

TEST REPORT

No. : XMCCM150300207

Date : Mar.11, 2015

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BENYEE TECHNOLOGY HOLDING CO., LTD

PU AN INDUSTRIAL AREA, QUANGANG DISTRICT, QUANZHOU CITY, FUJIAN PROVINCE, P.R.CHINA

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

Sample Name : QUARTZ SURFACES
Manufacturer : BENYEE TECHNOLOGY HOLDING CO., LTD
Test required : Selected test(s) as requested by applicant
Date of Receipt : Mar.03, 2015
Test Period : Mar.03, 2015 to Mar.11, 2015

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

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

Signed for
SGS-CSTC Standards Technical
Services Co., Ltd. XM Branch Testing Center



Civi Huang
Authorized Signatory



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Xiamen Branch Testing Center Materials Laboratory

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Summary of test results:
(Average of results)

Test items	Test methods	Test results
Absorption by weight	ASTM C97/C97M-09	0.07 %
Density		2370 kg/m ³
Compressive strength	ASTM C170/C170M-14a	Dry condition: 216 MPa
		Wet condition: 218 MPa
Mohs' hardness (polished)	EN 101:1991	No Scratch: 5
		Scratch: 6
Load Test	ANSI Z124.6-2007	No damage Average residual deflection: -0.01mm
Stain resistance test(polished)	ANSI Z124.6-2007	Total stain resistance value: 37 Maximum individual depth of staining: 0.02mm
Chemical resistance test(polished)	ANSI Z124.6-2007	Unaffected.
Cigarette test(polished)	ANSI Z124.6-2007	After test, there were visible stains remains which can be restorable by clean cheesecloth and water.
Heated pan test(polished)	ANSI Z124.6-2007	No visible change after test

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



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1. Absorption by weight and density

Test Method:

ASTM C97/C97M-09 Standard Test Methods for Absorption and Bulk Specific Gravity of Dimension Stone

Specimens: artificial stone with one face polished, 50mm×50mm×20mm, 5pcs

Test Result:

Specimens identification No.	1	2	3	4	5
Absorption by weight (%)	0.07	0.07	0.07	0.07	0.07
Mean water absorption (%)	0.07				
Density (kg/m ³)	2370	2370	2370	2370	2370
Mean density (kg/m ³)	2370				

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



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2. Compressive strength

Test Method:

ASTM C170/C170M-14a Standard Test Method for Compressive Strength of Dimension Stone

Specimens: artificial stone with one face polished, 20pcs, two samples 50mm×50mm×20mm were overlaid to form one specimen 50mm×50mm×40mm.

Test Result:

Dry Condition:

Specimens identification No.	1	2	3	4	5
Individual compressive strength value (MPa)	216	213	221	218	214
Mean compressive strength value (MPa)	216				
Standard deviation (MPa)	4				

Wet Condition:

Specimens identification No.	1	2	3	4	5
Individual compressive strength value (MPa)	217	224	225	214	212
Mean compressive strength value (MPa)	218				
Standard deviation (MPa)	6				

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



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3. Mohs' hardness

Test Method:

EN 101:1991 Ceramic tiles: determination of scratch hardness of surface according to Mohs

Specimens: artificial stone with one face polished, 100mm×100mm×20mm, 3pcs

Testing surface: polished

Test Result:

Specimens identification No.	1	2	3
No Scratch	5	5	5
Scratch	6	6	6

Scale:

- 1- Talc
- 2- Gypsum
- 3- Calcite
- 4- Fluorite
- 5- Apatite
- 6- Microcline
- 7- Quartz
- 8- Topaz
- 9- Corundum
- 10- Diamond

4. Load test

Test Method:

ANSI Z124.6-2007 Plastic Sinks – 4.3 Load test

Specimens: artificial stone with one face polished, 813mm×660mm×20mm, 2pcs

Test Result:

After test, there were no damage in the surface.

No.	1	2	Average value(mm)
Residual deflection (mm)	0.01	0.01	0.01

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



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5. Stain resistance test

Test Method:

ANSI Z124.6-2007 Plastic Sinks - 5.2 Stain resistance test

Specimens: artificial stone with one face polished, 100mm×100mm×20mm, 10pcs

Testing surface: polished

Test Result:

Reagents	Test results			
	(Covered)		(Uncovered)	
	Individual stain rating	Depth removed	Individual stain rating	Depth removed
Black Crayon	1	/	1	/
Black Liquid Shoe Polish	2	/	2	/
Blue Washable Ink	3	/	3	/
Gentian Violet Solution	4	/	5	0.02 mm
Beet Juice	1	/	1	/
Grape Juice	1	/	1	/
Lipstick	2	/	2	/
Hair Dye	2	/	2	/
Iodine solution	1	/	1	/
Wet Tea Bag	1	/	1	/
Total stain resistance rating	37			
Maximum individual depth of staining	0.02 mm			

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



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6. Chemical resistance test

Test Method:

ANSI Z124.6-2007 Plastic Sinks - 5.5 Chemical resistance test

Specimens: artificial stone with one face polished, 100mm×100mm×20mm, 15pcs

Testing surface: polished

Test Result:

Reagents	Test results	
	(covered)	(uncovered)
Naphtha	Unaffected	Unaffected
Ethyl alcohol	Unaffected	Unaffected
Amyl acetate	Unaffected	Unaffected
Commercial household ammonia (10% V/V)	Unaffected	Unaffected
Citric acid (10%)	Unaffected	Unaffected
Urea (6%)	Unaffected	Unaffected
Hydrogen peroxide solution (3%)	Unaffected	Unaffected
Concentrated sodium hypochlorite solution	Unaffected	Unaffected
Toluene	Unaffected	Unaffected
Ethyl acetate	Unaffected	Unaffected
Lye solution (2% sodium hydroxide)	Unaffected	Unaffected
Acetone	Unaffected	Unaffected
Trisodium phosphate (5%)	Unaffected	Unaffected
Vinegar	Unaffected	Unaffected
Pine oil	Unaffected	Unaffected

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7. Cigarette test

Test Method:

ANSI Z124.6-2007 Plastic Sinks - 5.4 Cigarette test

Specimens: artificial stone with one face polished, 100mm×100mm×20mm, 3pcs

Testing surface: polished

Test Result:

After test, there were visible stains remains which can be restorable by clean cheesecloth and water.

8. Heated pan test

Test Method:

ANSI Z124.6-2007 Plastic Sinks - 5.6 Heated pan test

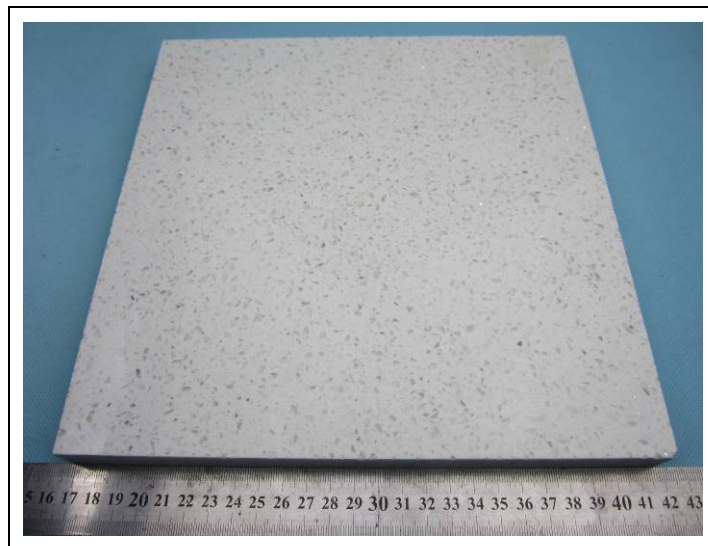
Specimens: artificial stone with one face polished, 250mm×250mm×20mm, 2pcs

Testing surface: polished

Test Result:

After test, both the two samples were no visible blister, crazing, or color change in the surface.

Specimen photograph:



SGS authenticate the photo on original report only

*****End of report*****



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