MANUFACTURER SUPPLIED TEST REPORT
LOCAL PRODUCT IDENTIFICATION: TITAN CLICKLOC

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

Sample Description	: VINYL FLOOR
Sample Receiving Date	: OCT.24,2011
Testing Period	: OCT.24,2011 TO NOV.21,2011
Test Performed	: SELECTED TEST(S) AS REQUESTED BY APPLICANT
Test Requested	:1. DETERMINATION OF THE SQUARENESS AND STRAIGHTNESS OF TILES(EN 427:1994) 2. DETERMINATION OF RESIDUAL INDENTATION AFTER STATIC LOADING(EN 433:1994) 3. DETERMINATION OF DIMENSIONAL STABILITY AND CURING AFTER EXPOSURE TO HEAT (EN 434:1994) 4. FLEXIBILITY (ASTM F137:2008) 5. DIMENSIONAL STABILITY (ASTM F1700:2004) 6. RESISTANT TO IMPACT (ASTM F1265:2003A (2008)) 7. RESISTANCE TO CHEMICALS (ASTM F925:2002)
Test Result(s)	: FOR FURTHER DETAILS, PLEASE REFER TO THE FOLLOWING PAGE(S)
Conclusion	: THE TEST DATA WERE PROVIDED TO CLIENT FOR THEIR OWN ANALYSIS.

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Signed for and on behalf of
SGS-CSTC Ltd.

Yomoro Gu
Supervisor

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Member of the SGS Group (SGS SA)

Test Conducted :

1. **Determination of the squareness and straightness of tiles(EN 427:1994)**
2. **Determination of residual indentation after static loading(EN 433:1994)**
3. **Determination of dimensional stability and curing after exposure to heat (EN 434:1994)**
4. **Flexibility (ASTM F137:2008)**
5. **Dimensional stability (ASTM F1700:2004)**
6. **Resistant to impact (ASTM F1265:2003a (2008))**
7. **Resistance to chemicals (ASTM F925:2002)**

Test Property	Test Method	Test principles/requirements	Rating/ Result
Determination of the squareness and straightness of tiles	EN 427:1994	Condition the test pieces and mandrels at a temperature of (23±2) °Cand relative humidity (50±5)% for a minimum of 24 h. Side length should be≤0.13% of nominal length, up to 0.5mm maximum. Squareness and straightness for side length: deviation ≤400mm ≤ 0.25mm >400mm ≤ 0.35mm >400mm(intended for welding) ≤ 0.50mm	Pass Squareness: 0.18mm Straightness: 0.07mm
Determination of residual indentation after static loading	EN 433:1994	Mark the place of measurement and measure the initial thickness of the test piece, t0, at its centre to 0.01 mm. Place the test piece on the platform. Place the annular weight on the test piece. Smoothly apply the appropriate total force 500N, and start the stopwatch within 2s. Record the depth of indentation after 150 min to 0.01mm, and remove the force and the test piece from the platform. After a further 150 min, measure the final thickness of the test piece, t1, at the same position, using the appropriate apparatus. The residual indentation should be ≤0.1mm	Pass Residual indention 0.06mm
Determination of dimensional stability and curing after exposure to heat	EN 434:1994	Store the test pieces for 360+15 min in the oven, which had previously been stabilized at (80±2) °C. Remove the metal plates bearing the test pieces from the oven. Allow these to cool and recondition at a temperature of (23±2) °C and relative humidity (50±5)% for a further 24 h, unless otherwise specified for the product. Variations of length percentage should be ≤ 0.25% The curling after exposure to heat should be ≤ 2 mm	Pass Variations of length:0.10% Curling: 0.06mm

Test Property	Test Method	Test principles/requirements	Rating/ Result
Flexibility	ASTM F137:2008	Condition the test specimens for at least 24 h at 73.4 ±1.8℉ (23± 1℃) and 50 ± 5 % relative humidity, and test in the same environment. When test in accordance with Test Method F137 and a mandrel size of 1 in (25.4 mm), the tile shall show no cracks or breaks.	/ Mandrel diameter: 100mm
Dimensional stability	ASTM F1700:2004	When tested in accordance with Test Method F 2199, the tile shall place in the heated cabinet at 180 ± 3.6℉ (82 ± 2℃) for 6 ± 0.25 h. After exposed to heat, the tile shall be conditioned at room temperature for at least 24h. After test, the tile shall not change linear dimensions more than 0.020 in (0.5 mm) per linear ft.	Pass Dimension change:0.013in /ft
Resistant to impact	ASTM F1265:2003a (2008)	Spread a thin coating of zinc oxide paste over the center of the wearing surface of the specimen so as to form a circle 36 1⁄8 in. (7.62 6 0.317 cm) in diameter. With the coated side down, immediately center the specimen over the three balls so that the falling weight will strike the specimen at the center. Drop the required weight freely through the guide tube from the specified height. Return the specimen to its original position after each drop. After the final drop, remove the specimen and examine for breaks or cracks that extend beyond the coated circle. Failure is defined as a complete breakage of the tile or crack development beyond the circle. Examine the coated surface under good illumination without flexing the specimen. Test a second specimen by placing the specimen at 90° to that of the first sequence. Steel Ball, 1-in. (2.54-cm diameter) weighing 0.143lb (0.065kg) shall be used for testing 1⁄8 (0.317cm) and thinner floor covering; and a 1-in. (2.54 cm) diameter steel cylinder weighing 0.350 lb (0.159 kg) shall be used and having a hemispherical end, for testing 3⁄16 in. (0.476 cm) and 1⁄4 in. (0.635 cm) material. Report the weight used, the height from which the weight was dropped shall be recorded.	/ Drop Height 20in(50.8cm) Weight of steel ball:0.143lb(0.065kg)

Test Property	Test Method	Test principles/requirements	Rating/ Result
Resistance to chemicals	ASTM F925:2002	The chemical resistance of solid vinyl tile shall be determined in accordance with Test Method F 925. the tile shall have no more than a slight change in surface dulling, surface attack, or staining when exposed to the following chemicals for 60±1 min: 1) White vinegar (5% acetic acid) 2) Rubbing alcohol (70% isopropyl alcohol) 3) White mineral oil (medicinal grade) 4) Sodium hydroxide solution (5% NaOH) 5) Hydrochloric acid solution (5% HCl) 6) Sulfuric acid solution (5% H2SO4) 7) Household ammonia solution (5% NH4OH) 8) Household bleach (5.25% NaOCl) 9) Olive oil (light) 10) Kerosene (K1) 11) Unleaded gasoline (regular grade) 12) Phenol (5% active phenol)	Pass See Result1

Result 1: Results of resistance to chemicals

Regent	Rating
White vinegar (5% acetic acid)	0
Rubbing alcohol (70% isopropyl alcohol)	0
White mineral oil (medicinal grade)	0
Sodium hydroxide solution (5% NaOH)	0
Hydrochloric acid solution (5% HCl)	0
Sulfuric acid solution (5% H2SO4)	0
Household ammonia solution (5% NH4OH)	0
Household bleach (5.25% NaOCl)	0
Olive oil (light)	0
Kerosene (K1)	0
Unleaded gasoline (regular grade)	0
Phenol (5% active phenol)	0

Remark: 0 = no change

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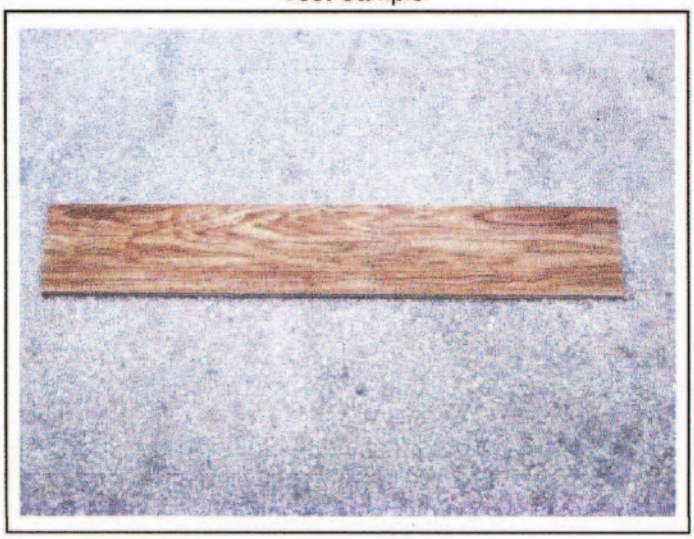
Sample Photo:

Test Sample



End of Report

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