT / DECLARATION OF CONFORMITY

**Manufacturer:** Las Arcas

**EN 12326-1:2004**

**Comercial document number:** 10002      **Issue date:** 13/11/2007

**Comercial document issued by:** Cupa Pizarras S.A.

**Quarry or mine location:** Las Arcas.San Pedro de Trones. León ( España )

This document establishes conformity of the product described above and becomes uncomplete without the explanation of the essay results and the requests of the EN 12326-1:2004 Norm. The essays to which it refers and the criteria are included in the EN 12326-1:2004 and :2-2000 Norm.

|   |  |                                    |                   |                     |                   |
|---|--|------------------------------------|-------------------|---------------------|-------------------|
| <b>Sampling date:</b> 29/05/2007                                      | <b>Essay date:</b> 13/08/2007  |                                    |                   |                     |                   |
| <b>Product description and comercial name:</b>                        | Slate for roofing and exterior cladding.Cupa 10  |                                    |                   |                     |                   |
| <b>1 Dimensional tolerances</b>                                       | <b>Conformity</b>  |                                    |                   |                     |                   |
| <b>Sizes</b>  | 40x20 - 32x22 - 30x20 - 30x18 - 27x18 - 25x18 - 40x22 - 35x20 - 35x25 - 35x23 - 40x25 - 35x22  |                                    |                   |                     |                   |
| <b>Deviation of the declared lenght</b>                               | Complies < ±5mms   |                                    |                   |                     |                   |
| <b>Deviation of the declared width</b>                                | Complies < ±5mms   |                                    |                   |                     |                   |
| <b>Deviation of the orthogonality</b>                                 | Complies < ±1%   |                                    |                   |                     |                   |
| <b>Deviation of the edges linearity</b>                               | Complies < 5mms & <=1% lenght  |                                    |                   |                     |                   |
| <b>Type of slate according to the flat surface</b>                    | <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;"><b>Very smooth</b></td> <td style="width: 25%;"><b>Smooth</b></td> <td style="width: 25%;"><b>Normal</b></td> <td style="width: 25%;"><b>Texturised</b></td> </tr> </table> | <b>Very smooth</b>                 | <b>Smooth</b>     | <b>Normal</b>       | <b>Texturised</b> |
| <b>Very smooth</b>  | <b>Smooth</b>  | <b>Normal</b>                      | <b>Texturised</b> |                     |                   |
| <b>Deviation of the planicidad</b>                                    | <2%  |                                    |                   |                     |                   |
| <b>2 Thickness</b>  |  |                                    |                   |                     |                   |
| <b>Slate type for the calculation of the packaged slate thickness</b> | <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;"><b>Very smooth</b></td> <td style="width: 25%;"><b>Smooth</b></td> <td style="width: 25%;"><b>Normal</b></td> <td style="width: 25%;"><b>Texturised</b></td> </tr> </table> | <b>Very smooth</b>                 | <b>Smooth</b>     | <b>Normal</b>       | <b>Texturised</b> |
| <b>Very smooth</b>  | <b>Smooth</b>  | <b>Normal</b>                      | <b>Texturised</b> |                     |                   |
| <b>Nominal thickness and variation</b>                                | 3,75mm±25%   |                                    |                   |                     |                   |
| <b>3 Resistance</b>   |  |                                    |                   |                     |                   |
| <b>MoR characteristic</b>   | <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;"><b>Transverse</b></td> <td style="width: 25%;">48 Mpa</td> <td style="width: 25%;"><b>Longitudinal</b></td> <td style="width: 25%;">65 Mpa</td> </tr> </table>              | <b>Transverse</b>                  | 48 Mpa            | <b>Longitudinal</b> | 65 Mpa            |
| <b>Transverse</b>   | 48 Mpa   | <b>Longitudinal</b>                | 65 Mpa            |                     |                   |
| <b>Medium load breakages</b>  | <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;"><b>Transverse</b></td> <td style="width: 25%;">495 N</td> <td style="width: 25%;"><b>Longitudinal</b></td> <td style="width: 25%;">555 N</td> </tr> </table>                | <b>Transverse</b>                  | 495 N             | <b>Longitudinal</b> | 555 N             |
| <b>Transverse</b>   | 495 N  | <b>Longitudinal</b>                | 555 N             |                     |                   |
| <b>4 Water absorption</b>   | 0,15%  |                                    |                   |                     |                   |
| <b>5 Freeze thaw test</b>   | not required   |                                    |                   |                     |                   |
| <b>6 Thermic cycle essay</b>  | T1   |                                    |                   |                     |                   |
| <b>7 Carbonates content</b>   | 0,2%   |                                    |                   |                     |                   |
| <b>8 Essays of SO2 exposure</b>                                       | ≤ 20% en carbonates  | S1                                 |                   |                     |                   |
|   | > 20% en carbonates  | Thickness of the softened layer mm |                   |                     |                   |
| <b>9 Contents of carbonate non carbonated</b>                         | 0,34%  |                                    |                   |                     |                   |
| <b>10 Exposure to the external fire</b>                               | It is considered to comply   |                                    |                   |                     |                   |
| <b>11 Fire reaction</b>   | It is considered to comply with A1 class   |                                    |                   |                     |                   |
| <b>12 Dangerous substances emission</b>                               | None in normal conditions of use as a roof o external cladding   |                                    |                   |                     |                   |

**DTOR. CALIDAI**

## ACCOMPANIMENT DOCUMENT / DECLARATION OF CONFORMITY

**Manufacturer:** Las Arcas

**EN 12326-1:2004**

**Comercial document number:** 10001      **Issue date:** 13/11/2007

**Comercial document issued by:** Cupa Pizarras S.A.

**Quarry or mine location:** Las Arcas. San Pedro de Trones. León ( España )

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**Sampling date:** 29/05/2007      **Essay date:** 13/08/2007

**Product description and comercial name:** Slate for roofing and exterior cladding. Cupa 10      **Conformity**

**1 Dimensional tolerances**

**Sizes** 40x20 - 32x22 - 30x20 - 30x18 - 27x18 - 25x18 - 40x22 - 35x20 - 35x25 - 35x23 - 40x25 - 35x22

**Deviation of the declared lenght** Complies < ±5mms

**Deviation of the declared width** Complies < ±5mms

**Deviation of the orthogonality** Complies < ±1%

**Deviation of the edges linearity** Complies < 5mms & <=1% lenght

**Type of slate according to the flat surface** Very smooth    Smooth    Normal    Texturised

**Deviation of the planicidad** <1,5%

**2 Thickness**

**Slate type for the calculation of the packaged slate thickness** Very smooth    Smooth    Normal    Texturised

**Nominal thickness and variation** 3,75mm±25%

**3 Resistance**

**MoR characteristic** Transverse 48 Mpa    Longitudinal 65 Mpa

**Medium load breakages** Transverse 495 N    Longitudinal 555 N

**4 Water absorption** 0,15%

**5 Freeze thaw test** not required

**6 Thermic cycle essay** T1

**7 Carbonates content** 0,2%

**8 Essays of SO2 exposure**  
     ≤ 20% en carbonates S1  
     > 20% en carbonates Thickness of the softened layer mm

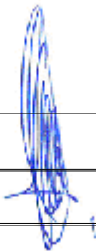
**9 Contents of carbonate non carbonated** 0,34%

**10 Exposure to the external fire** It is considered to comply

**11 Fire reaction** It is considered to comply with A1 class

**12 Dangerous substances emission** None in normal conditions of use as a roof o external cladding

**DTOR. CALIDAI**



## ACCOMPANIMENT DOCUMENT / DECLARATION OF CONFORMITY

**Manufacturer:** Las Arcas

**EN 12326-1:2004**

**Comercial document number:** 10003      **Issue date:** 13/11/2007

**Comercial document issued by:** Cupa Pizarras S.A.

**Quarry or mine location:** Las Arcas. San Pedro de Trones. León ( España )

This document establishes conformity of the product described above and becomes uncomplete without the explanation of the essay results and the requests of the EN 12326-1:2004 Norm. The essays to which it refers and the criteria are included in the EN 12326-1:2004 and :2-2000 Norm.

**Sampling date:** 29/05/2007      **Essay date:** 13/08/2007

**Product description and comercial name:** Slate for roofing and exterior cladding. Cupa 10      **Conformity**

**1 Dimensional tolerances**

**Sizes** 40x20 - 32x22 - 30x20 - 30x18 - 27x18 - 25x18 - 25x15 - 27x16 - 27x15 - 40x22 - 35x20 - 35x25 - 35x23 - 40x25 - 35x22 - 33x23 - 25x15

**Deviation of the declared lenght** Complies < ±5mms

**Deviation of the declared width** Complies < ±5mms

**Deviation of the orthogonality** Complies < ±1%

**Deviation of the edges linearity** Complies < 5mms & <=1% lenght

**Type of slate according to the flat surface** Very smooth    Smooth    Normal    Texturised

**Deviation of the planicidad** <2%

**2 Thickness**

**Slate type for the calculation of the packaged slate thickness** Very smooth    Smooth    Normal    Texturised

**Nominal thickness and variation** 3,75mm±35%

**3 Resistance**

**MoR characteristic** Transverse 48 Mpa    Longitudinal 65 Mpa

**Medium load breakages** Transverse 495 N    Longitudinal 555 N

**4 Water absorption** 0,15%

**5 Freeze thaw test** not required

**6 Thermic cycle essay** T1

**7 Carbonates content** 0,2%

**8 Essays of SO2 exposure** ≤ 20% en carbonates S1

> 20% en carbonates Thickness of the softened layer mm

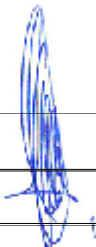
**9 Contents of carbonate non carbonated** 0,34%

**10 Exposure to the external fire** It is considered to comply

**11 Fire reaction** It is considered to comply with A1 class

**12 Dangerous substances emission** None in normal conditions of use as a roof o external cladding

**DTOR. CALIDAI**



## ACCOMPANIMENT DOCUMENT / DECLARATION OF CONFORMITY

**Manufacturer:** Las Arcas

### EN 12326-1:2004

**Comercial document number:** 10004      **Issue date:** 13/11/2007

**Comercial document issued by:** Cupa Pizarras S.A.

**Quarry or mine location:** Las Arcas. San Pedro de Trones. León ( España )

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**Sampling date:** 29/05/2007      **Essay date:** 13/08/2007

**Product description and comercial name:** Slate for roofing and exterior cladding. Cupa 10      **Conformity**

#### 1 Dimensional tolerances

**Sizes** 25x18 - 25x15 - 27x15 - 27x16 - 33x23

**Deviation of the declared lenght** Complies < ±5mms

**Deviation of the declared width** Complies < ±5mms

**Deviation of the orthogonality** Complies < ±1%

**Deviation of the edges linearity** Complies < 5mms & <=1% lenght

**Type of slate according to the flat surface**      **Very smooth**      **Smooth**      **Normal**      **Texturised**

**Deviation of the planicidad** <0,9%

#### 2 Thickness

**Slate type for the calculation of the packaged slate thickness**      **Very smooth**      **Smooth**      **Normal**      **Texturised**

**Nominal thickness and variation** 5mm±35%

#### 3 Resistance

**MoR characteristic**      **Transverse**      60 Mpa      **Longitudinal**      65 Mpa

**Medium load breakages**      **Transverse**      788 N      **Longitudinal**      816 N

**4 Water absorption** 0,15%

**5 Freeze thaw test** not required

**6 Thermic cycle essay** T1

**7 Carbonates content** 0,2%

**8 Essays of SO2 exposure**      ≤ 20% en carbonates      S1

> 20% en carbonates      Thickness of the softened layer      mm

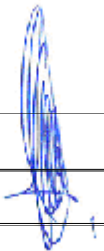
**9 Contents of carbonate non carbonated** 0,34%

**10 Exposure to the external fire** It is considered to comply

**11 Fire reaction** It is considered to comply with A1 class

**12 Dangerous substances emission** None in normal conditions of use as a roof o external cladding

**DTOR. CALIDAI**



## ACCOMPANIMENT DOCUMENT / DECLARATION OF CONFORMITY

**Manufacturer:** Las Arcas

**EN 12326-1:2004**

|   |                               |
|---|-------------------------------|
| <b>Comercial document number:</b> 10008   | <b>Issue date:</b> 13/11/2007 |
| <b>Comercial document issued by:</b> Cupa Pizarras S.A.                         |                               |
| <b>Quarry or mine location:</b> Las Arcas. San Pedro de Trones. León ( España ) |                               |

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|   |   |                                    |                   |                     |                   |
|---|---|------------------------------------|-------------------|---------------------|-------------------|
| <b>Sampling date:</b> 29/05/2007                                      | <b>Essay date:</b> 13/08/2007   |                                    |                   |                     |                   |
| <b>Product description and comercial name:</b>                        | Slate for roofing and exterior cladding. Cupa 10  |                                    |                   |                     |                   |
| <b>Conformity</b>   |   |                                    |                   |                     |                   |
| <b>1 Dimensional tolerances</b>                                       |   |                                    |                   |                     |                   |
| <b>Sizes</b>  | 40x20 - 32x22 - 30x20 - 30x18 - 27x18 - 25x18 - 25x15 - 27x16 - 27x15 - 40x22 - 35x20 - 35x25 - 35x23 - 40x25 - 35x22 - 33x23 - 50x25   |                                    |                   |                     |                   |
| <b>Deviation of the declared lenght</b>                               | Complies < ±5mms  |                                    |                   |                     |                   |
| <b>Deviation of the declared width</b>                                | Complies < ±5mms  |                                    |                   |                     |                   |
| <b>Deviation of the orthogonality</b>                                 | Complies < ±1%  |                                    |                   |                     |                   |
| <b>Deviation of the edges linearity</b>                               | Complies < 5mms & <=1% lenght   |                                    |                   |                     |                   |
| <b>Type of slate according to the flat surface</b>                    | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;"><b>Very smooth</b></td> <td style="width: 25%;"><b>Smooth</b></td> <td style="width: 25%;"><b>Normal</b></td> <td style="width: 25%;"><b>Texturised</b></td> </tr> </table> | <b>Very smooth</b>                 | <b>Smooth</b>     | <b>Normal</b>       | <b>Texturised</b> |
| <b>Very smooth</b>  | <b>Smooth</b>   | <b>Normal</b>                      | <b>Texturised</b> |                     |                   |
| <b>Deviation of the planicidad</b>                                    | <2%   |                                    |                   |                     |                   |
| <b>2 Thickness</b>  |   |                                    |                   |                     |                   |
| <b>Slate type for the calculation of the packaged slate thickness</b> | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;"><b>Very smooth</b></td> <td style="width: 25%;"><b>Smooth</b></td> <td style="width: 25%;"><b>Normal</b></td> <td style="width: 25%;"><b>Texturised</b></td> </tr> </table> | <b>Very smooth</b>                 | <b>Smooth</b>     | <b>Normal</b>       | <b>Texturised</b> |
| <b>Very smooth</b>  | <b>Smooth</b>   | <b>Normal</b>                      | <b>Texturised</b> |                     |                   |
| <b>Nominal thickness and variation</b>                                | 5mm±35%   |                                    |                   |                     |                   |
| <b>3 Resistance</b>   |   |                                    |                   |                     |                   |
| <b>MoR characteristic</b>   | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;"><b>Transverse</b></td> <td style="width: 25%;">60 Mpa</td> <td style="width: 25%;"><b>Longitudinal</b></td> <td style="width: 25%;">65 Mpa</td> </tr> </table>              | <b>Transverse</b>                  | 60 Mpa            | <b>Longitudinal</b> | 65 Mpa            |
| <b>Transverse</b>   | 60 Mpa  | <b>Longitudinal</b>                | 65 Mpa            |                     |                   |
| <b>Medium load breakages</b>  | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;"><b>Transverse</b></td> <td style="width: 25%;">788 N</td> <td style="width: 25%;"><b>Longitudinal</b></td> <td style="width: 25%;">816 N</td> </tr> </table>                | <b>Transverse</b>                  | 788 N             | <b>Longitudinal</b> | 816 N             |
| <b>Transverse</b>   | 788 N   | <b>Longitudinal</b>                | 816 N             |                     |                   |
| <b>4 Water absorption</b>   | 0,15%   |                                    |                   |                     |                   |
| <b>5 Freeze thaw test</b>   | not required  |                                    |                   |                     |                   |
| <b>6 Thermic cycle essay</b>  | T1  |                                    |                   |                     |                   |
| <b>7 Carbonates content</b>   | 0,2%  |                                    |                   |                     |                   |
| <b>8 Essays of SO2 exposure</b>                                       | ≤ 20% en carbonates   | S1                                 |                   |                     |                   |
|   | > 20% en carbonates   | Thickness of the softened layer mm |                   |                     |                   |
| <b>9 Contents of carbonate non carbonated</b>                         | 0,34%   |                                    |                   |                     |                   |
| <b>10 Exposure to the external fire</b>                               | It is considered to comply  |                                    |                   |                     |                   |
| <b>11 Fire reaction</b>   | It is considered to comply with A1 class  |                                    |                   |                     |                   |
| <b>12 Dangerous substances emission</b>                               | None in normal conditions of use as a roof o external cladding  |                                    |                   |                     |                   |

**DTOR. CALIDAI**

## ACCOMPANIMENT DOCUMENT / DECLARATION OF CONFORMITY

Manufacturer: Las Arcas

### EN 12326-1:2004

Comercial document number: 10006 Issue date: 13/11/2007

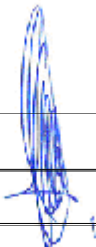
Comercial document issued by: Cupa Pizarras S.A.

Quarry or mine location: Las Arcas. San Pedro de Trones. León ( España )

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Sampling date: 29/05/2007 Essay date: 13/08/2007

| Product description and comercial name:                               |  | Slate for roofing and exterior cladding. Cupa 10  |               |                                 |                   | Conformity                               |
|---|--|---|---------------|---------------------------------|-------------------|--|
| <b>1 Dimensional tolerances</b>                                       |  |   |               |                                 |                   |  |
| <b>Sizes</b>  |  | 40x20 - 32x22 - 30x20 - 30x18 - 27x18 - 40x22 - 35x20 - 35x25 - 35x23 - 40x25 - 35x22 - 33x23 - 50x25 - 35x25 |               |                                 |                   |  |
| <b>Deviation of the declared lenght</b>                               |  |   |               |                                 |                   | Complies < ±5mms                         |
| <b>Deviation of the declared width</b>                                |  |   |               |                                 |                   | Complies < ±5mms                         |
| <b>Deviation of the orthogonality</b>                                 |  |   |               |                                 |                   | Complies < ±1%                           |
| <b>Deviation of the edges linearity</b>                               |  |   |               |                                 |                   | Complies < 5mms & <=1% lenght            |
| <b>Type of slate according to the flat surface</b>                    |  | <b>Very smooth</b>  | <b>Smooth</b> | <b>Normal</b>                   | <b>Texturised</b> |  |
| <b>Deviation of the planicidad</b>                                    |  |   | <1%           |                                 |                   |  |
| <b>2 Thickness</b>  |  |   |               |                                 |                   |  |
| <b>Slate type for the calculation of the packaged slate thickness</b> |  | <b>Very smooth</b>  | <b>Smooth</b> | <b>Normal</b>                   | <b>Texturised</b> |  |
| <b>Nominal thickness and variation</b>                                |  |   | 5mm±25%       |                                 |                   |  |
| <b>3 Resistance</b>   |  |   |               |                                 |                   |  |
| <b>MoR characteristic</b>   |  | <b>Transverse</b>   | 60 Mpa        | <b>Longitudinal</b>             | 65 Mpa            |  |
| <b>Medium load breakages</b>  |  | <b>Transverse</b>   | 788 N         | <b>Longitudinal</b>             | 816 N             |  |
| <b>4 Water absorption</b>   |  |   |               |                                 |                   | 0,15%                                    |
| <b>5 Freeze thaw test</b>   |  |   |               |                                 |                   | not required                             |
| <b>6 Thermic cycle essay</b>  |  |   |               |                                 |                   | T1                                       |
| <b>7 Carbonates content</b>   |  |   |               |                                 |                   | 0,2%                                     |
| <b>8 Essays of SO2 exposure</b>                                       |  | ≤ 20% en carbonates   |               |                                 |                   | S1                                       |
|   |  | > 20% en carbonates   |               | Thickness of the softened layer |                   | mm                                       |
| <b>9 Contents of carbonate non carbonated</b>                         |  |   |               |                                 |                   | 0,34%                                    |
| <b>10 Exposure to the external fire</b>                               |  |   |               |                                 |                   | It is considered to comply               |
| <b>11 Fire reaction</b>   |  |   |               |                                 |                   | It is considered to comply with A1 class |
| <b>12 Dangerous substances emission</b>                               |  | None in normal conditions of use as a roof o external cladding  |               |                                 |                   | DTOR. CALIDAI                            |



## ACCOMPANIMENT DOCUMENT / DECLARATION OF CONFORMITY

Manufacturer: Las Arcas

### EN 12326-1:2004

Comercial document number: 10005 Issue date: 13/11/2007

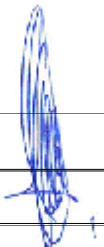
Comercial document issued by: Cupa Pizarras S.A.

Quarry or mine location: Las Arcas. San Pedro de Trones. León ( España )

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Sampling date: 29/05/2007 Essay date: 13/08/2007

| Product description and comercial name:                        |  | Slate for roofing and exterior cladding. Cupa 10  |        |                                 |            | Conformity                               |
|--|--|---|--------|---------------------------------|------------|--|
| <b>1 Dimensional tolerances</b>                                |  |   |        |                                 |            |  |
| <b>Sizes</b>   |  | 40x20 - 32x22 - 30x20 - 30x18 - 27x18 - 40x22 - 35x20 - 35x25 - 35x23 - 40x25 - 35x22 - 33x23 - 50x25 - 35x25 |        |                                 |            |  |
| Deviation of the declared lenght                               |  |   |        |                                 |            | Complies < ±5mms                         |
| Deviation of the declared width                                |  |   |        |                                 |            | Complies < ±5mms                         |
| Deviation of the orthogonality                                 |  |   |        |                                 |            | Complies < ±1%                           |
| Deviation of the edges linearity                               |  |   |        |                                 |            | Complies < 5mms & <=1% lenght            |
| Type of slate according to the flat surface                    |  | Very smooth   | Smooth | Normal                          | Texturised |  |
| Deviation of the planicidad                                    |  | <0,9%   |        |                                 |            |  |
| <b>2 Thickness</b>   |  |   |        |                                 |            |  |
| Slate type for the calculation of the packaged slate thickness |  | Very smooth   | Smooth | Normal                          | Texturised |  |
| Nominal thickness and variation                                |  | 5mm±25%   |        |                                 |            |  |
| <b>3 Resistance</b>  |  |   |        |                                 |            |  |
| MoR characteristic   |  | Transverse  | 60 Mpa | Longitudinal                    | 65 Mpa     |  |
| Medium load breakages  |  | Transverse  | 788 N  | Longitudinal                    | 816 N      |  |
| 4 Water absorption   |  |   |        |                                 |            | 0,15%                                    |
| 5 Freeze thaw test   |  |   |        |                                 |            | not required                             |
| 6 Thermic cycle essay  |  |   |        |                                 |            | T1                                       |
| 7 Carbonates content   |  |   |        |                                 |            | 0,2%                                     |
| 8 Essays of SO2 exposure                                       |  | ≤ 20% en carbonates   |        |                                 |            | S1                                       |
|  |  | > 20% en carbonates   |        | Thickness of the softened layer |            | mm                                       |
| 9 Contents of carbonate non carbonated                         |  |   |        |                                 |            | 0,34%                                    |
| 10 Exposure to the external fire                               |  |   |        |                                 |            | It is considered to comply               |
| 11 Fire reaction   |  |   |        |                                 |            | It is considered to comply with A1 class |
| 12 Dangerous substances emission                               |  | None in normal conditions of use as a roof o external cladding  |        |                                 |            | DTOR. CALIDAI                            |



## ACCOMPANIMENT DOCUMENT / DECLARATION OF CONFORMITY

**Manufacturer:** Las Arcas

### EN 12326-1:2004

**Comercial document number:** 10007      **Issue date:** 13/11/2007

**Comercial document issued by:** Cupa Pizarras S.A.

**Quarry or mine location:** Las Arcas. San Pedro de Trones. León ( España )

This document establishes conformity of the product described above and becomes uncomplete without the explanation of the essay results and the requests of the EN 12326-1:2004 Norm. The essays to which it refers and the criteria are included in the EN 12326-1:2004 and :2-2000 Norm.

**Sampling date:** 29/05/2007      **Essay date:** 13/08/2007

**Product description and comercial name:** Slate for roofing and exterior cladding. Cupa 10      **Conformity**

**1 Dimensional tolerances**

**Sizes** 25x18 - 25x15 - 27x15 - 27x16 - 33x23

**Deviation of the declared lenght** Complies < ±5mms

**Deviation of the declared width** Complies < ±5mms

**Deviation of the orthogonality** Complies < ±1%

**Deviation of the edges linearity** Complies < 5mms & <=1% lenght

**Type of slate according to the flat surface** Very smooth    Smooth    Normal    Texturised

**Deviation of the planicidad** <1%

**2 Thickness**

**Slate type for the calculation of the packaged slate thickness** Very smooth    Smooth    Normal    Texturised

**Nominal thickness and variation** 5mm±35%

**3 Resistance**

**MoR characteristic** Transverse    60 Mpa    Longitudinal    65 Mpa

**Medium load breakages** Transverse    788 N    Longitudinal    816 N

**4 Water absorption** 0,15%

**5 Freeze thaw test** not required

**6 Thermic cycle essay** T1

**7 Carbonates content** 0,2%

|                                 |                     |                                 |    |
|---------------------------------|---------------------|---------------------------------|----|
| <b>8 Essays of SO2 exposure</b> | ≤ 20% en carbonates |                                 | S1 |
|                                 | > 20% en carbonates | Thickness of the softened layer | mm |

**9 Contents of carbonate non carbonated** 0,34%

**10 Exposure to the external fire** It is considered to comply

**11 Fire reaction** It is considered to comply with A1 class

**12 Dangerous substances emission** None in normal conditions of use as a roof o external cladding

**DTOR. CALIDAI**

