

# VERIFICATION OF CONFORMITY

No. IN-XM -CP-5612-14014

It has been stated that the construction product
Natural stone product(SLATE), SLATE:
Slabs of natural stone for cladding
Intended use: Internal & external wall cladding

produced in the manufacturing plant and placed on the market by

GONMAR (XIAMEN) TRADING CO., LTD ROOM 706, NO.668 XIAHE ROAD, XIAMEN, FUJIAN, CHINA CODE:361004

from the quarry

**GONMAR QUARRY** 

XISHANBEI VILLAGE, YI COUNTY, BAODING CITY, HEBEI PROVINCE, CHINA

is submitted by the manufacturer to the further testing of samples taken at the factory in accordance with a prescribed test plan and that the third party- SGS-CSTC Standards Technical Services Co., Ltd. has performed the determination of the product type as required for Regulation 305/2011/EU and the assessment and verification of constancy of performance at system 4.

This verification attests that all provisions concerning assessment of constancy of performance at system 4 and the performances described in Annex ZA of the standards

EN 1469:2004

were applied and that the relevant test report no. is XMCCM131201255

This verification is customer voluntary act and refers to the tested samples only-type representative of the tested product. The manufacturer is obligated to apply factory production control. This verification is valid from Mar 24, 2014 until Mar 23, 2017 and remains valid as long as the the manufacturing

This verification is valid from Mar 24, 2014 until Mar 23, 2017 and remains valid as long as the the manufacturing conditions in the plant or the factory production control itself are not modified significantly.

Verified since Mar 24, 2014

Authorised by

Signer Manager

**Industrial Services** 

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SGSPAPER 14385107





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GONMAR (XIAMEN) TRADING CO., LTD

ROOM 706, NO.668 XIAHE ROAD, XIAMEN, FUJIAN, CHINA CODE: 361004

The following sample(s) was/ were submitted and identified on behalf of the client as:

Commercial Name SLATE Petrographic Name SLATE

Typical colour BLACK, MULTICOLOR

Manufacturer GONMAR (XIAMEN) TRADING CO., LTD

Manufacturer address ROOM 706, NO.668 XIAHE ROAD, XIAMEN, FUJIAN, CHINA CODE:361004

Place of origin CHINA

GONMAR QUARRY Name of quarry

XISHANBEI VILLAGE, YI COUNTY, BAODING CITY, HEBEI PROVINCE, Address of quarry

CHINA

Intend use Internal & external wall cladding

Test required EN 1469:2004 Natural stone products - Slabs for cladding - Requirements

Date of Receipt Dec.27, 2013

Test Period Dec.27, 2013 to Jan.16, 2014

Test result(s) For further details, please refer to the following page(s)

\*\*\*\*\*\* To be continued\*\*\*\*\*\*

Signed for and on behalf of SGS-CSTC Ltd.

Civi Huang

Xiamen Materials Lab Technical Supervisor

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### Summary of test results:

(Average value)

Test items	Test methods	Test results	Page
Apparent density	EN 1936:2006	2810kg/m <sup>3</sup>	3
Open porosity	EN 1936:2006	1.08%	3
Water absorption	EN 13755:2008	0.44%	3
Flexural strength in natural condition	EN 12372:2006	25.0MPa	4
Flexural strength after 12 cycles freeze/thaw	EN 12371:2010 EN 12372:2006	16.6MPa	4
Petrographic description	EN 12407:2007	SLATE	5

To be continued\*\*\*\*\*\*\*

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1. Apparent density and open porosity

#### Test Method:

EN 1936:2006 Natural stone test methods - determination of real density and apparent density and of total and open porosity

Specimens: 50mm×50mm, 6pcs, all specimens are in natural condition with sawn faces

#### **Test Result:**

Specimens identification No.	1,6	2	3	4	5	6
Apparent density (kg/m³)	2810	2790	2800	2810	2830	2800
Arithmetic mean of the apparent density (kg/m³)	300	355	281	10	500	50
Open porosity (%)	1.05	1.15	1.42	0.97	0.80	1.04
Arithmetic mean of the open porosity (%)	ZG5	500	1.0	8	50	250

### 2. Water absorption

#### Test Method:

EN 13755:2008 Natural stone test methods - Determination of water absorption at atmospheric pressure Specimens: 50mm×50mm, 6pcs, all specimens are in natural condition with sawn faces

#### **Test Result:**

Specimens identification No.	1	2	3	4	5	6
Water absorption (%)	0.36	0.37	0.51	0.52	0.50	0.36
Arithmetic mean of the water absorption (%)	Grand S	age .	0.	44	565 2	35.00

To be continued'

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3. Flexural Strength in natural condition and subjected to frost test

#### Test Method:

EN 12372:2006 Natural stone test methods - Determination of flexural strength under concentrated load

EN 12371:2010 Natural stone test methods - Determination of frost resistance

Specimens: 300mm×50mm×50mm, 21pcs, all specimens are in natural condition with sawn faces

Loading rate: (0.25±0.05)MPa/s

Load direction: applied perpendicular to the planes of anisotropy

#### **Test Result:**

Flexural strength in natural condition

No.	1	2	3	4	5	6	7	8	9	10
Flexural strength (MPa)	27.0	28.0	25.2	31.6	28.1	28.4	18.0	9.0	26.9	27.4
Mean value (MPa)	6	5	p e	500	25	5.0	50	30	97,	55
Standard deviation (MPa)	-	6.6							ege	
Lower expected value (MPa)	5	560	9	69	10	).9	25	455	50	25

Visual inspection after 12 freezing and thawing cycles: Scale 0, sample intact.

Flexural strength after 12 freezing and thawing cycles

No.	1.5	2	3	4	5	6	7	8	9	10
Flexural strength (MPa)	14.2	24.8	9.8	20.1	13.4	22.0	16.6	10.5	12.8	21.5
Mean value (MPa)	55-	300	5	555	16	5.6	S5	200	50	-65
Standard deviation (MPa)	Sp.	5	565	86.	5	.2	46.	149	165	S
Lower expected value (MPa)	¢\$ -	565	30	65	8	.0	2 6	.65	65	9 .

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4. Petrographical description

#### Test Method:

EN 12407:2007 Natural stone test methods - Petrographic examination

#### Test Result:

**CLASSIFICATION: Slate** 

### HAND SAMPLE DESCRIPTION

Moderately strong, black, moderately hard, It can be scored with a penknife. It is black because of containing carbon. We can see obvious silky luster on the fresh surface of the rock.

#### MICROSCOPIC DESCRIPTION

Texture	Blastoaleuritic texture
Structure	Phyllitic-like structure, Slate strcture
Major ingredient	Terrigenous clustic (most are silt)(80%±), Sericite (15~20%), iron, Carbonaceous (1~5%), Chlorite (small amount)
Accessory mineral	Metallic (Opaque) particles
Secondary mineral	La de de de de de de de

MATERIAL COMPONENT	PETROGRAPHIC DETAILS
Terrigenous clustic	Composed of quartz and little feldspar. which grain sizes are usually 0.02-0.05mm(be silt),occasionally 0.05~0.2mm(be fine sand).the shape is subangular-subround mostly, part is xenomorphic granular. random distribution.direction arrangement. quartz has undulatory extinction.

Sericite	Most are neogenic mineral. Flaky, which grain sizes are smaller than 0.2mm. most distribute among terrigenous clustic, aggregates(may be phyllite debris ect)takes on strigae and band when they distributes concentration relatively.			
Iron, Carbonaceous	Dusty, microgranular, the rock turns on black because it distribute in the rock symmetrical.			
Chlorite	Flaky, which grain sizes are usually 0.05~0.3mm. direction arrangement.			

#### Alterations:

Decomposed. Clay had been converted into sericite, and the shape of terrigenous clustic becomes xenomorphic granular from subangular-subround partially. And almost all minerals are in direction arrangement.

\*\* To be continued\*\*\*\*\*\*

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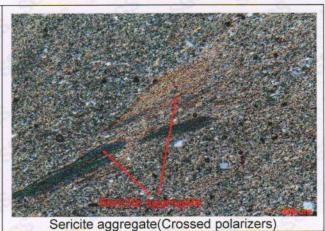
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#### Remaks:

From all the phenomenon of the rock, we can conclude that the rock was transferred by siltstone, and almost all minerals are in direction arrangement it belongs to metamorphic rock. According to mineral component, texture and structure of the rock, we named it sericite silty slate which containing iron and carbonaceous.

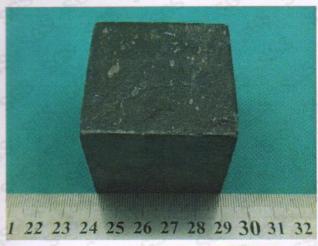
Photomicrographs





Note: The test was carried out by external laboratory assessed as competent.

Specimen photographs:





SGS authenticate the photos on original report only \*\*\*\*\*\*\*End of report\*\*\*\*\*\*

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