

CERTIFICATE OF KOREA ECO-LABEL



We hereby certify that the following products comply with the criteria set forth under the Support for Environmental Technology and Environmental Industry Act and are granted the right to use the Korea Eco-Label.

lasola arteco PP

(decoration sheet(0.15mm))

HANSOL HOME DECO Co., Ltd.

27F, Korea Specialty Contractor Financial Cooperative Bldg., 15,
Boramae-ro 5-gil, Dongjak-gu, Seoul, Republic of Korea

The products on the above are certified as Decorative Synthetic Resin
Sheets(EL252)

Reduction of local environmental pollution, Reduction of harmful
substances

Certificate No. 26916

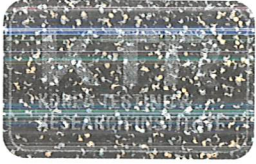
Issued on MAY 23, 2022

Valid until OCTOBER 24, 2024

A handwritten signature in black ink, consisting of three characters: '유', '제', and '철'.

JECHUL YOO, President

**KOREA ENVIRONMENTAL INDUSTRY &
TECHNOLOGY INSTITUTE**



TEST REPORT

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

TEL 82-63-214-2960

FAX 82-63-214-2964

Report No : TAK-2021-158396

Receipt Date : 2021.11.08.

Representative : Kim Gyeongrok

Test Completion Date : 2021.11.23.

Company name : Hansol HomeDeco Co., Ltd.

Address : 27F, Korea Specialty Contractor Financial Cooperative Bldg., 15, Boramae-ro 5-gil, Dongjak-gu, Seoul, Korea

Sample name : lasola arteco PP

Test Results

| TEST ITEM | UNIT | SAMPLE | RESULT | TEST METHOD |
|---------------------------|-------------------|--------|--------|--------------------------------|
| Tensile Strength(T.D)(**) | N/cm ² | - | 2 977 | KS M 3001 : 2001(Application) |
| Tensile Strength(M.D)(**) | N/cm ² | - | 3 540 | KS M 3001 : 2001(Application) |
| Elongation(T.D.)(**) | % | - | 30 | KS M 3001 : 2001(Application) |
| Elongation(M.D.)(**) | % | - | 47 | KS M 3001 : 2001(Application) |
| Tear Strength(T.D) | N/cm | - | 986 | KS M 3001 : 2001(Application) |
| Tear Strength(M.D) | N/cm | - | 1 236 | KS M 3001 : 2001(Application) |

※ Test condition : (23±2) °C, (50±5) % R.H)

** Test speed : 50 mm/min, Specimen : Type II

- 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.

Park Joo-ick

Prepared by Park Joo-ick

Tel : 02-2092-3701

Im Youngkeun

Reviewed by Im Youngkeun

Tel : 1577-0091(ARS ①→④)

2021.11.23

Korea Testing & Research Institute

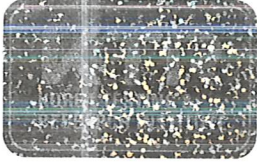
President *Kwon Oh-jung*



QR Code for forgery

Registered copy date : Jul.05.2022

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Test Results

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|------------------------------|------|--------|--------|---------------------------|
| Abrasion Resistance Test(**) | mg | - | 3 | ASTM D4060-19(application |

** Abrasion resistance test conditions(by the client): Abrasion wheel: CS-10, Weight: 250 g, Cycles: 500 Cycles
(This is the average result of the specimens(3 ea) provided by the client)

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Kim joong yeon

Prepared by Kim joong yeon

Tel : 02-2092-3703

Jung Bong Kue

Reviewed by Jung Bong Kue

Tel : 1577-0091(ARS ①→④)

2021.11.23

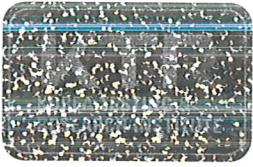
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TEST REPORT

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

TEL 82-63-214-2960

FAX 82-63-214-2964

Report No : TAK-2021-179953

Receipt Date : 2021.12.17.

Representative : Kim Gyeongrok

Test Completion Date : 2022.01.18.

Company name : Hansol HomeDeco Co., Ltd.

Address : 27F, Korea Specialty Contractor Financial Cooperative Bldg., 15, Boramae-ro 5-gil, Dongjak-gu, Seoul, Korea

Sample name : lasola arteco PP

Test Results

| TEST ITEM | UNIT | SAMPLE | RESULT | TEST METHOD | SITE |
|-----------------------|-----------------------|--------|-------------|--|------|
| TVOC emission | mg/m ² · h | - | 0.032 | National Institute of Environmental Research Notice No. 2020-23(2020.07.31.) | AK |
| Toluene emission | mg/m ² · h | - | 0.001 below | National Institute of Environmental Research Notice No. 2020-23(2020.07.31.) | AK |
| Formaldehyde emission | mg/m ² · h | - | 0.001 below | National Institute of Environmental Research Notice No. 2020-23(2020.07.31.) | AK |

* Test method 'Standard methods for the examination of environmental pollution (indoor air) ES 02131.1'

** Emission result averaged by using 2 chambers

*** Emission Test Condition

1. Test period : 7 days
 2. Load factor : 2.0 m² / m³
 3. Sample : Solid building materials (Exposed area: 143 mm x 143 mm x 2 ea)
 4. MDL : TVOC - 0.004 mg/m² · h, HCHO - 0.001 mg/m² · h
Toluene - 0.001 mg/m² · h
- AK: 98, Gyoyukwon-ro, Gwacheon-si, Gyeonggi-do, 13810, Korea
- Usage of Report : QUALITY CONTROL

- Next Page -

Kim Jiho

Prepared by Kim Jiho

Tel : 02-2092-3839

Chang-Seok Jeong

Reviewed by Chang-Seok

Tel : 1577-0091(ARS ①-④)

2022.01.18

Korea Testing & Research Institute

Accredited by KOLAS, Republic of KOREA

President *Kwon Oh-jung*



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TEST REPORT



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

TEL 82-63-214-2960

FAX 82-63-214-2964

Report No : TAK-2021-179953

Receipt Date : 2021.12.17.

Representative : Kim Gyeongrok

Test Completion Date : 2022.01.18.

Company name : Hansol HomeDeco Co., Ltd.

Address : 27F, Korea Specialty Contractor Financial Cooperative Bldg., 15, Boramae-ro 5-gil, Dongjak-gu, Seoul, Korea

Sample name : lasola arteco PP

Test Results

| TEST ITEM | UNIT | SAMPLE | RESULT | TEST METHOD | SITE |
|-----------|------|--------|--------|-------------|------|
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The above testing certificate is the accredited test result by Korea Laboratory Accreditation Scheme, which signed the ILAC-MRA.

Kim Jiho

Prepared by Kim Jiho

Tel : 02-2092-3839

Chang-Seok Jeong

Reviewed by Chang-Seok

Tel : 1577-0091(ARS ①→④)

2022.01.18

Korea Testing & Research Institute

Accredited by KOLAS, Republic of KOREA

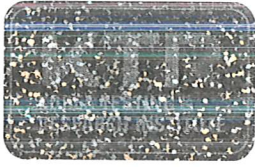
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TEST REPORT



This test report is not issued by TUV SUD Lab and the qualified TUV SUD mark means our lab is qualified and registered as TUV SUD partner lab program with the specific scope and test standards or methods. This special TUV SUD mark is property of TUV SUD and valid only with the related valid attestation.

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

TEL 82-63-214-2960

FAX 82-63-214-2964

Report No. : TAK-2021-179956

Receipt Date : Dec.17.2021

Customer : Kim Gyeongrok

Test Date : Jan.18.2022

Hansol HomeDeco Co., Ltd.

27F, Korea Specialty Contractor Financial Cooperative Bldg., 15, Boramae-ro 5-gil, Dongjak-gu, Seoul, Korea

Sample : lasola arteco PP

Testing Date : Dec.17.2021 ~ Jan.18.2022

Testing Environment : Temperature (20 ± 5)°C, Relative humidity (40 ± 20) %

Test method : Refer to following pages

Test result : Refer to following pages

Attachment : Flow chart and Sample pictures

USAGE : QUALITY CONTROL

- NOTE : 1. The test results on this test report are only limited to the samples and sample names provided by the customer and KTR does not guarantee the quality of all products of the customer, and you can confirm the authenticity of the test report online (www.ktr.or.kr) or by using the QR code.
2. This test report shall not be used for public relation, advertisement, lawsuit and any other purposes outside the scope of its defined usage.
3. Only original copy (including certified copy) of the test report is valid – electronic copy (hard and/or soft) is for your reference only.

Kim Eun Ji

Prepared by Kim Eun Ji

Tel : 02-2092-3684

Yang-Suek Bhang

Reviewed by Yang-Suek Bhang

Technical Manager

Tel : 1577-0091(ARS ①-④)

Jan.18.2022

Korea Testing & Research Institute

President

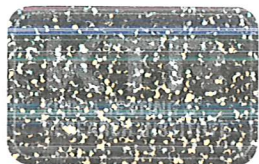
Kwon Oh-jung



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TEST REPORT

Report No. : TAK-2021-179956

Sample : lasola arteco PP

TEST RESULT

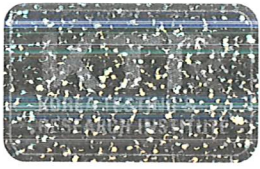
| Test itmes | Unit | Sample | Results | MDL | Test Methods |
|------------------|-------|--------|--------------|-----|---|
| Pb | mg/kg | - | Not detected | 10 | IEC 62321-5 Ed. 1.0 : 2013(Apply Correspondingly) |
| Cd | mg/kg | - | Not detected | 1 | IEC 62321-5 Ed. 1.0 : 2013(Apply Correspondingly) |
| Hg | mg/kg | - | Not detected | 1 | IEC 62321-4 Ed. 1.1 : 2017(Apply Correspondingly) |
| Cr ⁶⁺ | mg/kg | - | Not detected | 8 | IEC 62321-7-2 Ed. 1.0 : 2017(Apply Correspondingly) |

Notes : mg/kg = ppm (parts per million)

N.D = Not detected(<MDL)

MDL = Method detection limit





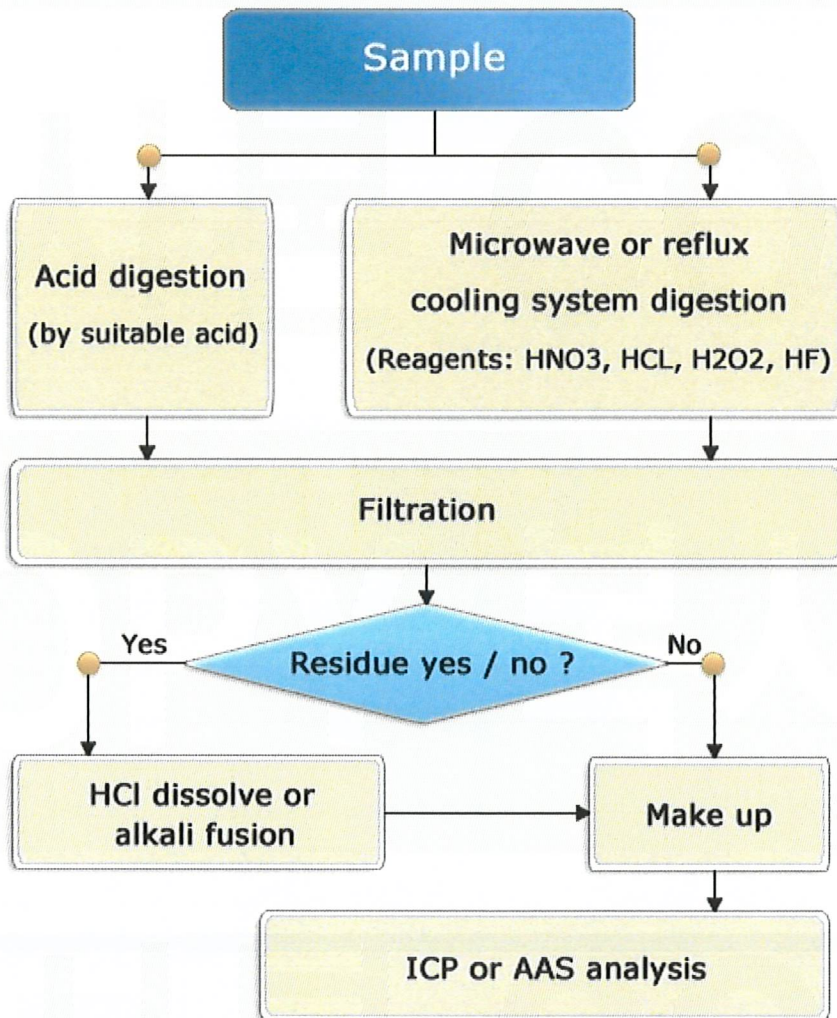
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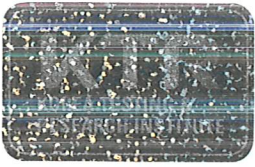
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Sample : lasola arteco PP

Pb, Cd, Hg : Tested by Kim Eun Ji(Tel : 02-2092-3684)

Flow Chart of heavy metals analysis





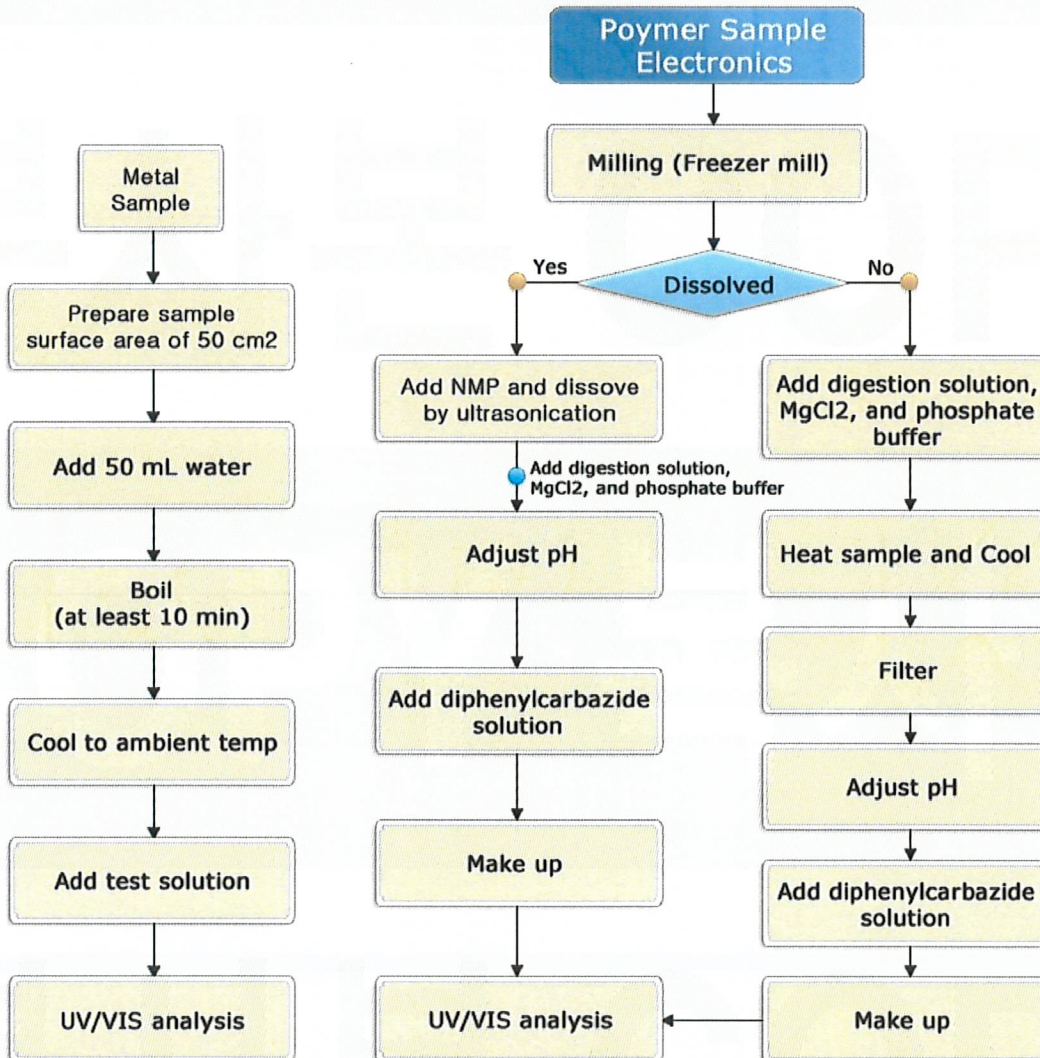
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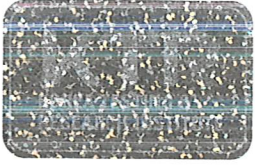
Report No. : TAK-2021-179956

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Cr⁶⁺ : Tested by Kim Eun Ji(Tel : 02-2092-3684)

Flow Chart of Cr⁶⁺ analysis





TEST REPORT

Report No. : TAK-2021-179956

Sample : lasola arteco PP

Sample



- End of Report -

