International Certification Registrar International Certification Registrar

Certificate
of Registration

This is to certify that :

KPTECH

37, Simigok-ro, Idong-myeon, Cheoin-gu, Yongin-si, Gyeonggi-do, Korea

Has been assessed by International Certification Registrar Ltd., in respect of their Quality Management Systems and found to comply with

ISO 9001:2015

Approval is hereby granted for registration providing the rules and conditions relating to certification are observed at all times.

Certification Scope

Development and Manufacture of Rigid Sheet (PVC, PET, PLA, Deco-Sheet) PVDC, ALU-Foil

Certificate Issue Date : 10th September 2020 **Initial Issued Date : 06th September 2011**

Expiration Date : 05th September 2023 **Certificate No. : Q359411**

※ This certificate is valid by completion of surveillance audit which is conducted within 12 months from the certification date.

The Seal of ICR Limited was hereto affixed
in the presence of :

President

- This certificate is intellectual property of ICR.
- This certificate is only valid by completion of surveillance audit which is conducted at least once a year.
- You can verify the authenticity of this certificate on "Certification Confirm" at www.icrqa.com
- If you can not maintain the certification, this certificate shall be returned to ICR.

International Certification Registrar International Certification Registrar

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Certification Scope

Development and Manufacture of Rigid Sheet (PVC, PET, PLA, Deco-Sheet) PVDC, ALU-Foil

Certificate Issue Date : 10th September 2020 **Initial Issued Date : 06th September 2011**

Expiration Date : 05th September 2023 **Certificate No. : E177411**

※ This certificate is valid by completion of surveillance audit which is conducted within 12 months from the certification date.

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ASTM E 2180 – 18

Standard Test Method for Determining the Activity of Incorporated Antimicrobial Agent(s) in Polymeric or Hydrophobic Materials

FINAL REPORT: R2019-566

Prepared for:
KP-Tech Co. Ltd.
Gyeonggi-do, Rep. of Korea

Accredited Testing Provided by:

The MicroStar® Lab
130 Erick Street
Crystal Lake, IL 60014
815.526.0954
TESTING CERT: #2832.01

Testing Initiated: October 29, 2019
Testing Completed: October 31, 2019
Report Issued: November 5, 2019

Performed By: Marcy Aaron
Title: Staff Scientist

Approved By: Debbie Koester
Title: Quality Manager

Objective:

To evaluate the surface of three samples for antimicrobial effectiveness against *Staphylococcus aureus* ATCC# 6538 and *Pseudomonas aeruginosa* ATCC# 15442 as demonstrated by ASTM E 2180 test method.

Test Sample Identification:

1. BELITAPET, KPT-DECO-001, UV Coating + GAG PET (UV coating + PET-G + PET-A + PET-G)
2. BELITASA, KPT-DECO-002, ASA + UV Coating
3. BELITASA, KPT-DECO-003, ASA Plain, No UV coating

Test Procedure Summary:

The test organism was adjusted and diluted to obtain the starting inoculum concentration in an agar slurry. The control was tested in triplicate at Time = 0 and Time = 24 hours. The test samples were tested in triplicate at Time = 24 hours. Each replicate was placed in a sterile Petri dish, inoculated and then incubated. At the appropriate time, the replicate was placed in sterile container with neutralizing broth and shaken to facilitate the release of the agar slurry to the neutralizing broth. Serial dilutions of the neutralizing broth containing the inoculum were plated. All plates were incubated. After incubation, bacterial colonies were counted and recorded. The results are found in the Test Results section. The results pertain only to the samples tested.

Test Variables

Test Organism:	*Staphylococcus aureus ATCC 6538* *Pseudomonas aeruginosa ATCC# 15442*
Sample Size:	3 cm x 3 cm
Pre-Cleaning:	None
Control:	Untreated plastic control supplied by MicroStar
Neutralizing Broth Used:	10 mL D/E Neutralizing Broth
Starting Inoculum Concentration:	*S. aureus ATCC# 6538:* 4.8 x 10^6; Log value 6.68 *P. aeruginosa ATCC# 15442:* 5.8 x 10^6; Log value 6.76
Amount of Inoculum:	1.0 mL
Contact Time:	24 hours
Deviations from Standard Test Method:	None, testing performed per ASTM E2180 without deviation.

Test Results:

Log reduction and percent reduction is determined by comparing the treated sample after the contact time to the untreated plastic control after the contact time using the geometric mean (average of log values of each replicate) and antilog as indicated by the standard test method. The average number of recovered bacteria and log reduction are reported as Log_{10} values.

Results against S. aureus ATCC#6538 after 24-hour Contact Time

Sample	Geometric Mean of Recovered Bacteria	Log Reduction	Percent Reduction
Untreated Plastic Control	6.66		
BELITAPET KPT-DECO-001 UV Coating +GAG PET (UV coating + PET-G + PET-A + PET-G)	6.32	0.34	54
BELITASA KPT-DECO-002 ASA + UV Coating	5.80	0.85	86
BELITASA KPT-DECO-003 ASA Plain, No UV coating	5.93	0.72	81

Results against P. aeruginosa ATCC# 15442 after 24-hour Contact Time

Sample	Geometric Mean of Recovered Bacteria	Log Reduction	Percent Reduction
Untreated Plastic Control	8.13		
BELITAPET KPT-DECO-001 UV Coating +GAG PET (UV coating + PET-G + PET-A + PET-G)	8.29	No Reduction	
BELITASA KPT-DECO-002 ASA + UV Coating	8.22	No Reduction	
BELITASA KPT-DECO-003 ASA Plain, No UV coating	8.26	No Reduction	

Percent reduction is translated into log reduction by the following:

90% reduction = 1 log reduction; i.e. 1,000,000 (Log Value 6.00) reduced to 100,000 (Log Value 5.00)
99% reduction = 2 log reduction; i.e. 1,000,000 (Log Value 6.00) reduced to 10,000 (Log Value 4.00)
99.9% reduction = 3 log reduction; i.e. 1,000,000 (Log Value 6.00) reduced to 1,000 (Log Value 3.00)
99.99% reduction = 4 log reduction; i.e. 1,000,000 (Log Value 6.00) reduced to 100 (Log Value 2.00)
99.999% reduction = 5 log reduction; i.e. 1,000,000 (Log Value 6.00) reduced to 10 (Log Value 1.00)

Fraunhofer WKI

Fraunhofer Institute for Wood Research
Wilhelm-Klauditz-Institut WKI

Director
Prof. Dr.-Ing. Bohumil Kasal

Head of the Testing, Supervision and Certifying Body
Dipl.-Ing. Harald Schwab

Bienroder Weg 54E
38108 Braunschweig | Germany

Andreas Ritter
Official in charge surface examination
Quality Assessment QA
Phone + 49 531 2155-339 | Fax -907
andreas.ritter@wki.fraunhofer.de
www.wki.fraunhofer.de

Fraunhofer WKI | Bienroder Weg 54E | 38108 Braunschweig I Germany

KP-Tech Co. Ltd.
Gyeonggi-do
REPUBLIC OF KOREA

Braunschweig, October 29, 2019

Test Report No. QA-2019-4314

Customer: KP-Tech Co. Ltd.
Gyeonggi-do
REPUBLIC OF KOREA

Material: Foil coated MDF
(1) BELITAPET KPT-DECO-001
(2) BELITASA KPT-DECO-002
(3) BELITASA KPT-DECO-003

Object of the test: Determination of surface characteristics in accordance with DIN 68861-1, -2, -4, -6, -7 and -8 at samples of foil coated MDF

Content of the report:

The test report comprises 5 pages. A publication of this report in excerpts is subject to the written consent of Fraunhofer Institute for Wood Research, Wilhelm-Klauditz-Institut WKI, Bienroder Weg 54E in Braunschweig (Germany).

DAkkS Deutsche Akkreditierungsstelle D-PL-11140-14-00

Mitglied des Verbandes der Materialprüfungsanstalten

Fraunhofer WKI

1. Task

The company AP Network Inc., Seoul, authorized the Fraunhofer Institute for Wood Research, Wilhelm-Klauditz-Institut WKI, with the testing of three foil coated MDF. The following tests should be performed:

- Behaviour at chemical influence (DIN 68861-1)
- Behaviour at abrasion (DIN 68861-2)
- Behaviour at scratches (DIN 68861-4)
- Behaviour at glowing cigarette (DIN 68861-6 (withdrawn))
- Behaviour subjection to dry heat (DIN 68861-7)
- Behaviour on subjection to wet heat (DIN 68861-8)

2. Material to be tested and parameters

By the letter of October 5, 2019 ten samples 300 mm x 210 mm x 18.6 mm and eight samples 100 mm x 100 mm x 18.6 mm of foil coated MDF were sent to the Fraunhofer WKI. The material to be tested was selected by the customer and was delivered to the Fraunhofer WKI on October 8, 2019.

Name of the specimen:
(according to the customer)

(1) BELITAPET KPT-DECO-001
UV Coating+GAG PET (UV coating+PET-G+PET-A+PET-G)
Thickness: 0.3~0.4 mm, No fire retardant

(2) BELITASA KPT-DECO-002
ASA + UV Coating
Thickness: 0.3~0.4 mm, No fire retardant

(3) BELITASA KPT-DECO-003
ASA Plain
Thickness: 0.3~0.4 mm, No UV coating, No fire retardant

The material that has not been used up will be disposed by the Fraunhofer WKI three months after the completion of the tests.

3. Execution of the test

3.1 Behaviour at chemical influence

In accordance with DIN 68861-1 „Furniture surfaces – Behavior at chemical influence" (January 2011) the test was performed following DIN EN 12720 „Furniture – Assessment of the surface resistance to to cold liquids" (February 2014) after storage at (23 ± 2) °C and (50 ± 5) % relative humidity for at least one week.

3.2 Behavior at abrasion

In accordance with DIN 68861-2 „Furniture surfaces – Behaviour at abrasion" (February 2013) the test was performed following DIN EN 15185 „Furniture – Assessment of the surface resistance to abrasion" (July 2011) after storage at (23 ± 2) °C and (50 ± 5) % relative humidity for at least one week.

Fraunhofer WKI

3.3 Behaviour at scratches

In accordance with DIN 68861-4 „Furniture surfaces – Behaviour at scratches" (February 2013) the test was performed following DIN EN 15186 „Furniture – Assessment of the surface resistance to scratching", procedure B (July 2012) after storage at (23 ± 2) °C and (50 ± 5) % relative humidity for at least one week.

3.4 Behaviour at glowing cigarette

In accordance with DIN 68861-6 „Furniture surfaces – Behaviour at glowing cigarette" (November 1982, withdrawn) the test was performed following DIN 51961 „Testing of plastics surfaces – Behaviour on exposure to glowing cigarettes" (August 1984, withdrawn) after storage at (23 ± 2) °C and (50 ± 5) % relative humidity for at least one week.

3.5 Behaviour subjection to dry heat

In accordance with DIN 68861-7 „Furniture surfaces – Behaviour subjection to dry heat" (April 2001) the test was performed following DIN EN 12722 „Furniture – Assessment of surface resistance to dry heat" (February 2014) after storage at (23 ± 2) °C and (50 ± 5) % relative humidity for at least one week.

3.6 Behaviour on subjection to wet heat

In accordance with DIN 68861-8 „Furniture surfaces – Behaviour on subjection to wet heat" (April 2001) the test was performed following DIN EN 12721 „Furniture – Assessment of surface resistance to wet heat" (February 2014) after storage at (23 ± 2) °C and (50 ± 5) % relative humidity for at least one week.

4. Results

4.1 Behavior at chemical influence

Foil coated MDF	Class	Result
(1) BELITAPET KPT-DECO-001	1 C	No change is visible when tested in accordance with the standard
(2) BELITASA KPT-DECO-002	1 C	No change is visible when tested in accordance with the standard
(3) BELITASA KPT-DECO-003	1 C	No change is visible when tested in accordance with the standard

4.2 Behavior at abrasion

Foil coated MDF	Class	Achieved revolutions at testing according to DIN EN 15185
(1) BELITAPET KPT-DECO-001	2 A	> 650
(2) BELITASA KPT-DECO-002	2 A	> 650
(3) BELITASA KPT-DECO-003	2 A	> 650

Fraunhofer WKI

4.3 Behaviour at scratches

Foil coated MDF	Class	Scratch resistance at testing according to DIN EN 15186, procedure B
(1) BELITAPET KPT-DECO-001	4 F	0.3 N
(2) BELITASA KPT-DECO-002	4 F	0.3 N
(3) BELITASA KPT-DECO-003	4 F	0.1 N

4.4 Behavior at glowing cigarette

Foil coated MDF	Class	Surface after testing (cleaned)
(1) BELITAPET KPT-DECO-001	6 E	Destroyed
(2) BELITASA KPT-DECO-002	6 E	Destroyed
(3) BELITASA KPT-DECO-003	6 E	Destroyed

4.5 Behavior subjection to dry heat

Foil coated MDF	Class	Test temperature at testing according to DIN EN 12722
(1) BELITAPET KPT-DECO-001	7 E	55 °C
(2) BELITASA KPT-DECO-002	7 E	55 °C
(3) BELITASA KPT-DECO-003	7 E	55 °C

4.6 Behavior on subjection to wet heat

Foil coated MDF	Class	Test temperature at testing according to DIN EN 12721
(1) BELITAPET KPT-DECO-001	8 C	55 °C
(2) BELITASA KPT-DECO-002	8 B	70 °C
(3) BELITASA KPT-DECO-003	8 B	70 °C

Fraunhofer WKI

5. Evaluation of the results

The evaluation of the test results was not made, because a determination of the characteristics of the existing samples should be performed, only. The test results exclusively refer to the objects of the test.

Andreas Ritter
Official in Charge

Durch die oberste Bauaufsichtsbehörde anerkannte Überwachungs- und Zertifizierungsstelle - ÜZ - Wilhelm-Klauditz-Institut WKI Braunschweig

Dipl.-Ing. Harald Schwab
Head of the Testing, Supervision and Certifying Body

SGS INSTITUT FRESENIUS GmbH• Postfach 1261 • 65220 Taunusstein

DAkkS Deutsche Akkreditierungsstelle D-PL-14115-02-00

KP–Tech Co. Ltd.
Gyeonggi-do
Rep. of Korea

Dr. Simone Kirchert
Customer Service Consultant
Tel.: +49 6128 744-151, Fax:
Simone.Kirchert@sgs.com
Consumer and Retail
Non Food

Taunusstein, 31/10/2019

Test-report no. 4532645
Test-report version < 1 >

Original Sample ID	Sample Description	Sample Receipt Date
191135463	Nomenclature: BELITAPET Part Number: KPT-DECO-001, Layer Construction: UV Coating+GAG PET (UV coating+PET-G+PET-A+PET-G)	16/10/2019
191135464	Nomenclature: BELITASA Part Number: KPT-DECO-003, Layer Construction: ASA Plain, No UV coating,	16/10/2019
191135465	Nomenclature: BELITASA Part Number: KPT-DECO-002, Layer Construction: ASA + UV Coating	16/10/2019

General Information

SGS-Client´s ID	:	10182835
SGS-Customer-Order	:	5136715
Ordering date	:	15/10/2019
Testing period	:	21/10/2019 – 29/10/2019
Buyer	:	-
Order No.	:	-
Testing scope	:	Test according to client's requirements

Assessment

Overall assessment	Pass
The contents of all parameters tested are below their respective limits.	

This (e)Report cancels and supersedes the (e)Report No. 4530675 dated 30.10.2019 issued by SGS INSTITUT FRESENIUS GmbH.

- Correction of the address of the company (page 1)
- Correction of the sample description (page 1)

SGS INSTITUT FRESENIUS GmbH

This test report was electronically created and released:

	date	name		function	department
created	31.10.2019	i. A.	Malika Michel	Customer Service Assistant	Toys and Juvenile Products
released	31.10.2019	i.A.	Stephan Neuhaus	Customer Service Consultant	Consumer and Retail Non Food

Summary of results

Test	Result
Migration of certain elements acc. to DIN EN 71-3 (Category 3	Pass

Note:

Conclusions on pass/fail are based on the test result from the actual sampling of the received sample(s).

Conclusions are based on the relevant requirements; measurement uncertainties are not taken into account. Only results above the relevant detection limit are taken into account for the calculation of sums.

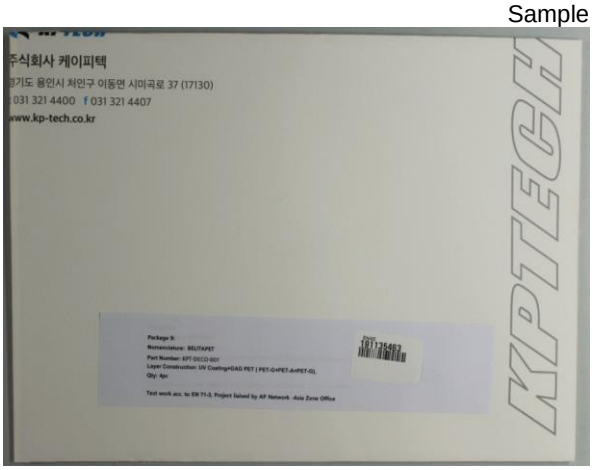
Test was conducted on composite of random parts of the item as per client's request and the test result is the overall result.

The composite sampling method is based on the client's special request and could be a modification from the testing standard.

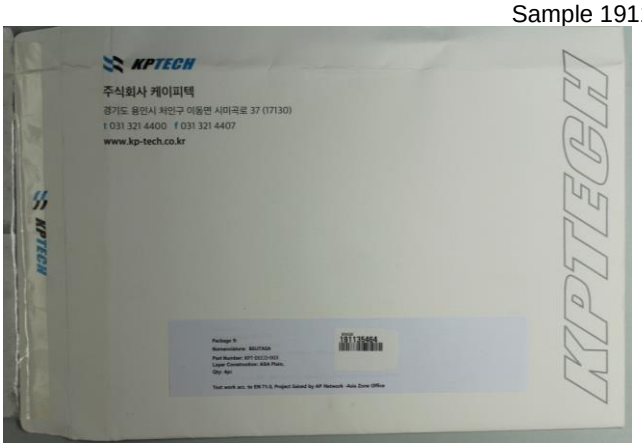
For 2-composite mix with results exceeding one half of the relevant requirements or 3-composite mix with results exceeding one third of the relevant requirements, the composite sample may have the possibility of one or more components that can lead to a failure result, it is recommended to test on individual basis.

Photo documentation

Sample 191135463



Sample 191135464



Sample 191135465

Analytical results

Migration of certain elements acc. to DIN EN 71-3

Test Method
DIN EN 71-3:2013+A3:2018, Analysis conducted by Inductively Coupled Argon Plasma Spectrometry.

Sample(s)	Unit	Result 191135463	Result 191135464	Result 191135465
Aluminum (Al)	mg/kg	< 10	< 10	< 10
Antimony (Sb)	mg/kg	< 10	< 10	< 10
Arsenic (As)	mg/kg	< 1.0	< 1.0	< 1.0
Boron (B)	mg/kg	< 10	< 10	< 10
Barium (Ba)	mg/kg	< 10	< 10	< 10
Cadmium (Cd)	mg/kg	< 1.0	< 1.0	< 1.0
Cobalt (Co)	mg/kg	< 10	< 10	< 10
Chromium (Cr), total	mg/kg	< 0.200	< 0.200	< 0.200
Copper (Cu)	mg/kg	< 10	< 10	< 10
Manganese (Mn)	mg/kg	< 10	< 10	< 10
Nickel (Ni)	mg/kg	< 10	< 10	< 10
Lead (Pb)	mg/kg	< 10	< 10	< 10
Selenium (Se)	mg/kg	< 10	< 10	< 10
Tin (Sn)	mg/kg	< 1.0	< 1.0	< 1.0
Strontium (Sr)	mg/kg	< 10	< 10	< 10
Zinc (Zn)	mg/kg	< 10	< 10	< 10
Mercury (Hg)	mg/kg	< 1.0	< 1.0	< 1.0
Conclusion		Pass	Pass	Pass

Note:

Requirement: Limits according to DIN EN 71-3:2013 + A3:2018

Parameter	Unit	Limit Category 3
Aluminium (Al)	mg/kg	70000
Antimony (Sb)	mg/kg	560
Arsenic (As)	mg/kg	47
Boron (B)	mg/kg	15000
Barium (Ba)	mg/kg	18750
Cadmium (Cd)	mg/kg	17
Cobalt (Co)	mg/kg	130
Chromium III (CrIII)	mg/kg	460
Chromium VI (CrVI)	mg/kg	0.2
Copper (Cu)	mg/kg	7700
Manganese (Mn)	mg/kg	15000
Nickell (Ni)	mg/kg	930
Lead	mg/kg	23
Selenium (Se)	mg/kg	460
Tin (Sn)	mg/kg	180000
organo tin	mg/kg	12
Strontium (Sr)	mg/kg	56000
Zinc (Zn)	mg/kg	46000
Mercury (Hg)	mg/kg	94

*** End of test report ***

Test Report

Report No.: 100119075-2
Project No.: 11190021.1
Date: March 15, 2016
Trace Code: A16.0139

Client: K.P. Tech Co., Ltd.
37, Simigok-ro, Idong-myeon
Cheoin-gu, Yongin-si
Gyeonggi-do, Korea 17130

Attention: Baik Jong Doo

Authorization: Check Number 1019

Samples Received: (03/03/2016)

- PVC Rigid Sheet

Analysis Requested:

Extraction studies done in accordance with FDA 21 CFR §175.300, Resinous and Polymeric Coatings, Condition of

Analysis Performed On: March 7, 2016 through March 10, 2016

Results and Discussion:

The submitted samples were analyzed in accordance with FDA 21 CFR §175.300. The samples were tested in accordance with the test specification listed under FDA 21 CFR 175.300, Resinous and Polymeric Coatings, under Condition of Use E. The results of this analysis are found on the attached table.

1. Purified water at 120°F for twenty four hours
2. Heptane at 70°F for 30 minutes
3. 8% Alcohol at 120°F for twenty four hours

The results of this analysis are found on the attached table.

The submitted sample meets the specifications in contact with alcohol, fatty foods, and aqueous foods at Room Temperature Filled and Stored (No Thermal Treatment in the Container).

Please contact us if you have any questions regarding these results or if you require additional information.

judith.v.haber@ul.com
2016.03.15 12:54:37 -04'00'

Judith V. Haber
Consumer Manager
Analytical Chemistry

Test Report

Report No.: 100119075-2
Project No.: 11190021.1
Date: March 15, 2016
Trace Code: A16.0139
J. S. Chem International Co. on behalf of K.P. Tech Co., Ltd.

TEST RESULTS
FDA 21 CFR 175.300, Condition of Use E, Room Temperature Filled
Sample ID: PVC Rigid Sheet

Solvent	Residue (mg/in^2)	Chloroform Residue (mg/in^2)	Criteria (mg/in^2)	Pass/Fail
Purified Water A	0.02	N/A	0.5	Pass
Purified Water B	0.01	N/A	0.5	Pass
Purified Water C	0.02	N/A	0.5	Pass
Purified Water D	0.01	N/A	0.5	Pass
Heptane A	0.00	N/A	0.5	Pass
Heptane B	0.00	N/A	0.5	Pass
Heptane C	0.00	N/A	0.5	Pass
Heptane D	0.00	N/A	0.5	Pass
Alcohol A	0.00	N/A	0.5	Pass
Alcohol B	0.00	N/A	0.5	Pass
Alcohol C	0.00	N/A	0.5	Pass
Alcohol D	0.00	N/A	0.5	Pass

**********End of Report**********

UL Verification Services, Inc., 1559 King Street, Enfield, CT 06082 USA
Phone: (860) 749-8371 **| Fax:** (860) 749-0196 **|Email:** QAINFO@UL.COM **|Website:** www.ul.com/consumer-products

Control Union Certifications B.V.
Meeuwenlaan 4-6, 8011 BZ, Zwolle, Netherlands
+31 38 426 0100
www.controlunion.com

CERTIFICATE OF COMPLIANCE

(Scope Certificate)

Certificate No: CU1044515GRS-2020-00022782

Registration No: 1044515

Control Union Certifications declares that

KPTECH

37, Simigok-ro, Idong-eup, Cheoin-gu
17130 Yongin-si, Gyeonggi-do
South Korea

has been inspected and assessed in accordance with the

Global Recycled Standard (GRS) 4.0

and that products of the categories as mentioned below (and further specified in the annex) comply with this standard:

Home Textiles

Processing steps / activities carried out under responsibility of the above-mentioned company (by the operations as detailed in the annex) for certified products

Processing, Trading, Storing

This certificate is valid until:
2021-06-10
This certificate is valid from:
2020-06-11

Place and date of issue:

2020-06-11, Zwolle

Stamp of the issuing body

Standard's Logo

Name of authorised person:

On behalf of the Managing Director
Henry Kim | Certifier

This certificate cannot be used as a transaction certificate. The issueing body can withdraw this certificate before it expires if the declared compliance is no longer guaranteed. Accredited by: Sri Lanka Accreditation Board (SLAB), Accreditation No: CP 004-01

Control Union Certifications B.V.
Meeuwenlaan 4-6, 8011 BZ, Zwolle, Netherlands
+31 38 426 0100
www.controlunion.com

Annex to certificate no.: CU1044515GRS-2020-00022782

KPTECH
Global Recycled Standard (GRS)

In specific the certificate covers the following products:

Name of product	Label grade	Processing unit(s)
Deco Foil - 84% Recycled Post-consumer Polyester + 16% Polyester	Post-Consumer	KPTECH

Place and date of issue:

Stamp of the issuing body

Standard's logo

2020-06-11, Zwolle

Name of authorised person:

On behalf of the Managing Director
Henry Kim | Certifier

Control Union Certifications B.V.
Meeuwenlaan 4-6, 8011 BZ, Zwolle, Netherlands
+31 38 426 0100
www.controlunion.com

Annex to certificate no.: CU1044515GRS-2020-00022782

KPTECH
Global Recycled Standard (GRS)

Under the scope of this certificate the following facilities / subcontractors have been inspected and assessed. The listed processing steps/activities comply with the corresponding criteria of the Global Recycled Standard (GRS) for the certified products:

Name of unit	Address	Processes
KPTECH	37, Simigok-ro, Idong-eup, Cheoin-gu Yongin-si, Gyeonggi-do South Korea	Processing Trading Storing

Place and date of issue:

2020-06-11, Zwolle

Stamp of the issuing body

Standard's Logo

Name of authorised person:

On behalf of the Managing Director
Henry Kim | Certifier

SCS Global Services *does hereby certify that an independent assessment has been conducted on behalf of:*

KP Tech

37 Simigokro Idongmyeon, Yonginsi, Gyeonggido, Korea, Republic Of

For the following product(s):

PLASTIC SHEET: rPET (Mono Layer)

The product(s) meet(s) all of the necessary qualifications to be certified for the following claim(s):

SCS RECYCLED CONTENT CERTIFIED

Conforms to the SCS Recycled Content Standard V7-0 for a **Minimum 28% with at least 10% Post-Consumer and Balance 18% Pre-Consumer PET Content.** Material quantification and mass-balance calculations completed on a dry-weight basis.

MINIMUM 83% RECYCLED CONTENT
10% POST-CONSUMER
18% PRE-CONSUMER

Registration # SCS-RC-05883

Valid from: January 30, 2020 to January 29, 2021

SCSglobal SERVICES

Stanley Mathuram, PE, Vice President

2000 Powell Street, Ste. 600, Emeryville, CA 94608 USA

제 22553 호

환경표지 인증서

1. 상　　호 : (주)케이피텍
2. 사 업 자 등 록 번 호 : 135-81-15211
3. 소　　재　　지 : 경기도 용인시 처인구 이동읍 시미곡로 37
4. 공장 · 사업장소재지 : 경기도 용인시 처인구 이동읍 시미곡로 37
5. 대 표 자 성 명 : 백종두, 백우순
6. 대 상 제 품 : EL252.장식용 합성수지 시트
7. 상표명/용도·제공서비스 : BELITAPET/데커레이션 시트(일반용, 두께 : 0.4mm)
8. 인 증 기 간 : 2020.07.31 부터 2022.07.30 까지
9. 인 증 사 유 : "유해물질 감소, 생활 환경오염 감소"

「환경기술 및 환경산업 지원법」 제17조제3항, 같은 법 시행령 제23조제2항 및 같은 법 시행규칙 제34조제2항에 따라 환경표지대상제품의 인증기준에 적합하므로 환경표지의 사용을 인증합니다.

※ 최 초 교 부 : 2020.07.31

2020년 07월 31일

한국환경산업기술원장

※ 한국환경산업기술원은 「환경기술 및 환경산업 지원법」 제31조제2항 및 같은 법 시행령 제33조제8항에 따라 환경부장관으로부터 환경표지 인증에 관한 업무를 위탁받은 기관입니다.

사실확인 : 1577-7360

KPtech Tel. (82) 31-321-4400, Fax. (82) 31-321-4407
Simigok-ro 37, Idong-myeon, Yongin-si, Gyeonggi-do, 17130 S.Korea

Technical Data Sheet

Rev.2 21.03.03

APET 020 - GAG Coextrusion
PETG / APET / PETG
DECORATIVE SHEET GRADE

GAG is the favored deco film worldwide with excellent aesthetic qualities.
GAG is fully recyclable, easily formed and is the material of choice in the MDF&PB board furniture industry.

PHYSICAL PROPERTIES

Property	Unit	Nominal Value	Test Method
Thickness tolerance	㎛	+5% -0%	ASTM D 1005
Color Consistency @D65 (White color)	-	ΔE≤0.5	CM-2600D
Color Consistency @D65 (Other color)	-	ΔE≤0.8	CM-2600D
Gloss level @60˚ (High Glossy)	%	87.0~93.0	ASTM D 523
Gloss level @60˚ (Ultra Matte)	%	3.0~7.0	ASTM D 523
Coating hardness (@250g load)	-	Min.H	ASTM D 3363
Light Fastness (White color)	-	ΔE≤1.0	ISO 4892-2 (A)
Light Fastness (Other color)	-	ΔE≤1.5	ISO 4892-2 (A)
Specific gravity	g/㎤	1.38~1.42	ASTM D 1503
Tensile strength	kgf/Cm^2	340	ASTM D 882
Izod impact strength @23℃ (73℉)	J/m^2	50	ASTM D 256
Heat distortion temp. @0.455mpa (66 psi)	℃	65-70	ASTM D 648
Vicat softening point (@ 5kg load)	℃	70 (+/-2)	ASTM D 1525

GENERAL SPECIFICATIONS

- More than 100 standard colors available
- Custom color matching on request
- Coated material supplied with high-tack formable masking film
- Gauges from 185micron to 800micron thickness
- Maximum roll width : 1,580mm
- Maximum roll OD : 1,000mm
- Core diameter :152mm

All data is based on in-house testing and are believed to be typical values when measured under laboratory condition.
Actual performance of the product described here in, and suitability for use is the responsibility of an end user.

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Technical Data Sheet

Rev.2. 21.04.28

ASA 021 - ASA
Acrylonitrile Styrene Acrylate
DECORATIVE SHEET GRADE

ASA is widely used decorative film with excellent aesthetic and weathering qualities and a naturally hard surface due to it's inherent acrylic properties
ASA is easily formed and is a material of choice in the MDF&PB board furniture industry.

PHYSICAL PROPERTIES

Property	Unit	Nominal Value	Test Method
Thickness tolerance	㎛	+5% -0%	ASTM D 1005
Color Consistency @D65 (White color)	-	ΔE≤0.5	CM-2600D
Color Consistency @D65 (Other color)	-	ΔE≤0.8	CM-2600D
Gloss level @60˚ (High Glossy)	%	87.0~93.0	ASTM D 523
Gloss level @60˚ (Ultra Matte)	%	3.0~7.0	ASTM D 523
Coating hardness (@250g load)	-	Min.H	ASTM D 3363
Light Fastness (White color)	-	ΔE≤1.0	ISO 4892-2 (A)
Light Fastness (Other color)	-	ΔE≤1.5	ISO 4892-2 (A)
Specific gravity	g/㎤	1.07	ASTM D 1503
Tensile strength at Yield	MPa	57	ASTM D 128
Izod impact strength @23℃ (73℉)	J/m^2	60	ASTM D 256
Heat distortion temp. @0.455mpa (66 psi)	℃	87	ASTM D 648
Vicat softening point (@ 5kg load)	℃	96	ASTM D 1525
Mold Shrinkage 23℃	%	0.4-0.7	ASTM D 955

GENERAL SPECIFICATIONS

- More than 100 standard colors available
- Custom color matching on request
- Coated material supplied with high-tack formable masking film
- Gauges from 185micron to 800micron thickness
- Maximum roll width : 1,580mm
- Maximum roll OD : 1,000mm
- Core diameter :152mm