TEST REPORT

1. NO: CT20-007948E
2. Client
   ○ Name: Noroo Paint & Coatings Co., Ltd
   ○ Address: Bakdal-ro 351, Manan-gu, Anyang-si, Gyeonggi-do
3. Date of Test: 2020.01.15 ~ 2020.02.13
4. Use of Report:
5. Test Sample: ECO-CRETE
6. Test Method
   (1) JIS Z 2801:2012
7. Test Results
   1) ECO-CRETE

<table>
<thead>
<tr>
<th>Test Item(s)</th>
<th>Unit</th>
<th>Test Method</th>
<th>Test Results</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anti-bacterial Test(Klebsiella pneumoniae)-antibacterial activity</td>
<td>Log value</td>
<td>(1)</td>
<td>5.5</td>
<td>(35.0 ± 0.1) °C (92.9 ± 0.5) % R.H.</td>
</tr>
<tr>
<td>Anti-bacterial Test(MRSA)-antibacterial activity</td>
<td>Log value</td>
<td>(1)</td>
<td>5.6</td>
<td>(35.0 ± 0.1) °C (92.9 ± 0.5) % R.H.</td>
</tr>
</tbody>
</table>

* Test bacteria: Klebsiella pneumoniae ATCC 4352, MRSA(Staphylococcus aureus subsp. aureus) ATCC 33591
* Sample: 5 cm × 5 cm, Blank: Stomacher film: 5 cm × 5 cm
* Covering film: 16 cm²
* Incubation time: 24 hours

--- End of Report ---

Affirmation

Tested By
Name: Lee, Jeoung Yun

Technical Manager
Name: Park Dong Hyup

Our report apply only to the standards or procedures identified and to the sample(s) tested unless otherwise specified. The test results are not indicative of representative of the qualities of the qualities of the lot from which the sample was taken or of apparently identical or similar products. The results of using only a portion of this report cannot be guaranteed. The authenticity of this test report can be checked on KCL website (www.kcl.re.kr).

2020.02.13

Korea Conformity Laboratories  President Yoon, Kap Seok

Result Inquiry: 628, Sora-ro, Namdong-gu, Incheon, 21594, Korea (82-32-460-5163)
# TEST REPORT

1. **NO:** CT20-007949E

2. **Client**
   - **Name:** Noroo Paint & Coatings Co., Ltd
   - **Address:** Bakdal-ro 351, Manan-gu, Anyang-si, Gyeonggi-do

3. **Date of Test:** 2020.01.15 ~ 2020.02.13

4. **Use of Report:**

5. **Test Sample:** ECO-CRETE

6. **Test Method**
   1. JIS Z 2801:2012

7. **Test Results**

<table>
<thead>
<tr>
<th>Test Item(s)</th>
<th>Unit</th>
<th>Test Method</th>
<th>Test Results</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anti-bacterial Test (Escherichia coli) - antibacterial activity</td>
<td>Log value</td>
<td>(1)</td>
<td>5.8</td>
<td>(36.0 ± 0.1) °C (92.9 ± 0.5) % R.H.</td>
</tr>
<tr>
<td>Anti-bacterial Test (Pseudomonas aeruginosa) - antibacterial activity</td>
<td>Log value</td>
<td>(1)</td>
<td>5.9</td>
<td>(36.0 ± 0.1) °C (92.9 ± 0.5) % R.H.</td>
</tr>
<tr>
<td>Anti-bacterial Test (Staphylococcus aureus) - antibacterial activity</td>
<td>Log value</td>
<td>(1)</td>
<td>5.7</td>
<td>(36.0 ± 0.1) °C (92.9 ± 0.5) % R.H.</td>
</tr>
</tbody>
</table>

* Test bacteria: Escherichia coli ATCC 8739, Pseudomonas aeruginosa ATCC 15442, Staphylococcus aureus ATCC 6538P
* Sample: 5 cm × 5 cm, Blank: Stomacher film: 5 cm × 5 cm
* Covering film: 16 cm²
* Incubation time: 24 hours

---- End of Report ----

---

**Affirmation**

 Tested By: Name: Lee, Jeoung Yun

 Technical Manager: Name: Park Dong Hyup

---

Our report apply only to the standards or procedures identified and to the sample(s) tested unless otherwise specified. The test results are not indicative of representative of the qualities of the qualities of the lot from which the sample was taken or of apparently identical or similar products. The results of using only a portion of this report cannot be guaranteed. The authenticity of this test report can be checked on KCL website (www.kcl.re.kr).

2020.02.13

Korea Conformity Laboratories **President Yoon, Kap Seok**

Result Inquiry: 628. Sora-ro, Namdong-gu, Incheon, 21594, Korea (82-32-460-5163)
Test Results

<table>
<thead>
<tr>
<th>TEST ITEM</th>
<th>UNIT</th>
<th>SAMPLE</th>
<th>RESULT</th>
<th>TEST METHOD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hardness(Hs D)</td>
<td>–</td>
<td>–</td>
<td>84</td>
<td>KS M 6518 : 2018[1]</td>
</tr>
<tr>
<td>Compressive Strength</td>
<td>N/mm²</td>
<td>–</td>
<td>60.4</td>
<td>KS F 4042 : 2012(Apply correspondingly)</td>
</tr>
<tr>
<td>Flexural Strength</td>
<td>N/mm²</td>
<td>–</td>
<td>18.4</td>
<td>KS F 4042 : 2012(Apply correspondingly)</td>
</tr>
</tbody>
</table>

Test specimen : By client


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 for public relation, advertisement and lawsuit.
3. This test report is only 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.
# Test Results

<table>
<thead>
<tr>
<th>TEST ITEM</th>
<th>UNIT</th>
<th>SAMPLE</th>
<th>RESULT</th>
<th>TEST METHOD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impact Resistance</td>
<td>–</td>
<td>–</td>
<td>No defects</td>
<td>KS F 4937 : 2009</td>
</tr>
<tr>
<td>Adhesive Strength</td>
<td>N/mm²</td>
<td>–</td>
<td>2.9</td>
<td>KS F 4937 : 2009</td>
</tr>
<tr>
<td>Wheel load resistance – Surface state</td>
<td>–</td>
<td>–</td>
<td>No defects</td>
<td>KS F 4937 : 2009</td>
</tr>
<tr>
<td>Wheel load resistance – decreased depth of thickness</td>
<td>mm</td>
<td>–</td>
<td>0.3</td>
<td>KS F 4937 : 2009</td>
</tr>
<tr>
<td>Watertightness</td>
<td>–</td>
<td>–</td>
<td>No defects</td>
<td>KS F 4937 : 2009</td>
</tr>
<tr>
<td>TVOC emission</td>
<td>mg/m³·h</td>
<td>–</td>
<td>0.177</td>
<td>KS F 4937 : 2009</td>
</tr>
<tr>
<td>Toluene emission</td>
<td>mg/m³·h</td>
<td>–</td>
<td>0.005 below</td>
<td>KS F 4937 : 2009</td>
</tr>
<tr>
<td>Formaldehyde emission</td>
<td>mg/m³·h</td>
<td>–</td>
<td>0.005 below</td>
<td>KS F 4937 : 2009</td>
</tr>
</tbody>
</table>

* This is a test specimens provided by the client after completing the production and curing.  
* Emission Test Condition  
  1. Test period : 7 days  
  2. Load factor : 0.4 m²/m³  
  3. Sample : Paint (Applied area: 63 mm x 63 mm x 2 ea, Client provided sample)  
  4. MDL : TVOC - 0.020 mg/m³·h, HCHO - 0.005 mg/m³·h, Toluene - 0.005 mg/m³·h  
  Usage of Report : QUALITY CONTROL

---

Park Sanghyo  
Prepared by Park Sanghyo  
Tel : 032-570-9643

Jong-Kuk Kwon  
Reviewed by Jong-Kuk Kwon  
Tel : 1577-0091(ARS ①→③)

Korea Testing & Research Institute  
2020.03.05

President

QR Code for forgery  
Registered copy date : Mar,16,2020
Test Results

<table>
<thead>
<tr>
<th>TEST ITEM</th>
<th>UNIT</th>
<th>SAMPLE</th>
<th>RESULT</th>
<th>TEST METHOD</th>
</tr>
</thead>
</table>

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 for public relation, advertisement and lawsuit.
3. This test report is only 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.

Park Sanghyo  
Prepared by Park Sanghyo  
Tel: 032-570-9643

Jong-Kuk Kwon  
Reviewed by Jong-Kuk Kwon  
Tel: 1577-0091(ARS ①→③)

2020.03.05  
Korea Testing & Research Institute  
President

QR Code for forgery  
Registered copy date: Mar.16,2020