WORLD ATHLETICS

PRODUCT CERTIFICATE

World Athletics is pleased to certify that the following product meets all the technical requirements of the World Athletics Rules for the relevant competitions.

Product's Trade Name:

Synthetic surface - Poltrack Spraycoat System

Description, Colour/Absolute Thickness:

Spray coat, 13.5mm

Company Name, Country:

Kataskeves Dapedon Ltd. (KDF), GRE

Catalogue Number:

-

Certification Number:

S-18-0227

Test Report by and on:

09102020, Trackmaster (Thailand) Co. Ltd., (THA), 9 October 2020

Note:

-

Date of Issue:

1 June 2021

Date of Expiry:

June 2025

Issued in accordance with the terms and conditions of the World Athletics Certification System

Jon Ridgeon
World Athletics CEO

WORLD ATHLETICS CERTIFIED PRODUCT

Laboratory Report

Assessment of KDF to the performance of *[EN14877:2013] Laboratory test requirements for synthetic surfaces intended for Athletics facilities.*
Product(s):

- POLTRACK SPRAYCOAT SYSTEM

Client:

Company	KDF - Kataskeves Dapedon LTD 1 Papanikolaou Ave., 57010 Thessaloniki - GREECE
Contact	Marie Nikolaidou

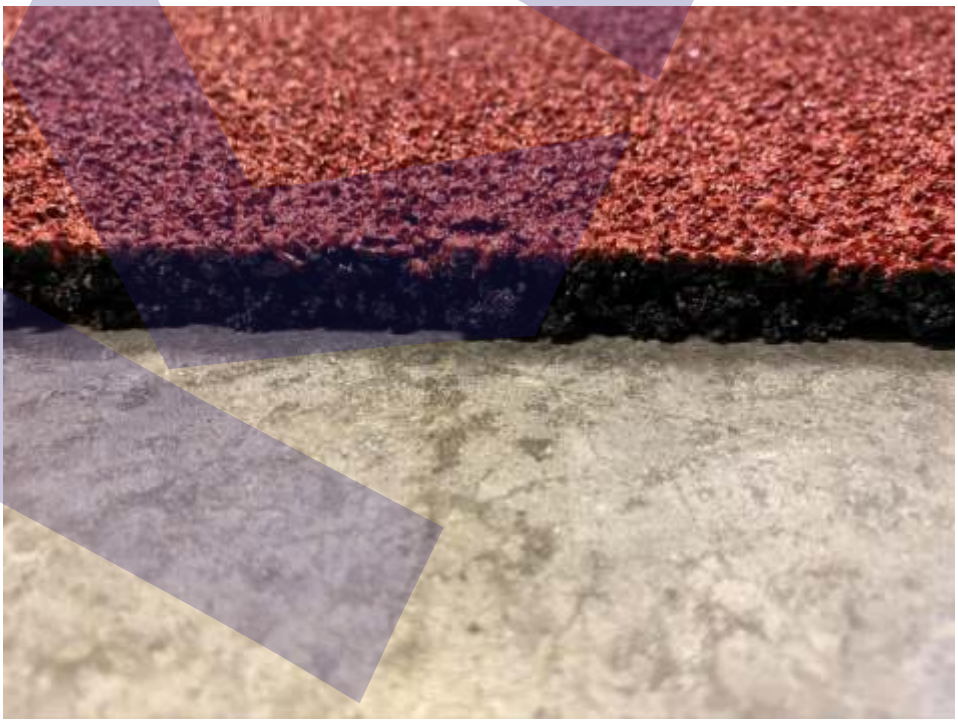
Description of Surface:

Supplier name: KDF - Kataskeves Dapedon LTD

Date: 21/4/2020

Systems installed:

- POLTRACK SPRAYCOAT SYSTEM



Summary:

A program of testing has been carried out on a Athletics system comprising of POLAPLAST P10, POLAPLAST P13, SBR 858, POLAPLAST P12, & EDPM 856, manufactured by KDF

Testing was performed to *[EN14877:2013] Laboratory test requirements for synthetic surfaces intended for athletics facilities.*

Reported By:

Grant Humphreys (Director)

Contents:

1.Introduction:

Testing was performed to *[EN14877:2013] Laboratory test requirements for synthetic surfaces intended for athletics facilities.*

Results of the testing are designed to show the product complies to *[EN14877:2013] athletics.*

Testing of the product for performance requirements in order to determine the type of product to the *[EN14877:2013]* standard.

2.Product Details & Description:

Poltrack Spray Coat System, synthetic outdoor running track system.

- POLAPLAST P10 (polyurethane primer)
- POLAPLAST P13 (polyurethane binder)
- SBR 858 (granulometry of 0.5-2.5mm)
- POLAPLAST P12 (coloured polyurethane spray coating)
- EDPM 856 (granulometry 0.5-1.5mm)

3.Test Procedure:

The product was tested to the method given in *[EN14877:2013] Laboratory test requirements for synthetic surfaces intended for athletics facilities.*

tested at 23 degrees and 50% humidity (unless specifically stated for a specific test).

Samples were conditioned for 24 hrs prior to the test being undertaken.

The following test methods have been conducted within the scope of *[EN14877:2013] Laboratory test requirements for synthetic surfaces intended for athletics facilities.*

Athletics:

-	Friction	EN 13036-4 using CEN rubber under dry conditions (Wet and Dry)
-	Shock absorption	EN 14808 (new and UV aged)
-	Vertical Deformation	EN 14809 (new and UV aged)
-	Water Permeability	EN 12616
-	Resistance To wear	EN 5470-1 using H18 (new and UV aged)
-	Colour Loss	EN ISO 210105-AO2 (new and UV aged)
-	Tensile Properties	EN 12230 (new and UV aged)
-	Absolute thickness	EN 1969 (method A)
-	Spike Resistance	EN 14810 (Not Tested)

4.Test Results:

TESTS CONDITIONS

The dry conditions in a standard atmosphere at a temperature of (23 ± 2) °C and a humidity of (50 ± 5) %RH are laboratory values. The UV weather samples were exposed for (4 896 ± 125) kJ, in a QUV chamber

NOTE An exposure of (4 896 ± 125) kJ will require approximately 2 000h UV exposure and takes approximately 3000 h with cycling to complete.

Friction to EN13036-4

Property	Units	Results	EN14877	Pass/ Fail
Wet	µ	55	**(55-110)**	Pass
Dry	µ	85	**(80-110)**	Pass

Shock Absorption to EN14808 (athletics: SA 25 to 34, SA 35 to 50)

Property	Units	Results	EN14877	Pass/ Fail
Force Reduction before Weathering	µ	42	Athletics: 35% to 50%	Pass
Force Reduction After Weathering	µ	42	Athletics: 35% to 50%	Pass

Vertical Deformation to EN14809

Property	Units	Results	EN 14877	Pass/ Fail
Dry	mm	2.7	Athletics: ≤3mm	Pass

Water Permeability EN 12616

Property	Units	Results	EN 14877	Pass/ Fail
Water Perm.	mm/hr	1800	≥150mm/hr	Pass

Resistance To wear EN 5470-1 using H18

Property	Units	Results	EN 14877	Pass/ Fail
Before Weathering	Loss of grams	3.3 g	<4.0 g	Pass
After weathering	Loss of grams	3.5g	<4.0 g	Pass

Colour Loss EN ISO 210105-AO2 after UV testing

Property	Units	Results	EN 14877	Pass/ Fail
Colour Change	-	4/5	≥3	Pass

Tensile Properties EN 12230

Property	Units	Results	EN 14877	Pass/ Fail
Tensile Strength	MPa	0.405	≥0.40	Pass
Elongation	%	45%	≥40%	Pass
After Artificial Weathering				
Tensile Strength	MPa	0.40	≥0.40	Pass
Elongation	%	47%	≥40%	Pass

Absolute Thickness EN1969 (method A)

Nominal Thickness	Measured Thickness
14mm	14mm

4.Conclusion

The above tests have been conducted within the scope of *[EN14877:2013] Laboratory test requirements for synthetic surfaces intended for athletics facilities.*

The outdoor synthetic sports surface Poltrack Spraycoat System from, KDF has been found to comply with the following requirements of standards *[EN14877:2013] Laboratory test requirements for synthetic surfaces intended for Athletics facilities.*

the tested items:

Athletics:

- Friction — EN 13036-4 using CEN rubber under dry conditions (Wet and Dry)
- Shock absorption — EN 14808 (new and UV aged)
- Vertical Deformation — EN 14809 (new and UV aged)
- Water Permeability — EN 12616
- Resistance To wear — EN 5470-1 using H18 (new and UV aged)
- Colour Loss — EN ISO 210105-AO2 (new and UV aged)
- Tensile Properties — EN 12230 (new and UV aged)
- Absolute thickness — EN 1969 (method A)

Reviewed and Approved by:

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Date: 21/7/2020

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KATASKEVES DAPEDON LTD - KDF
MRS. Maria Nikolaidoy
Mitropoleos 19
54024 Thessaloniki
GREECE

Fórth, May 12/2020

TEST REPORT No. FUTYP2020-01959-C

Date sample received: March 06/2020
Period of testing: March 19/2020 – April 29/2020
Technical Director: Kerstin Scharrer

Sample description: **EPDM Granulates E1, E2, E7, E8, E11, E12, E13, E15, E16, E17, E18, E19, E20**

For the test results please refer to next pages

Test order

Test of products for polycyclic aromatic hydrocarbons

Summary	Results
Further requirements	*pass*

Sample description:

No. 1:	Granulate E1 (red rose)
No. 2:	Granulate E2 (orange)
No. 7:	Granulate E7 (brown)
No. 8:	Granulate E8 (dark brown)
No. 11:	Granulate E11 (light blue)
No. 12:	Granulate E12 (dark blue)
No. 13:	Granulate E13 (purple)
No. 15:	Granulate E15 (light grey)
No. 16:	Granulate E16 (dark grey)
No. 17:	Granulate E17 (light green)
No. 18:	Granulate E18 (blue)
No. 19:	Granulate E19 (light brown)
No. 20:	Granulate E20 (EPDM red 0,5-1,5 mm)

Test results

Abbreviations:
n.d. = not determinable (< LoQ)
LoQ = limit of quantification

1. Polycyclic Aromatic Hydrocarbons according to US-EPA+ 2 EFSA PAH and according to Regulation (EC) No. 1907/2006 (REACh) Annex XVII No. 50

Test method: AfPS GS 2019:01 PAK (2019-05)
Limit of quantification: 0.1 mg/kg

Test results in mg/kg

Parameter		CAS-No.	Sample No. 1	Sample No.2	Sample No. 7	Sample No. 8
1	Naphthalene	91-20-3	**0.26**	**0.14**	**0.14**	**0.18**
2	Acenaphthylene	208-96-8	n.d.	n.d.	n.d.	n.d.
3	Acenaphthene	83-32-9	n.d.	n.d.	n.d.	n.d.
4	Fluorene	86-73-7	**0.66**	**0.22**	**0.23**	**0.68**
5	Phenanthrene	85-01-8	**1.9**	**0.40**	**0.46**	**1.1**
6	Anthracene	120-12-7	**0.22**	n.d.	n.d.	n.d.
7	Fluoranthene	206-44-0	**0.39**	**0.14**	**0.18**	n.d.
8	Pyrene	129-00-0	n.d.	n.d.	**0.21**	n.d.
9	Benzo(a)anthracene	56-55-3	**0.23**	n.d.	n.d.	n.d.

Polycyclic Aromatic Hydrocarbons - continued

Test results in mg/kg

Parameter		CAS-No.	Sample No. 1	Sample No.2	Sample No. 7	Sample No. 8
10	Chrysene	218-01-9	**0.28**	n.d.	n.d.	n.d.
∑11+12	Benzo(b)fluoranthene + Benzo(j)fluoranthene	205-99-2 + 205-82-3	n.d.	n.d.	n.d.	n.d.
13	Benzo(k)fluoranthene	207-08-9	n.d.	n.d.	n.d.	n.d.
14	Benzo(e)pyrene	192-97-2	n.d.	n.d.	**0.21**	n.d.
15	Benzo(a)pyrene	50-32-8	n.d.	n.d.	n.d.	n.d.
16	Indeno(1,2,3-cd)pyrene	193-39-5	n.d.	n.d.	n.d.	n.d.
17	Dibenzo(a,h)anthracene	53-70-3	n.d.	n.d.	n.d.	n.d.
18	Benzo(ghi)perylene	191-24-2	n.d.	n.d.	n.d.	n.d.
	Sum 15 PAH		**3.3** [b]	**0.40** [b]	**0.88** [b]	**1.1** [b]

[a] *For summation according to AfPS GS 2019:01 PAK the following PAH are not included: Acenaphthylene, Acenaphthene, Fluorene*
[b] *Only contents from 0.2 mg/kg were used for summation.*

Parameter		CAS-No.	Sample No. 11	Sample No. 12	Sample No. 13	Sample No. 15
1	Naphthalene	91-20-3	**0.34**	**0.30**	n.d.	n.d.
2	Acenaphthylene	208-96-8	n.d.	n.d.	n.d.	n.d.
3	Acenaphthene	83-32-9	n.d.	n.d.	n.d.	n.d.
4	Fluorene	86-73-7	**0.19**	n.d.	**0.32**	**0.21**
5	Phenanthrene	85-01-8	**0.87**	**0.61**	**0.65**	**0.53**
6	Anthracene	120-12-7	n.d.	n.d.	n.d.	n.d.
7	Fluoranthene	206-44-0	**0.25**	**0.16**	n.d.	**0.16**
8	Pyrene	129-00-0	n.d.	n.d.	n.d.	**0.15**
9	Benzo(a)anthracene	56-55-3	n.d.	n.d.	n.d.	n.d.
10	Chrysene	218-01-9	**0.15**	**0.12**	n.d.	n.d.
∑11+12	Benzo(b)fluoranthene + Benzo(j)fluoranthene	205-99-2 + 205-82-3	n.d.	n.d.	n.d.	n.d.
13	Benzo(k)fluoranthene	207-08-9	n.d.	n.d.	n.d.	n.d.
14	Benzo(e)pyrene	192-97-2	n.d.	n.d.	n.d.	n.d.
15	Benzo(a)pyrene	50-32-8	n.d.	n.d.	n.d.	n.d.
16	Indeno(1,2,3-cd)pyrene	193-39-5	n.d.	n.d.	n.d.	n.d.
17	Dibenzo(a,h)anthracene	53-70-3	n.d.	n.d.	n.d.	n.d.
18	Benzo(ghi)perylene	191-24-2	n.d.	n.d.	n.d.	n.d.
	Sum 15 PAH		**1.5** [b]	**0.91** [b]	**0.65** [b]	**0.53** [b]

[a] *For summation according to AfPS GS 2019:01 PAK the following PAH are not included: Acenaphthylene, Acenaphthene, Fluorene*
[b] *Only contents from 0.2 mg/kg were used for summation.*

Polycyclic Aromatic Hydrocarbons - continued

Test results in mg/kg

Parameter		CAS-No.	Sample No. 16	Sample No. 17	Sample No. 18	Sample No. 19
1	Naphthalene	91-20-3	n.d.	n.d.	n.d.	n.d.
2	Acenaphthylene	208-96-8	n.d.	n.d.	n.d.	n.d.
3	Acenaphthene	83-32-9	n.d.	n.d.	n.d.	n.d.
4	Fluorene	86-73-7	n.d.	n.d.	**0.45**	n.d.
5	Phenanthrene	85-01-8	n.d.	**0.12**	**0.81**	**0.12**
6	Anthracene	120-12-7	n.d.	n.d.	n.d.	n.d.
7	Fluoranthene	206-44-0	n.d.	n.d.	n.d.	n.d.
8	Pyrene	129-00-0	n.d.	n.d.	n.d.	n.d.
9	Benzo(a)anthracene	56-55-3	n.d.	n.d.	n.d.	n.d.
10	Chrysene	218-01-9	n.d.	n.d.	n.d.	n.d.
∑11+12	Benzo(b)fluoranthene + Benzo(j)fluoranthene	205-99-2 + 205-82-3	n.d.	n.d.	n.d.	n.d.
13	Benzo(k)fluoranthene	207-08-9	n.d.	n.d.	n.d.	n.d.
14	Benzo(e)pyrene	192-97-2	n.d.	n.d.	n.d.	n.d.
15	Benzo(a)pyrene	50-32-8	n.d.	n.d.	n.d.	n.d.
16	Indeno(1,2,3-cd)pyrene	193-39-5	n.d.	n.d.	n.d.	n.d.
17	Dibenzo(a,h)anthracene	53-70-3	n.d.	n.d.	n.d.	n.d.
18	Benzo(ghi)perylene	191-24-2	n.d.	n.d.	n.d.	n.d.
	Sum 15 PAH		**n.d.** [b]	**n.d.** [b]	**0.81** [b]	**n.d.** [b]

[a] *For summation according to AfPS GS 2019:01 PAK the following PAH are not included: Acenaphthylene, Acenaphthene, Fluorene*
[b] *Only contents from 0.2 mg/kg were used for summation.*

Parameter		CAS-No.	Sample No. 20
1	Naphthalene	91-20-3	n.d.
2	Acenaphthylene	208-96-8	n.d.
3	Acenaphthene	83-32-9	n.d.
4	Fluorene	86-73-7	n.d.
5	Phenanthrene	85-01-8	n.d.
6	Anthracene	120-12-7	n.d.
7	Fluoranthene	206-44-0	n.d.
8	Pyrene	129-00-0	n.d.
9	Benzo(a)anthracene	56-55-3	n.d.
10	Chrysene	218-01-9	n.d.
∑11+12	Benzo(b)fluoranthene + Benzo(j)fluoranthene	205-99-2 + 205-82-3	n.d.
13	Benzo(k)fluoranthene	207-08-9	n.d.
14	Benzo(e)pyrene	192-97-2	n.d.
15	Benzo(a)pyrene	50-32-8	n.d.
16	Indeno(1,2,3-cd)pyrene	193-39-5	n.d.
17	Dibenzo(a,h)anthracene	53-70-3	n.d.
18	Benzo(ghi)perylene	191-24-2	n.d.
	Sum 15 PAH		**n.d.** [b]

[a] *For summation according to AfPS GS 2019:01 PAK the following PAH are not included: Acenaphthylene, Acenaphthene, Fluorene*
[b] *Only contents from 0.2 mg/kg were used for summation.*

Conclusion

The tested sample of the presented products "**EPDM Granulates E1, E2, E7, E8, E11, E12, E13, E15, E16, E17, E18, E19, E20**" conform to the EC-Regulation 1907/2006, Annex XVII No. 50.

Remark

Requirements acc. to AfPS GS 2019:01 PAK (Utilization for GS-mark from July 1st, 2020) and Regulation (EC) No. 1907/2006, Annex XVII No. 50

Parameter	Category 1	Category 2		Category 3		Limit value acc. to EC regulation 1907/2006, Annex XVII No. 50	
	Materials intended to be put into the mouth, or materials in toys according to Directive 2009/48/EC or materials in articles for use by children up to three years of age with prolonged skin contact (longer than 30s) when used as intended	Materials, not covered by category 1, with prolonged skin contact (longer than 30s) or repeated short-term skin contact when used as intended or in a foreseeable way		Materials, not covered by category 1 or category 2, with short-term skin contact (up to 30 s) when used as intended or in a foreseeable way		Toys, including activity toys, and childcare articles – Components rubber or plastic components that come into direct as well as prolonged or short-term repetitive contact with the human skin or the oral cavity, under normal or reasonably foreseeable conditions of use	Articles shall not be placed on the market for supply to the general public, if any of their rubber or plastic components that come into direct as well as prolonged or short-term repetitive contact with the human skin or the oral cavity, under normal or reasonably foreseeable conditions of use
		a. Use by children	b. other consumer products	a. Use by children	b. other consumer products		
Benzo[a]pyrene mg/kg	< 0.2	< 0.2	< 0.5	< 0.5	< 1	0.5	1
Benzo[e]pyrene mg/kg	< 0.2	< 0.2	< 0.5	< 0.5	< 1	0.5	1
Benzo[a]anthracene mg/kg	< 0.2	< 0.2	< 0.5	< 0.5	< 1	0.5	1
Benzo[b]fluoranthene mg/kg	< 0.2	< 0.2	< 0.5	< 0.5	< 1	0.5	1
Benzo[j]fluoranthene mg/kg	< 0.2	< 0.2	< 0.5	< 0.5	< 1	0.5	1
Benzo[k]fluoranthene mg/kg	< 0.2	< 0.2	< 0.5	< 0.5	< 1	0.5	1
Chrysene mg/kg	< 0.2	< 0.2	< 0.5	< 0.5	< 1	0.5	1
Dibenzo[a,h]anthracene mg/kg	< 0.2	< 0.2	< 0.5	< 0.5	< 1	0.5	1
Benzo[ghi]perylene mg/kg	< 0.2	< 0.2	< 0.5	< 0.5	< 1	-	-
Indeno[1,2,3-cd]pyrene mg/kg	< 0,2	< 0.2	< 0.5	< 0.5	< 1	-	-
Phenanthrene, Pyrene, Anthracene, Fluoranthene, mg/kg	< 1 – Sum	< 5 – Sum	< 10 – Sum	< 20 – Sum	< 50 - Sum	-	-
Naphthalene mg/kg	< 1	< 2		< 10		-	-
Sum 15 PAH mg/kg	<1	< 5	< 10	< 20	< 50	-	-
Evaluation	-	-	-	-	-	pass	-

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