



# TEST REPORT

98, Gyoyukwon-ro, Gwacheon-si, Gyeonggi-do, 13810, Korea

TEL 82-43-211-6144

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Report No : TAK-2019-016964

Receipt Date : 2019.01.24.

Representative : Kyungjip Min

Test Completion Date : 2019.02.25.

Company name : LG HAUSYS Co., Ltd

Address : (Yeouido-dong, One IFC)10, Gukjegeumyung-ro, Yeongdeungpo-gu, Seoul, Korea.

Sample name : Artificial Marble Marmo (M502)

## Test Results

TEST ITEM	UNIT	SAMPLE	RESULT	TEST METHOD
Specific Gravity((23/23) °C)	-	-	1.73	ASTM D792-13(Method A)
Rockwell Hardness(HRM)	-	-	89	ASTM D785-08(2015)(Procedure A)
Barcol Hardness	-	-	65	ASTM D2583-13a
Tensile Strength	MPa	-	32.5	ASTM D638-14(**)
Tensile Modulus of Elasticity	GPa	-	10.6	ASTM D638-14(**)
Flexural Strength	MPa	-	49.9	ASTM D790-17(***)
Flexural Modulus of Elasticity	GPa	-	10.8	ASTM D790-17(***)
Izod Impact Strength	J/m	-	18	ASTM D256-10(2018)(Method A)
Water Absorption(24 h Immersion)	%	-	0.02	ASTM D570-98(2018)
Appearance(Crack) after Heat Resistance[(170±2) °C × 1 h]	-	-	No Defects	Client Provided Test Method
Deflection Temperature Under Load(1.82 MPa)	°C	-	109	ASTM D648-18(Method B)
Thermal Expansion	1/°C	-	$2.3 \times 10^{-5}$	KS M 3015 : 2003
Pencil Hardness(Mitsu bishi pencil)	-	-	9H	KS M ISO 15184 : 2013
Heat Water Resistance(Appearance)	-	-	No Defects	Client Provided Test Method(*)

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2019.02.25

## Korea Testing & Research Institute

President



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전자문서본(Electronic Copy)



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## Test Results

TEST ITEM	UNIT	SAMPLE	RESULT	TEST METHOD
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\* Changing appearance(Crack) after pour boiled water on the surface

\*\* Specimen: Type I, Speed of Testing: 5 mm/min(Modulus: 1 mm/min)

\*\*\* Speed of Testing: 5.1 mm/min, Support Span: 190 mm

- Usage of Report : QUALITY CONTROL

- Note :
1. The test results of this test report are only limited in to the samples and sample names provided by the client and do not guarantee the quality of all products of the client. You Can check website (www.ktr.or.kr) or QR code to verify the authenticity of the certificate.
  2. This test report shall be used only within the purpose of its defined usage and shall not be used fo public relation, advertisement and lawsuit.
  3. This test report is olny valid when printed on KTR original report paper with hologram and when re-issued by KTR. The copy and the electronic file of the test report are only for reference.

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