


EN71 CERTIFICATE

Sunmicrotek and 3rd party(SGS) provide the certification of compliance below;

Certificate No. F690101/LF-CTSAYHA21-00851 SGS File No. AYHA21-00851	Product Description Heat Transfer Vinyl High Glossy PU(HGP)	Issued Date 2021. 01. 18
Test Requested EN71-3:2013 + A3:2019 - Migration of certain elements (By all conclusive testing)	Conclusion PASS	
Manufacturer SUNMICROTEK CO., LTD. #1107 Gayang techno town 217 Heojun-ro, Seoul Korea	Approved 3rd Party Test Laboratory 322, The O valley, 76, LS-ro, Dongan-gu, Anyang-si, Gyeonggi-do, Korea 14117 SGS Korea Co., Ltd. t +82 (0)31 4608 000 f +82 (0)31 4608 059 	
Certification		
Test Item	Result(mg/kg)	
Mass of trace amount (mg)	-	
Soluble Aluminium (Al)	ND	
Soluble Antimony (Sb)	ND	
Soluble Arsenic (As)	ND	
Soluble Barium (Ba)	ND	
Soluble Boron (B)	ND	
Soluble Cadmium (Cd)	ND	
Soluble Chromium (Cr)	0,55	
Soluble Chromium III (Cr III)	ND	
Soluble Chromium VI (Cr VI)	ND	
Soluble Cobalt (Co)	ND	
Soluble Copper (Cu)	ND	
Soluble Lead (Pb)	ND	
Soluble Manganese (Mn)	ND	
Soluble Mercury (Hg)	ND	
Soluble Nickel (Ni)	ND	
Soluble Selenium (Se)	ND	
Soluble Strontium (Sr)	ND	
Soluble Tin (Sn)	ND	

SMTF

Test Item		
Soluble Organic Tin	ND	
Soluble Zinc (Zn)	ND	
Conclusion	PASS	
Test Item	Soluble Organic Tin Result(s) (mg/kg)	MDL(mg/kg)
Methyl tin (MeT)	ND	0.5
Di-n-propyl tin (DProT)	ND	0.5
Butyl tin (BuT)	ND	0.5
Tributyl tin (TBT)	ND	0.5
n-Octyl tin (MOT)	ND	0.5
Terabutyl tin (TeBT)	ND	0.5
Diphenyl tin (DPHT)	ND	0.5
Di-n-octyl tin (DOT)	ND	0.5
Triphenyl tin(TPHT)	ND	0.5
Records Contact		
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217 Heojun-ro, Seoul		
Korea		
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SGS



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SUNMICROTEK
1107 Gayang techno town, 217
Heojun-ro, Seoul
Korea

The following sample(s) was/were submitted and identified by/on behalf of the client as:-

SGS File No. : AYHA21-00851
Sample Description : HGP
Style no./Item no. : High Glossy PU
Order No. : -
Buyer : -
Manufacturer : -
Country of Origin : South Korea
Country of Destination : -
Received Date : 2021. 01. 18
Test Period : 2021. 01. 18 to 2021. 01. 25
Test Result(s) : For further details, please refer to following page (s)
Report Comments : The results shown in this test report refer only to the sample(s) tested unless otherwise stated.
Result Summary : This test report is not related to Korea Laboratory Accreditation Scheme.

Test Requested Directive 2009/48/EC and its amendment Council Directive (EU) 2017/738, Commission Directive (EU) 2018/725 - EN71-3:2019 - Migration of certain elements (By all conclusive testing)	Conclusion PASS
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SGS Korea Co., Ltd.



Tommy Oh / Chemical Lab Mgr

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CQP-7081-F01 (01)

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Test Results :

Directive 2009/48/EC and its Amendment Council Directive (EU) 2017/738, Commission Directive (EU) 2018/725 - EN71-3: 2019 - Migration of certain elements

Category III: Scrapped-off toy material

Method : With reference to EN71-3:2019. Analysis of general elements was performed by ICP-OES and Chromium (III) was obtained by calculation, chromium (VI) was analyzed by IC-UV/VIS. Organic Tin was analyzed by GC-MS.

Test Item	Result (mg/kg)	Reporting Limit (mg/kg)	Permissible Limit (EN71-3:2019) (mg/kg)
	1		
Mass of trace amount (mg)	--	--	--
Soluble Aluminium (Al)	ND	50	70,000
Soluble Antimony (Sb)	ND	10	560
Soluble Arsenic (As)	ND	10	47
Soluble Barium (Ba)	ND	50	18,750
Soluble Boron (B)	ND	50	15,000
Soluble Cadmium (Cd)	ND	5	17
Soluble Chromium (III) (Cr (III))	ND	5	460
Soluble Chromium (VI) (Cr (VI))	ND	0,01	0,053
Soluble Cobalt (Co)	ND	10	130
Soluble Copper (Cu)	ND	50	7,700
Soluble Lead (Pb)	ND	10	23
Soluble Manganese (Mn)	ND	50	15,000
Soluble Mercury (Hg)	ND	10	94
Soluble Nickel (Ni)	ND	10	930
Soluble Selenium (Se)	ND	10	460
Soluble Strontium (Sr)	ND	50	56,000
Soluble Tin (Sn)	ND	4.9	180,000
Soluble Organic Tin	--	--	12
Soluble Zinc (Zn)	ND	50	46,000
Comment / Conclusion	PASS	--	--

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Test Item(s)	Soluble Organic Tin Result(s) (mg/kg)		MDL (mg/kg)
	1		
Dimethyl tin (DMT)	ND		0.5
Methyl tin (MeT)	ND		0.5
Di-n-propyl tin (DPrOT)	ND		0.5
Butyl tin (BuT)	ND		0.5
Dibutyl tin (DBT)	ND		0.5
Tributyl tin (TBt)	ND		0.5
n-Octyl tin (MOT)	ND		0.5
Di-n-octyl tin (DOT)	ND		0.5
Tetra-butyl tin (TeBT)	ND		0.5
Diphenyl tin (DPHT)	ND		0.5
Triphenyl tin (TPHT)	ND		0.5

Sample Description :

- White sheet

- Note.
1. mg/kg = milligram per kilogram
 2. ND = Not Detected (< MDL)
 3. 1% = 10000 mg/kg = 10000 ppm
 4. Soluble Chromium (III) = Soluble Total Chromium – Soluble Chromium (VI)

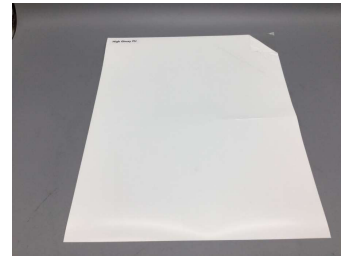
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Picture of Sample as Received :



AYHA21-00851

*** End of Report ***

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