

TEST REPORT

REPORT NO.: HV-11-05153X PAGE: 1 OF 6 DATE: AUGUST 23, 2011

The following merchandise was submitted and identified by the vendor as:

<u>Style/Item No.</u>: Ceramic PRO <u>Manufacturer/Vendor</u>: Nanoshine LTD

<u>Country of Origin</u>: Taiwan

We have tested the submitted sample(s) as requested and the following results were obtained:

<u>Test Required</u>: (According to client's test specification, please see following sheets in detail.)

(1) Hardness by Pencil Test

(2) Alkali resistance

(3) Acid resistance

(4) Salt solution resistance

Test Result:

-PLEASE SEE ATTACHED PAGE-

<u>Date of Receive</u>: AUGUST 12, 2011

Date of Testing: AUGUST 12, 2011~ AUGUST 19, 2011

Signed for and on behalf of SGS Taiwan Ltd.

Carlos Kao Supervisor

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TEST REPORT

REPORT NO.: HV-11-05153X

PAGE:

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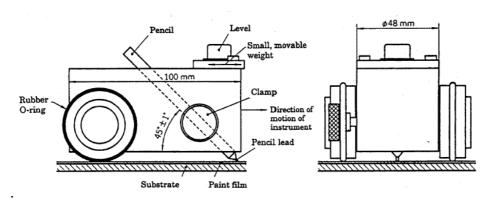
DATE:

AUGUST 23, 2011

(1) Hardness by Pencil Test

Test Equipment:

Name	Brand
Pencil	MITSU-BISHI uni



Lab Environmental Conditions:

Ambient Temperature: 23±2°C

Relative humidity:

50±5%RH

Test Method/ Specification:

JIS K5400(1990)

Testing Methods for Paints (Scratch Hardness)

The variety of pencil hardness:

5011 ←------ → Hard

Load:

500 g

Test Result:

Above 9H

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TEST REPORT

REPORT NO.: HV-11-05153X PAGE: 3 OF 6

DATE: AUGUST 23, 2011

(2) Alkali Resistance

Lab Environmental Conditions:

Ambient temperature: $23\pm2^{\circ}$ C Relative humidity: $50\pm5^{\circ}$ RH

Test Method:

JIS K5400(1990) Testing Methods for Paints

Test conditions:

Test reagent: 5% Na₂CO₃

Test temperature: 23 °C
Test time: 24 hour

Examine the appearance of specimen(s) by visual check

Test Result:

No visible damage.

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TEST REPORT

REPORT NO.: HV-11-05153X PAGE: 4 OF 6

DATE: AUGUST 23, 2011

(3)Acid Resistance

Lab Environmental Conditions:

Ambient temperature: $23\pm2^{\circ}$ C Relative humidity: $50\pm5\%$ RH

Test Method:

JIS K5400(1990) Testing Methods for Paints

Test conditions:

Test reagent: 5% H₂SO₄

Test temperature: 23 °C
Test time: 24 hour

Examine the appearance of specimen(s) by visual check

Test Result:

No visible damage.

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TEST REPORT

REPORT NO.: HV-11-05153X PAGE: 5 OF 6

DATE: AUGUST 23, 2011

(4)Salt solution resistance

Lab Environmental Conditions:

Ambient temperature: $23\pm2^{\circ}$ C Relative humidity: $50\pm5^{\circ}$ RH

Test Method:

JIS K5400(1990) Testing Methods for Paints

<u>Test conditions</u>:

Test reagent: 5% NaCl solution

Test temperature: 23 °C
Test time: 96 hour

Examine the appearance of specimen(s) by visual check

Test Result:

No visible damage.

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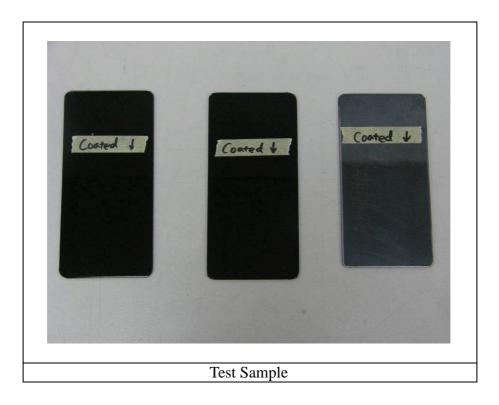
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TEST REPORT

REPORT NO.: HV-11-05153X PAGE: 6 OF 6 DATE: AUGUST 23, 2011

Test Photo:



- The End of Test Report -

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TEST REPORT

Report No.: HR-15-01371X

Page: 1 OF Date: July 01, 2015

NANOSHINE LIMITED

Product Description: Ceramic Pro 9H

Product Submitted By: NANOSHINE LIMITED

Date of Sample Received: June 11, 2015

Date of Testing: June 11, 2015-June 30, 2015

Remark: The information mentioned in the above section is provided by Client

(Exclude Date of Sample Received and Date of Testing)

We have tested the submitted sample(s) as requested and the following results were obtained:

Test Required : Coating Thickness Measurement

Reference Method: ASTM B487 Standard Test Method for Measurement of Metal and Oxide Coating

Thickness by Microscopical Examination of a Cross Section

Test Equipment: OLYMPUS BX-51 Optical Microscope

Test Results:

Appearance of Specimen

Test site: non-coat



-- To Next Page --

The value of required specifications are for reference only. Conformity judgment is the Applicant's final verdict.

Signed for and on behalf of SGS TAIWAN Ltd.

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TEST REPORT

Report No.: HR-15-01370X

Page: 1 OF 2 Date: July 01, 2015

NANOSHINE LIMITED

Product Description: Ceramic Pro 9H

Product Submitted By: NANOSHINE LIMITED

Date of Sample Received: June 11, 2015

Date of Testing: June 11, 2015~June 30, 2015

Remark: The information mentioned in the above section is provided by Client

(Exclude Date of Sample Received and Date of Testing)

We have tested the submitted sample(s) as requested and the following results were obtained:

<u>Test Required</u>: Coating Thickness Measurement

Reference Method: ASTM B487 Standard Test Method for Measurement of Metal and Oxide Coating

Thickness by Microscopical Examination of a Cross Section

Test Equipment: OLYMPUS BX-51 Optical Microscope

Test Results:

Appearance of Specimen

Test site: 10 layers



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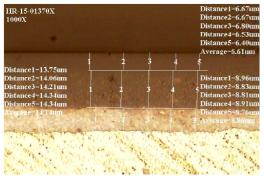


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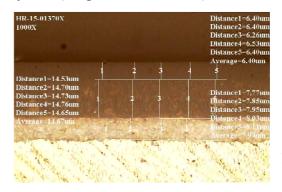
Report No.: HR-15-01370X

Page: 2 OF Date: July 01, 2015

After section-polishing, the specimen was observed by OM.(Magnification 1000X)



 $10 \mu m$



10 µm

*Average Thickness:

Surface layer	6.5 μm
Second layer	14.4 μm
Third layer	8.4 μm

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TEST REPORT

Report No.: HR-15-01371X

Page: 1 OF Date: July 01, 2015

NANOSHINE LIMITED

Product Description: Ceramic Pro 9H

Product Submitted By: NANOSHINE LIMITED

Date of Sample Received: June 11, 2015

Date of Testing: June 11, 2015~June 30, 2015

Remark: The information mentioned in the above section is provided by Client

(Exclude Date of Sample Received and Date of Testing)

We have tested the submitted sample(s) as requested and the following results were obtained:

<u>Test Required</u>: Coating Thickness Measurement

Reference Method: ASTM B487 Standard Test Method for Measurement of Metal and Oxide Coating

Thickness by Microscopical Examination of a Cross Section

<u>Test Equipment</u>: OLYMPUS BX-51 Optical Microscope

Test Results:

Appearance of Specimen

Test site: non-coat



-- To Next Page --

The value of required specifications are for reference only. Conformity judgment is the Applicant's final verdict. Signed for and on behalf of SGS TAIWAN Ltd.

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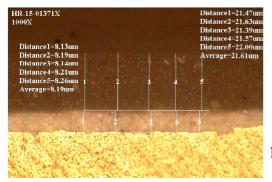
TEST REPORT

Depart No. : LID 15 01271X

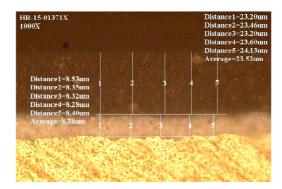
Report No.: HR-15-01371X

Page: 2 OF
Date: July 01, 2015

After section-polishing, the specimen was observed by OM.(Magnification 1000X)



10 µm



10 µm

*Average Thickness:

Surface layer	22.6 μm
Second layer	8.3 μm

-- End of Report --

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TEST REPORT

REPORT NO. : HV-17-01263 PAGE : 1 OF 3 REPORT DATE : Apr. 07, 2017

Nanoshine Group Corp.

No. 163, Guangming Rd., Beitou Dist., Taipei City 112, Taiwan (R.O.C.)

The following merchandise was submitted and identified by the vendor as:

<u>Product Name</u>: Ceramic Pro 9H

<u>Manufacturer</u>: Nanoshine Group Corp.

We have tested the submitted sample(s) as requested and the following results were obtained:

<u>Test Required</u>: (According to client's test specification, please see following sheets in detail.)

Pencil Hardness

<u>Test Result</u>:

-PLEASE SEE ATTACHED SHEETS-

Date of Receive: MARCH 14, 2017

Date of Testing: MARCH 14, 2017 ~ MARCH 27, 2017

Signed for and on behalf of SGS Taiwan Ltd.

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TEST REPORT

REPORT NO. : HV-17-01263 PAGE : 2 OF 3 REPORT DATE : Apr. 07, 2017

Pencil Hardness

Test Equipment:

Name	Brand	Model
Pencil	MITSU-BISHI	uni

<u>Lab Environmental Conditions</u>:

Ambient Temperature : $23\pm2^{\circ}$ C Relative Humidity : $65\pm5\%$ RH

<u>Test Method</u>:

JIS K5400(1990) Testing Methods for Paints

Test Condition:

The variety of pencil hardness:

6B - 5B - 4B - 3B - 2B - B - HB - F - H - 2H - 3H - 4H - 5H - 6H - 7H - 8H - 9H

Soft <----->Hard

Test Load: 500g

Evaluation Method: Scratch Hardness

<u>Test Result</u>:

Test Item(s)	Test Result(s)	
rest item(s)	Coated	Non-coated
Pencil Hardness	4H	2H

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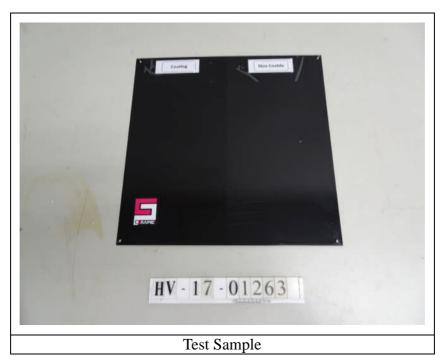


TEST REPORT

REPORT NO.: HV-17-01263 PAGE: 3 OF 3

REPORT DATE: Apr. 07, 2017

<u>Test Photo</u>:



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t (886-2) 2298-3355

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TEST REPORT

REPORT NO.: HV-17-00954-1 PAGE: 1 OF 3 REPORT DATE: Mar. 15, 2017

Nanoshine Group Corp.

No. 163, Guangming Rd., Beitou Dist., Taipei City 112, Taiwan (R.O.C.)

The following merchandise was submitted and identified by the vendor as:

Product Name: Ceramic Pro 9H

Manufacturer: Nanoshine Group Corp

We have tested the submitted sample(s) as requested and the following results were obtained:

<u>Test Required</u>: (According to client's test specification, please see following sheets in detail.)

Pencil Hardness

<u>Test Result</u>:

-PLEASE SEE ATTACHED SHEETS-

<u>Date of Receive</u>: FEBRUARY 22, 2017

Date of Testing: FEBRUARY 22, 2017 ~ MARCH 10, 2017

Remark: This test report cancels and supersedes the test report No. HV-17-00954.

Revised date: April 07,2017

Signed for and on behalf of SGS Taiwan Ltd.

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TEST REPORT

REPORT NO.: HV-17-00954-1 OF PAGE: REPORT DATE: Mar. 15, 2017

Pencil Hardness

Test Equipment:

Name	Brand	Model
Pencil	MITSU-BISHI	uni

Lab Environmental Conditions:

Ambient Temperature: 23±2°C Relative Humidity: 65±5%RH

<u>Test Method</u>:

JIS K5400(1990) **Testing Methods for Paints**

Test Condition:

The variety of pencil hardness:

6B - 5B - 4B - 3B - 2B - B - HB - F - H - 2H - 3H - 4H - 5H - 6H - 7H - 8H - 9H

Soft <---->Hard

Load: 1000g

Evaluation Method: Scratch Hardness

Test Result:

Test Item(s)	Test Result(s)
Pencil Hardness	9H. No Scratch

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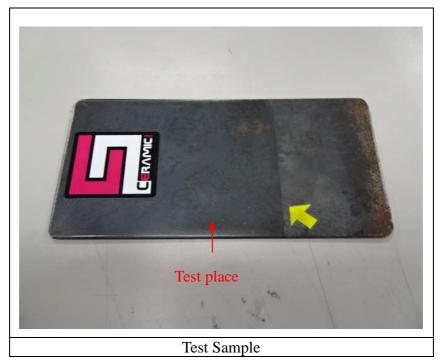
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TEST REPORT

REPORT NO.: HV-17-00954-1 PAGE: OF REPORT DATE: Mar. 15, 2017

<u>Test Photo</u>:



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TEST REPORT

REPORT NO. : HV-17-01263 PAGE : 1 OF 3 REPORT DATE : Apr. 07, 2017

Nanoshine Group Corp.

No. 163, Guangming Rd., Beitou Dist., Taipei City 112, Taiwan (R.O.C.)

The following merchandise was submitted and identified by the vendor as:

<u>Product Name</u>: Ceramic Pro 9H

<u>Manufacturer</u>: Nanoshine Group Corp.

We have tested the submitted sample(s) as requested and the following results were obtained:

<u>Test Required</u>: (According to client's test specification, please see following sheets in detail.)

Pencil Hardness

<u>Test Result</u>:

-PLEASE SEE ATTACHED SHEETS-

Date of Receive: MARCH 14, 2017

Date of Testing: MARCH 14, 2017 ~ MARCH 27, 2017

Signed for and on behalf of SGS Taiwan Ltd.

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TEST REPORT

REPORT NO. : HV-17-01263 PAGE : 2 OF 3 REPORT DATE : Apr. 07, 2017

Pencil Hardness

Test Equipment:

Name	Brand	Model
Pencil	MITSU-BISHI	uni

<u>Lab Environmental Conditions</u>:

Ambient Temperature : $23\pm2^{\circ}$ C Relative Humidity : $65\pm5\%$ RH

<u>Test Method</u>:

JIS K5400(1990) Testing Methods for Paints

Test Condition:

The variety of pencil hardness:

6B - 5B - 4B - 3B - 2B - B - HB - F - H - 2H - 3H - 4H - 5H - 6H - 7H - 8H - 9H

Soft <----->Hard

Test Load: 500g

Evaluation Method: Scratch Hardness

<u>Test Result</u>:

Test Item(s)	Test Result(s)	
rest item(s)	Coated	Non-coated
Pencil Hardness	4H	2H

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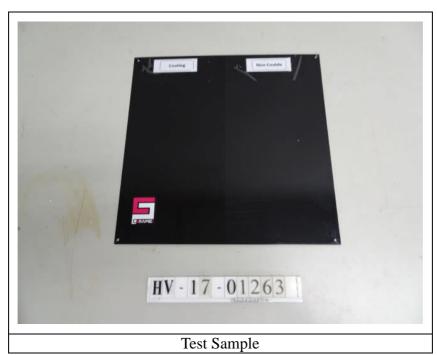


TEST REPORT

REPORT NO. : HV-17-01263 PAGE : 3 OF 3

REPORT DATE: Apr. 07, 2017

<u>Test Photo</u>:



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