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Technical Report

Laboratory testing

26-0834-A1

15/10/2026

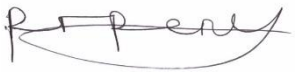
Confidential

TECHNICAL REPORT

TOXICOLOGY
POLYCYCLIC AROMATIC HYDROCARBON (PAH) ANALYSIS

RUBBER PLAYGROUND CHIPPINGS

CLIENT	Nationwide Bark & Play Surfacing LLP
CLIENT ADDRESS	20 Shelley Drive Cheadle Stoke-On-Trent Staffordshire ST10 1XR
CLIENT CONTACT	Debbie Whieldon

REPORT NUMBER	26-0834-A1	
REPORT STATUS	Final	
VERSION NUMBER & DATE	1.0	15/10/2026
REPORTED BY		Phoebe Penty Laboratory Technician
APPROVED BY		David Rigby Technical Director

SUMMARY OF REPORT / FINDINGS	In accordance with REACH Regulation Annex XVII Entry 50, PAH analysis has been carried out on test specimen(s) of Rubber Playground Chippings used in the sports and play sector. The test specimen(s) submitted met the requirements of REACH Regulation Annex XVII Entry 50 when tested under laboratory conditions between the 01/10/2026 and 08/10/2026.

SCOPE OF TESTING / PROJECT	REACH is a regulation of the European Union, adopted to improve the protection of human health and the environment from the risks that can be posed by chemicals. Annex XVII of the REACH regulation contains a list of restrictions of certain hazardous substances, mixtures and articles for their marketing and use on the European market. A restriction can apply to any substance on its own, in a mixture or in an article, including those that do not require registration. The list is often known as REACH restricted substances list or simply as REACH Annex XVII. The placing on the market for supply to the general public of articles containing polycyclic aromatic hydrocarbons (PAHs) are restricted by entry 50 of Annex XVII to REACH Regulation (EC) No 1907/2006, paragraphs 5 and 6. Although classified as a "mixture", it states that granules or mulches used as an infill material in synthetic turf pitches, in loose form on playgrounds or in sport applications (for example on golf courses, athletic arenas, horse arena footings, nature trials or shooting ranges) placed on the market for supply to the general public will contravene the restriction if they contain more than 20mg/kg (0.002% by weight) in total of the EU-8 carcinogenic PAHs. The test specimen(s) submitted have been analysed for these EU-8 carcinogenic PAHs in accordance with REACH Annex XVII Entry 50.

TEST PROCEDURE / STANDARDS	REACH Regulation – Annex XVII – Entry 50 Commission Regulation (EU) 2021/1199 of 20 July 2021 AfPS GS 2019-01 PAK

PRODUCT (DETAILS / DESCRIPTION)	Playground surfacing referred to as "Rubber Playground Chippings" made of recycled SBR rubber coated with paint. This information was supplied by the client.

TEST RESULTS	EU-8 PAH ANALYSIS			
Rubber Playground Chippings				
Element	Requirement	Measured result	Total result	Pass / Fail
Benzo[a]pyrene (BaP)	≤ 20mg/kg (0.002%)	1.6mg/kg	< 4.72mg/kg	**Pass**
Dibenzo[a,h]anthracene (DBAhA)		< 0.2mg/kg		
Benzo[e]pyrene (BeP)		1.1mg/kg		
Benzo[a]anthracene (BaA)		0.35mg/kg		
Chrysene (CHR)		0.69mg/kg		
Benzo[b]fluoranthene (BbFA)		< 0.2mg/kg		
Benzo[j]fluoranthene (BjFA)		< 0.2mg/kg		
Benzo[k]fluoranthene (BkFA)		0.58mg/kg		

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LABOSPORT LTD, Unit 3 Aerial Way, Hucknall, Nottinghamshire, NG15 6DW, England (5185905)
+44 (0) 115 968 1998 info@labosport.co.uk
www.labosport.com

DISCUSSION	Based on current regulations granules or mulches used as an infill material in synthetic turf pitches, in loose form on playgrounds or in sport applications are currently classified as a "mixture" by REACH Regulation (EC) No 1907/2006. Entry 50 of Annex XVII has been updated in accordance with Commission Regulation (EU) 2021/1199 of 20 July 2021 to include infill materials. It states that any infill materials should conform to the following concentration limits: Less than or equal to 20mg/kg (0.002% by weight) of the sum of all listed PAHs. For reference products classified as "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, contain more than 1 mg/kg (0.0001% by weight of this component) of any of the listed PAHs.

CONCLUSIONS	The test specimen(s) submitted met the requirements of REACH Regulation Annex XVII Entry 50 when tested under laboratory conditions. The test results apply only to the test specimen(s) as received and relate only to the test specimen(s) tested. <u>Conformity decision rule</u> The test(s) have been performed in accordance with the stated published test standard(s), with repeatability and bias consistent with the published test standard(s) and no additional influences being identified. Conformity has been assessed as follows: Pass; The measured value(s) are within the stipulated requirement(s). Fail; The measured value(s) are outside the stipulated requirement(s).