

EN71 CERTIFICATE

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

Certificate No.	Product Description	Issued Date
F690101/LF-CTSAYHA21-00853 SGS File No. AYHA21-00853	Heat Transfer Vinyl Pearlshine Flex(SPS)	2021. 01. 18
Test Requested	Conclusion	
EN71-3:2013 + A3:2019 - Migration of certain elements (By all conclusive testing)	PASS	
Manufacturer	Approved 3rd Party Test Laboratory	
SUNMICROTEK CO., LTD. #1107 Gayang techno town 217 Heojun-ro, Seoul Korea	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	Result	MDL(mg/kg)
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	SUNMICROTEK CO., LTD. #1107 Gayang techno town 217 Heojun-ro, Seoul Korea Tel : +82 2 338 6670 Email : sales@sm-tf.com	

SGS

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Test Report No. F690101/LF-CTSAYHA21-00853 Issued Date: 2021. 01. 25 Page 1 of 4

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. : AYHA21-00853
Sample Description : SPS
Style no./Item no. : Pearlshine Flex
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	Conclusion
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)	PASS

SGS Korea Co., Ltd.



Tommy Oh / Chemical Lab Mgr

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CQP-7081-F01 (01)

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Test Report No. F690101/LF-CTSAYHA21-00853 Issued Date : 2021. 01. 25 Page 2 of 4

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)	
	1	MDL (mg/kg)
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 :

1. Silver hologram 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 :



AYHA21-00853

*** End of Report ***

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