

# 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 PET

(Decoration Sheet(Electric & Electronic, 0.3mm))

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 harmful substances, Reduction of life environmental  
pollution

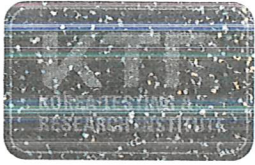
Certificate No. 25375

Issued on SEPTEMBER 27, 2021  
Valid until MAY 17, 2024

A handwritten signature in black ink, consisting of the Korean characters '유 제철' (Yoo Jechul).

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-2021-179951

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 PET

## Test Results

TEST ITEM	UNIT	SAMPLE	RESULT	TEST METHOD
Tensile Strength(T.D)(**)(****)	N/cm <sup>2</sup>	-	6 518	KS M 3001 : 2001( Application)
Tensile Strength(M.D)(**)(****)	N/cm <sup>2</sup>	-	6 556	KS M 3001 : 2001( Application)
Elongation(T.D.)(**)(****)	%	-	397	KS M 3001 : 2001( Application)
Elongation(M.D.)(**)(****)	%	-	402	KS M 3001 : 2001( Application)
Tear Strength(T.D)(****)	N/cm	-	2 363	KS M 3001 : 2001( Application)
Tear Strength(M.D)(****)	N/cm	-	2 340	KS M 3001 : 2001( Application)
Abrasion Resistance Test(**)	mg	-	1	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)

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

\*\*\*\* Test condition : 23 °C, 50 % RH

- Usage of Report : QUALITY CONTROL

- Next Page -

*Park Joo-ick*

Prepared by Park Joo-ick

Tel : 02-2092-3701

*Im Youngkeun*

Reviewed by Im Youngkeun

Tel : 1577-0091(ARS ①-④)

2022.01.18

## Korea Testing & Research Institute

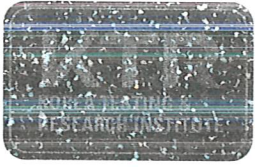
President *Kwon Oh-jung*



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Page : 1 of 2



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Sample name : lasola arteco PET

## Test Results

TEST ITEM	UNIT	SAMPLE	RESULT	TEST METHOD
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- 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](http://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)

2022.01.18

## Korea Testing & Research Institute

President *Kwon Oh-jung*



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Page : 2 of 2



# TEST REPORT



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

TEL 82-63-214-2960

FAX 82-63-214-2964

Report No : TAK-2021-179952

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 PET

## Test Results

TEST ITEM	UNIT	SAMPLE	RESULT	TEST METHOD	SITE
TVOC emission	mg/m <sup>2</sup> · h	-	0.006	National Institute of Environmental Research Notice No. 2020-23(2020.07.31.)	AK
Toluene emission	mg/m <sup>2</sup> · h	-	0.001 below	National Institute of Environmental Research Notice No. 2020-23(2020.07.31.)	AK
Formaldehyde emission	mg/m <sup>2</sup> · 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 m<sup>2</sup> / m<sup>3</sup>
3. Sample : Solid building materials (Exposed area: 143 mm x 143 mm x 2 ea)
4. MDL : TVOC - 0.004 mg/m<sup>2</sup> · h, HCHO - 0.001 mg/m<sup>2</sup> · h  
Toluene - 0.001 mg/m<sup>2</sup> · 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

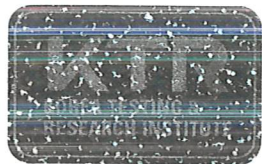
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Page : 1 of 2



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Representative : Kim Gyeongrok

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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 PET

## 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

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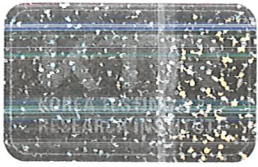
President *Kwon Oh-jung*



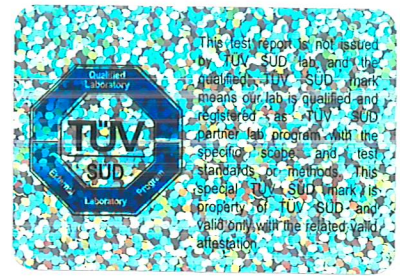
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Page : 2 of 2



# TEST REPORT



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

TEL 82-63-214-2960

FAX 82-63-214-2964

Report No. : TAK-2021-179954

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 PET

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](http://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

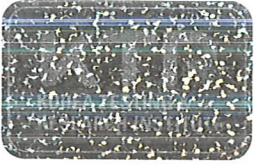
*Kwon Oh-jung*



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1 of Total 5 Page(s)





# TEST REPORT

Report No. : TAK-2021-179954

Sample : lasola arteco PET

## 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 <sup>6+</sup>	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





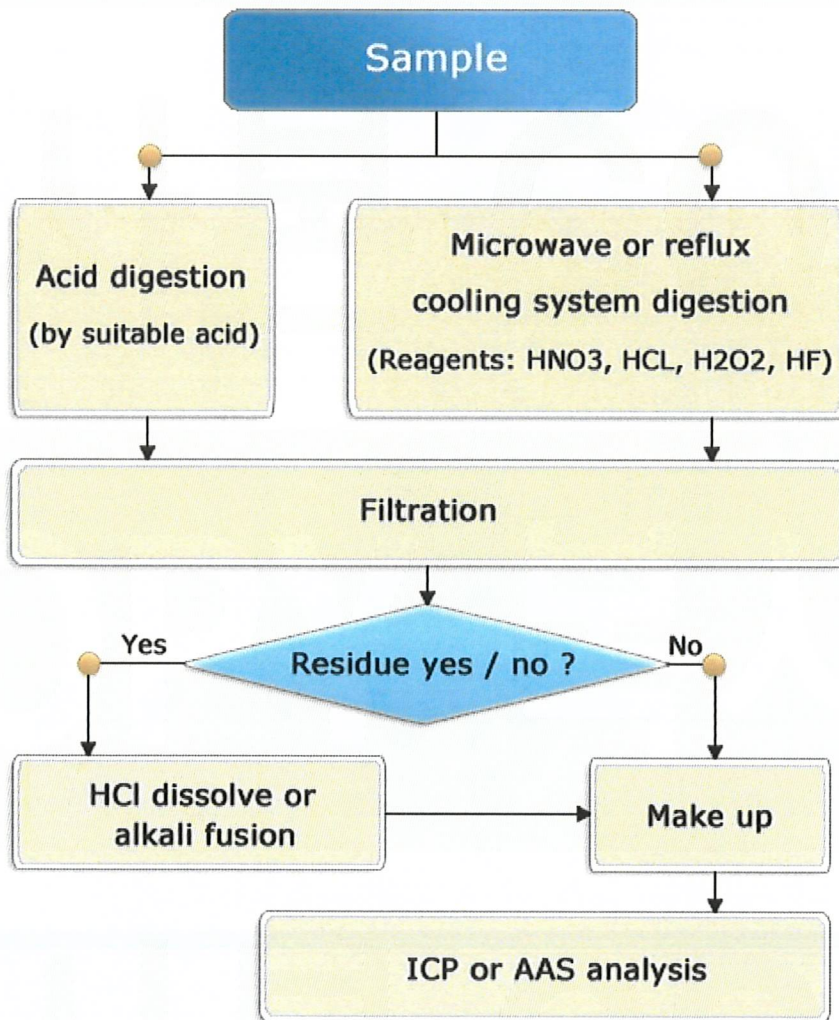
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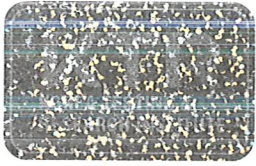
Report No. : TAK-2021-179954

Sample : lasola arteco PET

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

## Flow Chart of heavy metals analysis





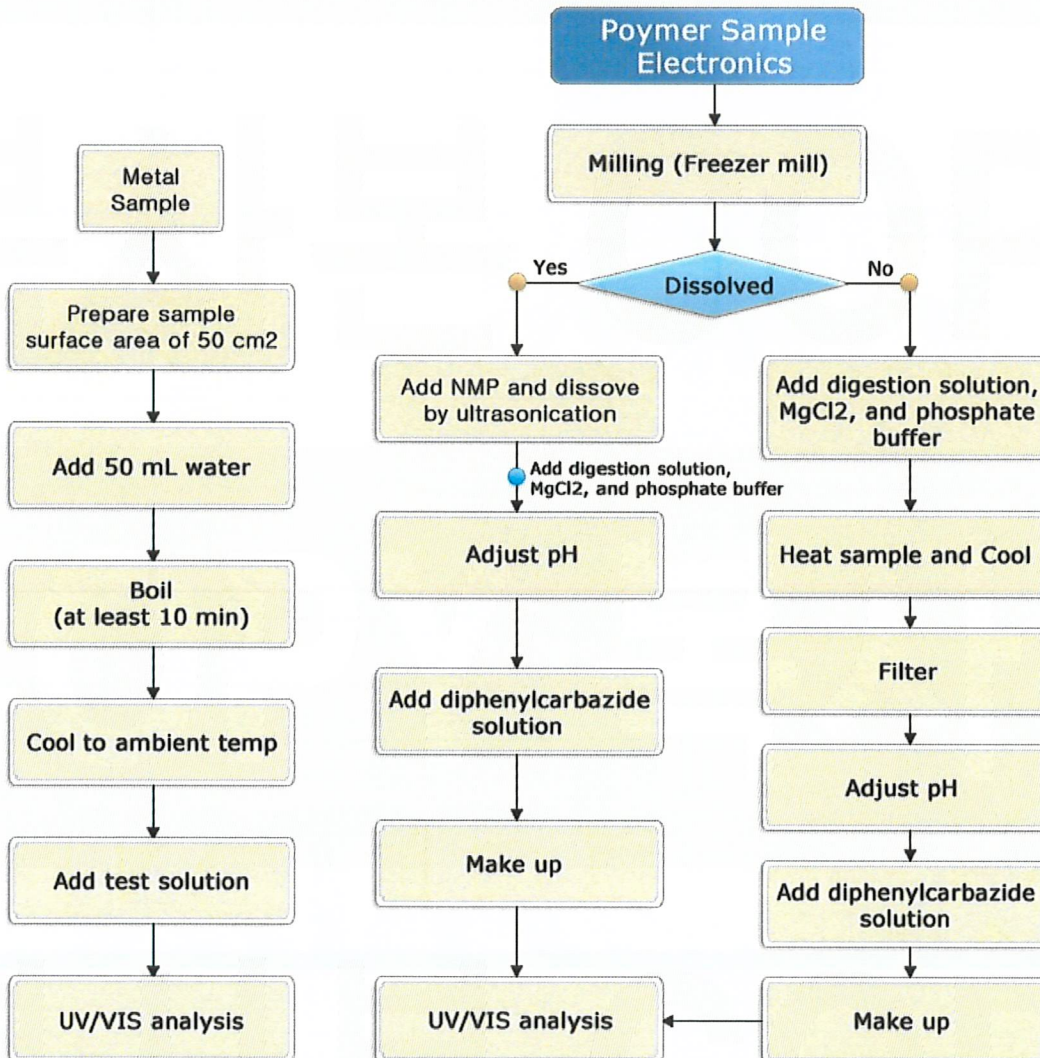
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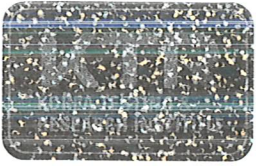
Report No. : TAK-2021-179954

Sample : lasola arteco PET

Cr<sup>6+</sup> : Tested by Kim Eun Ji(Tel : 02-2092-3684)

## Flow Chart of Cr<sup>6+</sup> analysis





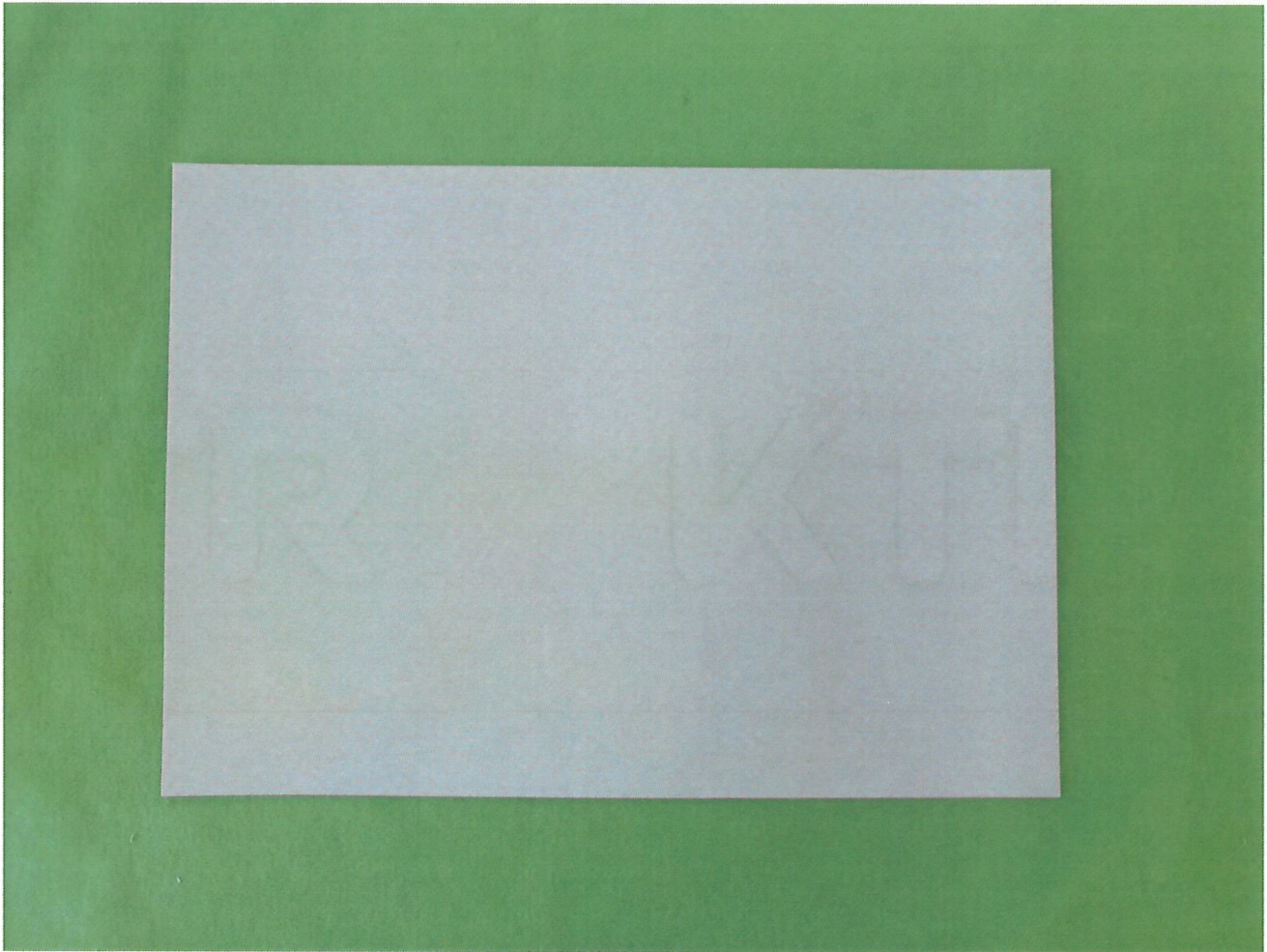
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## Sample



- End of Report -

