



TEST REPORT

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

TEL 82-2-2164-0011

FAX 82-2-2634-1008

Report No : TAK-2019-005760

Receipt Date : 2019.01.09.

Representative : YOO JUNG SEUK

Test Completion Date : 2019.01.30.

Company name : HYUNDAI L&C

Address : 26, Eulji-ro 5-gil, Jung-gu, Seoul, Republic Korea

Sample name : Modified UPE Surfaces (Basic)

Test Results

TEST ITEM	UNIT	SAMPLE	RESULT	TEST METHOD
Contamination Resistance(Coffee, 16 h)	-	-	No Defects	SPS-KHFC 001-0438 : 2017(**)
Contamination Resistance(Milk, 16 h)	-	-	No Defects	SPS-KHFC 001-0438 : 2017(**)
Contamination Resistance(3 % Acetic acid, 16 h)	-	-	No Defects	SPS-KHFC 001-0438 : 2017
Contamination Resistance(10 % Ammonium Water, 16 h)	-	-	No Defects	SPS-KHFC 001-0438 : 2017
Contamination Resistance(Soy Sauce, 16 h)	-	-	No Defects	SPS-KHFC 001-0438 : 2017(**)
Contamination Resistance(Kimchi soup(Napa cabbage kimchi), 16 h)	-	-	No Defects	SPS-KHFC 001-0438 : 2017(**)
Contamination Resistance(Coke, 16 h)	-	-	No Defects	SPS-KHFC 001-0438 : 2017(**)
Contamination Resistance(Tomato ketchup, 16 h)	-	-	No Defects	SPS-KHFC 001-0438 : 2017(**)
Impact Resistance	-	-	No Defects	Client Provided Test Method(Referencing SPS-KHFC 001-0438 : 2017)
Heat Resistance(Appearance)	-	-	No Defects	Client Provided Test Method(Referencing SPS-KHFC 001-0438 : 2017)(*)
Heat Water Resistance(Appearance)	-	-	No Defects	Client Provided Test Method(Referencing SPS-KHFC 001-0438 : 2017)(*)

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Cho Hyeong-gil

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Tel : 02-2092-3698

You Seok

Reviewed by You Seok

Tel : 1577-0091(ARS ①→④)

2019.01.30

Korea Testing & Research Institute

President



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전자문서본(Electronic Copy)



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TEST ITEM	UNIT	SAMPLE	RESULT	TEST METHOD
Pb	mg/kg	-	Not Detected	IEC 62321-5 Ed. 1.0 : 2013(AAS, Apply Correspondingly)
Hg	mg/kg	-	Not Detected	IEC 62321-4 Ed. 1.0 : 2013(CV-AAS, Apply Correspondingly)
Cd	mg/kg	-	Not Detected	IEC 62321-5 Ed. 1.0 : 2013(AAS, Apply Correspondingly)
Cr ⁶⁺	mg/kg	-	Not Detected	IEC 62321-7-2 Ed. 1.0 : 2017(UV/Vis, Apply Correspondingly)
DEHP	%	-	Not detected	US EPA 8061A : 1996 (GC/MS)
DBP	%	-	Not detected	US EPA 8061A : 1996 (GC/MS)
BBP	%	-	Not detected	US EPA 8061A : 1996 (GC/MS)

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Test Results

TEST ITEM	UNIT	SAMPLE	RESULT	TEST METHOD
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* Changing appearance(Crack)

** Contaminant: By the client

- Method Detection Limit -

Pb : 10 mg/kg

Cd : 1 mg/kg

Hg : 1 mg/kg

Cr6+ : 5 mg/kg

Bis(2-ethylhexyl) phthalate (DEHP) : 0.005 %

D-n-butyl phthalate (DBP) : 0.005 %

Butyl benzyl phthalate (BBP) : 0.005 %

- 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.

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