

BIO-BASED POLYURETHANE RESILIENT FLOORING



Shaw Contract furthers its commitment to healthier materials with a collection of coordinating tile and sheet resilient products composed of bio-based polyurethane. These products are manufactured with canola, castor and rapeseed oils—all rapidly renewable, commonly occurring bio-based materials that are free of ortho-phthalates, chlorine and solvents.

shaw contract®

We design products that empower our clients to create safe, sustainable, enduring spaces.

We are not trying to get to zero - our goal is more than zero. By adhering to Cradle to Cradle design principles, our goal is not to do less bad, but to do more good.

We don't focus on just one attribute, because this doesn't help our clients or the planet. It all matters - and we're taking every detail into account.

This is our philosophy and it permeates throughout our entire company. The *Cradle to Cradle Certified™* Product Standard holds us accountable to this commitment while supporting our drive for continuous improvement. All while contributing to the circular economy.



*Registered under the scope
of mutual recognition between
UL Environment and
Institut Bauen und Umwelt e.V.*



ENVIRONMENTAL PRODUCT DECLARATION

shaw contract®

Shaw Contract®

Bio-Based Polyurethane Resilient Flooring

According to EN 15804 and ISO 14025

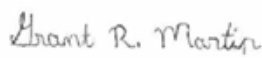
Dual Recognition by UL Environment and Institut Bauen und Umwelt e.V.

This declaration is an environmental product declaration (EPD) in accordance with ISO 14025. EPDs rely on Life Cycle Assessment (LCA) to provide information on a number of environmental impacts of products over their life cycle. Exclusions: EPDs do not indicate that any environmental or social performance benchmarks are met, and there may be impacts that they do not encompass. LCAs do not typically address the site-specific environmental impacts of raw material extraction, nor are they meant to assess human health toxicity. EPDs can complement but cannot replace tools and certifications that are designed to address these impacts and/or set performance thresholds – e.g. Type 1 certifications, health assessments and declarations, environmental impact assessments, etc. Accuracy of Results: EPDs regularly rely on estimations of impacts, and the level of accuracy in estimation of effect differs for any particular product line and reported impact. Comparability: EPDs are not comparative assertions and are either not comparable or have limited comparability when they cover different life cycle stages, are based on different product category rules or are missing relevant environmental impacts. EPDs from different programs may not be comparable.



PROGRAM OPERATOR	UL Environment
DECLARATION HOLDER	Shaw Contract
ULE DECLARATION NUMBER	4788795916.101.1
IBU DECLARATION NUMBER	EPD-SHA-20180120-CBC1-EN
DECLARED PRODUCT	Bio-Based Polyurethane Resilient Flooring
REFERENCE PCR	Product Category Rules Part A: Calculation Rules for the Life Cycle Assessment and Requirements on the Background Report, 03.2018 Product Category Rules Part B: Floor coverings, 02.2018

DATE OF ISSUE	April 3, 2019
VALIDITY UNTIL	April 17, 2024

CONTENTS OF THE DECLARATION	General information Product / Product description LCA calculation rules LCA scenarios and further technical information LCA results References	
The PCR review was conducted by:	IBU – Institut Bauen und Umwelt e.V.	
	PCR was approved by the Independent Expert Committee (IEC) of IBU	
The CEN Norm EN 15804 serves as the core PCR. This declaration was independently verified in accordance with ISO 14025 by Underwriters Laboratories <input type="checkbox"/> INTERNAL <input checked="" type="checkbox"/> EXTERNAL		
	Grant R. Martin, UL Environment	
This life cycle assessment was independently verified in accordance with EN 15804 and the reference PCR by:	IBU – Institut Bauen und Umwelt e.V.	

Environment



General Information

Shaw Contract®

Programme holder

IBU - Institut Bauen und Umwelt e.V.
Panoramastr. 1
10178 Berlin
Germany

Declaration number

EPD-SHA-20180120-CBC1-EN

This declaration is based on the product category rules:

Floor coverings, 02/2018
(PCR checked and approved by the SVR)

Issue date

18.09.2018

Valid to

17.03.2023

Horst J. Bossenmayer

Prof. Dr.-Ing. Horst J. Bossenmayer
(President of Institut Bauen und Umwelt e.V.)

Alexander Röder

Dr. Alexander Röder
(Managing Director IBU)

Bio-Based Polyurethane Resilient Flooring

Owner of the declaration

Shaw Contract®
PO Box 2128
Dalton, GA 30722
United States, Georgia

Declared product / declared unit

1 m² Bio-Based Polyurethane Resilient Flooring

Scope:

The manufacturer declaration applies to Bio-Based polyurethane Resilient Flooring.
It is manufactured externally in Germany.

The owner of the declaration shall be liable for the underlying information and evidence; the IBU shall not be liable with respect to manufacturer information, life cycle assessment data and evidences.

Verification

The standard /EN 15804/ serves as the core PCR
Independent verification of the declaration and data according to /ISO 14025:2010/

☐ internally ☒ externally

Angela Schindler

Angela Schindler
(Independent verifier appointed by SVR)

Product

Product description / Product definition

Bio-Based Polyurethane Resilient Flooring is produced with the reactive component castor oil as renewable raw material and with natural inorganic filler. The total weight of the product is 3.9 kg/m².

For the placing on the market of the product in the European Union/European Free Trade Association (EU/EFTA) (with the exception of Switzerland) Regulation (EU) No. 305/2011 Construction Products Regulation /CPR/ applies.

The Declaration of Performance of the products taking into consideration /EN 14041/ and the CE-marking of the products can be found on the manufacturer's technical information section.

Application

According to the use class as defined in /ISO 10874/ the product can be used

- in all domestic areas, classified as use class 23,
- in all commercial areas, classified as use class 34
- in all industrial areas, classified as use class 43



Technical Data

Name	Value	Unit
Grammage	3.9	kg/m²
Product thickness	2.5	mm
Product Form	several dimensions	-

Additional product properties in accordance with /EN 16776/ and performance data of the product in accordance with the Declaration of Performance with respect to its Essential Characteristics according to /EN 14041/ can be found on the manufacturer's technical information section (www.shawcontract.com).

Base materials / Ancillary materials

Name	Value	Unit
Polyurethane including 64% renewable material	45.2	%
Filler	50.2	%
Paper	1.7	%
Glass fibre	0.8	%
Polyester	2.1	%

This product contains substances listed in the /REACH/ Candidate List of Substances of Very High Concern for Authorisation" (SVHC) (27.06.2018) exceeding 0.1 percentage by mass: no

Reference service life

A calculation of the reference service life according to /ISO 15686/ is not possible.
The service life of resilient floor coverings depends on the correct installation taking into account the declared

use classification and the adherence to cleaning and maintenance instructions.

A minimum service life of 20 years can be assumed /BNB/, technical service life can be considerably longer.

LCA: Calculation rules

Declared Unit

Name	Value	Unit
Declared unit	1	m ²
Conversion factor to 1 kg	0.26	-
Mass reference	3.9	kg/m ²

The declared unit refers to 1 m² produced floor covering. Output of module A5 'Assembly' is 1 m² installed floor covering.

System boundary

Type of EPD: Cradle-to-grave

System boundaries of modules A, B, C, D:

A1-A3 Production:

Energy supply and production of the basic material, auxiliary material, transport of the material to the manufacturing site, emissions, waste water treatment, packaging material and waste processing up to the landfill disposal of residual waste (except radioactive waste). Benefits for generated electricity and steam due to the incineration of production waste are aggregated.

A4 Transport:

Transport of the packed floor covering from factory gate to the place of installation.

A5 Installation:

Installation of the floor covering, processing of installation waste and packaging waste up to the landfill disposal of residual waste (except radioactive waste), the production of the amount of floor covering that occurs as installation waste including its transport to the place of installation.
Generated electricity and steam due to the incineration of waste are listed in the result table as exported energy.
Preparing of the floor and adhesives are beyond the system boundaries and not taken into account.

B1 Use:

Indoor emissions during the use stage. After the first year, no product related VOC emissions are relevant due to VOC decay curves of the product.

B2 Maintenance:

Cleaning of the floor covering for a period of 1 year:
Vacuum cleaning – electricity supply
Wet cleaning – water consumption, production of the cleaning agent, waste water treatment.
The declared values in this module have to be multiplied by the assumed service life of the floor covering in the building in question.

B3 - B7:

The modules are not relevant and therefore not declared.

C1 De-construction:

Energy consumption of the de-construction machine.

C2 Transport:

Transport of the floor covering waste to a landfill or to the municipal waste incineration plant (MWI).

C3 Waste processing:

C3-1: Landfill disposal needs no waste processing.
C3-2: Impact from waste incineration (plant with R1>0.6), generated electricity and steam are listed in the result table as exported energy.

C4 Disposal

C4-1: Impact from landfill disposal,
C4-2: The floor covering waste leaves the system in module C3-2,

D Recycling potential:

D-A5: Benefits for generated energy due to incineration of packaging and installation waste (incineration plant with R1 > 0.6),
D-1: Benefits for generated energy due to landfill disposal of floor covering waste at the end-of-life,
D-2: Benefits for generated energy due to incineration of floor covering waste at the end-of-life (incineration plant with R1 > 0.6),

Comparability

Basically, a comparison or an evaluation of EPD data is only possible if all the data sets to be compared were created according to /EN 15804/ and the building context, respectively the product-specific characteristics of performance, are taken into account.

Background data are taken from the /GaBi database 2018/, service pack 35 and from the /ecoinvent 3.3/ database

LCA: Scenarios and additional technical information

The following information refer to the declared modules and are the basis for calculations or can be used for further calculations. The indicated values refer to the declared functional unit.

Transport to the construction site (A4)

Name	Value	Unit
Litres of fuel , diesel, truck EURO 0-6 mix	0.009	l/100km
Litres of fuel , heavy fuel oil, ship	0.001	l/100km
Transport distance truck	540	km
Transport distance ship	750	km
Capacity utilisation (including empty runs) truck	60	%
Capacity utilisation (including empty runs) ship	48	%

Installation in the building (A5)

Name	Value	Unit
Material loss	0.12	kg

Coated packaging paper and installation waste are considered to be incinerated in a municipal waste incineration plant. Pure cardboard packaging waste is going to be recycled.
Preparation of the floor and adhesives are not taken into account.

Maintenance (B2)

The values for cleaning refer to 1 m² floor covering used in commercial areas per year.
Depending on the application based on /EN ISO 10874/, the technical service life recommended by the manufacturer and the anticipated strain on the floor by customers, the case-specific useful life can be established. The effects of Module B2 need to be calculated on the basis of this useful life in order to obtain the overall environmental impacts.

Name	Value	Unit
Maintenance cycle (wet wiping)	103,2	1/year
Maintenance cycle (vacuum cleaning)	37,4	1/year
Water consumption (wet wiping)	0.026	m ³
Cleaning agent (wet wiping)	0.05	kg
Electricity consumption	0.09	kWh

Further information on cleaning and maintenance see www.shawcontract.com

End of Life (C1-C4)

Two different end-of-life scenarios are declared and the results are indicated separately in module C. Each scenario is calculated as a 100% scenario.

Scenario 1: 100% landfill disposal

Scenario 2: 100% municipal waste incineration (MWI) with R1>0.6

If combinations of these scenarios have to be calculated this should be done according to the following scheme:

EOL-impact = x% impact (Scenario 1)
+ y% impact (Scenario 2)

Name	Value	Unit
Collected as mixed construction waste (scenario 1 and 2)	3.9	kg
Landfilling (scenario 1)	3.9	kg
Energy recovery (scenario 2)	3.9	kg

Reuse, recovery and/or recycling potentials (D), relevant scenario information

Recovery potentials due to the two end-of-life scenarios (module C) are indicated separately.

LCA: Results

The declared result figures in module B2 have to be multiplied by the assumed service life (in years) of the floor covering in the building under consideration.

Information on un-declared modules:

Modules B3 - B7 are not relevant during the service life of the floor covering and are therefore not declared.

Modules C3/1 and C4/2 cause no additional impact (see "LCA: Calculation rules") and are therefore not declared.

Module C2 represents the transport for scenarios 1 and 2. Column D represents module D/A5.

The /CML/ characterisation factors version January 2016 are applied.

DESCRIPTION OF THE SYSTEM BOUNDARY (X = INCLUDED IN LCA; MND = MODULE NOT DECLARED)

PRODUCT STAGE			CONSTRUCTION PROCESS STAGE		USE STAGE							END OF LIFE STAGE				BENEFITS AND LOADS BEYOND THE SYSTEM BOUNDARIES
Raw material supply	Transport	Manufacturing	Transport from the gate to the site	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse-Recovery-Recycling-potential
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
X	X	X	X	X	X	X	MNR	MNR	MNR	MND	MND	X	X	X	X	X

RESULTS OF THE LCA - ENVIRONMENTAL IMPACT: 1 m² floorcovering

CML 2001 – April 2013													
Param eter	Unit	A1-A3	A4	A5	B1	B2	C1	C2	C3/2	C4/1	D	D/1	D/2
GWP	[kg CO ₂ eq.]	4.26E+0	1.92E-1	3.68E-1	0.00E+0	2.88E-1	6.55E-3	1.18E-2	7.23E+0	3.01E+0	-5.52E-2	0.00E+0	-1.65E+0
ODP	[kg CFC11 eq.]	1.47E-7	5.11E-15	4.26E-9	0.00E+0	2.07E-8	2.90E-14	3.24E-16	8.69E-13	7.40E-14	-1.19E-13	0.00E+0	-3.55E-12
AP	[kg SO ₂ eq.]	4.80E-2	1.54E-3	1.50E-3	0.00E+0	8.50E-4	1.85E-5	5.01E-5	2.02E-3	7.48E-4	-9.20E-5	0.00E+0	-2.75E-3
EP	[kg (PO ₄) ³⁻ eq.]	3.27E-2	2.69E-4	9.77E-4	0.00E+0	4.99E-4	1.74E-6	1.28E-5	4.98E-4	7.65E-4	-9.96E-6	0.00E+0	-2.98E-4
POCP	[kg ethene eq.]	1.43E-3	-2.60E-4	2.41E-5	1.79E-6	1.02E-4	1.16E-6	-2.09E-5	1.33E-4	8.18E-5	-7.22E-6	0.00E+0	-2.16E-4
ADPE	[kg Sb eq.]	2.51E-5	1.44E-8	7.33E-7	0.00E+0	8.33E-7	3.47E-9	9.83E-10	1.39E-7	5.93E-8	-1.55E-8	0.00E+0	-4.63E-7
ADPF	[MJ]	1.10E+2	2.58E+0	3.42E+0	0.00E+0	3.58E+0	6.94E-2	1.61E-1	2.03E+0	3.97E+0	-7.58E-1	0.00E+0	-2.27E+1

TRACI 2.1													
Parameter	Unit	A1-A3	A4	A5	B1	B2	C1	C2	C3/2	C4/1	D	D/1	D/2
GWP	[kg CO ₂ eq.]	4.31E+00	1.92E-01	3.69E-01	0.00E+00	2.85E-01	6.52E-03	1.18E-02	7.23E+00	3.01E+00	-5.49E-02	0.00E+00	-1.65E+00
ODP	[kg CFC11 eq.]	1.61E-07	5.11E-15	4.66E-09	0.00E+00	2.19E-08	2.90E-14	3.24E-16	9.15E-13	7.40E-14	-1.19E-13	0.00E+00	-3.55E-12
AP	[kg SO ₂ eq.]	5.48E-02	1.84E-03	1.74E-03	0.00E+00	9.46E-04	1.88E-05	6.78E-05	2.76E-03	7.93E-04	-9.63E-05	0.00E+00	-2.88E-03
EP	[kg N eq.]	5.91E-02	1.10E-04	1.72E-03	0.00E+00	9.40E-04	1.41E-06	5.66E-06	2.03E-04	3.67E-04	-6.76E-06	0.00E+00	-2.02E-04
SFP	[kg O ₃ eq.]	5.47E-01	3.77E-02	2.01E-02	3.29E-05	1.13E-02	2.33E-04	1.50E-03	8.65E-02	1.36E-02	-1.48E-03	0.00E+00	-4.43E-02
ARDP	[MJ]	1.37E+01	3.71E-01	4.27E-01	0.00E+00	4.12E-01	3.89E-03	2.32E-02	2.43E-01	5.14E-01	-8.67E-02	0.00E+00	-2.60E+00
Caption	GWP = Global warming potential; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential of land and water; EP = Eutrophication potential; POCP = Formation potential of tropospheric ozone photochemical oxidants; ADPE = Abiotic depletion potential for non-fossil resources; ADPF = Abiotic depletion potential for fossil resources, SMP = Smog Formation Potential, ARDP = Abiotic Resource Depletion Potential for Non-renewable (fossil) energy resources												

RESULTS OF THE LCA - RESOURCE USE: 1 m² floorcovering

Parameter	Unit	A1-A3	A4	A5	B1	B2	C1	C2	C3/2	C4/1	D	D/1	D/2
PERE	[MJ]	6.57E+1	1.26E-1	3.00E+0	0.00E+0	6.30E-1	4.48E-2	8.93E-3	3.80E+1	3.07E-1	-1.84E-1	0.00E+0	-5.51E+0
PERM	[MJ]	3.77E+1	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	-3.77E+1	0.00E+0	0.00E+0	0.00E+0	0.00E+0
PERT	[MJ]	1.03E+2	1.26E-1	3.00E+0	0.00E+0	6.30E-1	4.48E-2	8.93E-3	3.13E-1	3.07E-1	-1.84E-1	0.00E+0	-5.51E+0
PENRE	[MJ]	1.03E+2	2.59E+0	3.60E+0	0.00E+0	4.07E+0	1.19E-1	1.62E-1	1.50E+1	4.12E+0	-9.61E-1	0.00E+0	-2.88E+1
PENRM	[MJ]	1.27E+1	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	-1.27E+1	0.00E+0	0.00E+0	0.00E+0	0.00E+0
PENRT	[MJ]	1.16E+2	2.59E+0	3.60E+0	0.00E+0	4.07E+0	1.19E-1	1.62E-1	2.31E+0	4.12E+0	-9.61E-1	0.00E+0	-2.88E+1
SM	[kg]	1.41E-1	0.00E+0	4.24E-3	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
RSF	[MJ]	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
NRSF	[MJ]	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
FW	[m ³]	8.20E+0	2.32E-4	2.38E-1	0.00E+0	7.45E-3	6.10E-5	1.65E-5	1.55E-2	-1.06E-5	-2.51E-4	0.00E+0	-7.51E-3
Caption	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water												

RESULTS OF THE LCA – OUTPUT FLOWS AND WASTE CATEGORIES:

1 m² floorcovering

Parameter	Unit	A1-A3	A4	A5	B1	B2	C1	C2	C3/2	C4/1	D	D/1	D/2
HWD	[kg]	3.23E-7	1.31E-7	1.93E-8	0.00E+0	1.33E-9	5.59E-11	9.36E-9	1.31E-8	1.76E-8	-3.91E-10	0.00E+0	-1.17E-8
NHWD	[kg]	1.69E-1	1.91E-4	3.05E-2	0.00E+0	3.84E-2	8.40E-5	1.36E-5	8.42E-1	3.89E+0	-4.10E-4	0.00E+0	-1.23E-2
RWD	[kg]	1.94E-3	3.49E-6	6.00E-5	0.00E+0	1.29E-4	1.97E-5	2.22E-7	1.11E-4	5.85E-5	-8.09E-5	0.00E+0	-2.42E-3
CRU	[kg]	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
MFR	[kg]	0.00E+0	0.00E+0	1.29E-1	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
MER	[kg]	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
EEE	[MJ]	0.00E+0	0.00E+0	2.32E-1	0.00E+0	0.00E+0	0.00E+0	0.00E+0	6.93E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
EET	[MJ]	0.00E+0	0.00E+0	4.26E-1	0.00E+0	0.00E+0	0.00E+0	0.00E+0	1.28E+1	0.00E+0	0.00E+0	0.00E+0	0.00E+0

Caption HWD = Hazardous waste disposed; NHWD = Non-hazardous waste disposed; RWD = Radioactive waste disposed; CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported electrical energy; EEE = Exported thermal energy

The CO₂ uptake during the growth phase of renewable materials in the product is 2.74 kg. This amount is stored in the material as biogenic carbon. At the end of life the stored carbon is released into the air again as 2.74 kg CO₂ emissions.

References

/IBU 2016/

IBU (2016): General Programme Instructions for the Preparation of EPDs at the Institut Bauen und Umwelt e.V., Version 1.1 Institut Bauen und Umwelt e.V., Berlin.

www.ibu-epd.de

/ISO 14025/

DIN EN /ISO 14025:2011-10/, Environmental labels and declarations — Type III environmental declarations — Principles and procedures

/EN 15804/

/EN 15804:2012-04+A1 2013/, Sustainability of construction works — Environmental Product Declarations — Core rules for the product category of construction products

/EN 16810/

DIN EN 16810: 2017-08: Resilient, textile and laminate floor coverings – Environmental product declarations – Product category rules

/PCR Part A/

Institut Bauen und Umwelt e.V., Berlin (pub.): Product Category Rules for Construction Products from the range of Environmental Product Declarations of Institut Bauen und Umwelt (IBU), Part A: Calculation Rules for the Life Cycle Assessment and Requirements on the Background Report, V1.7, March 2018
www.bau-umwelt.de

/PCR Part B/

Institut Bauen und Umwelt e.V., Berlin (pub.): Product Category Rules for Construction Products from the range of Environmental Product Declarations of Institut Bauen und Umwelt (IBU), Part B: Requirements on the EPD for floor coverings, V1.2, February 2018
www.bau-umwelt.de

/EN 16776/

DIN EN 16776: 2016-09: Resilient floor coverings - Heterogeneous polyurethane floor coverings - Specification

/EN 14041/

DIN EN 14041: 2008-05: Resilient, textile and laminate floor coverings - Essential characteristics

/ISO 10874/

DIN EN ISO 10874: 2012-04: Resilient, textile and laminate floor coverings - Classification

/EN 13501-1/

DIN EN 13501-1:2010-01: Fire classification of construction products and building elements - Part 1: Classification using data from reaction to fire tests

/ISO 15686/

ISO 15686: Buildings and constructed assets - Service life planning

ISO 15686-1: 2011-05: Part 1: General principles and framework

ISO 15686-2: 2012-05: Part 2: Service life prediction procedures

ISO 15686-7: 2006-03: Part 7: Performance evaluation for feedback of service life data from practice

ISO 15686-8: 2008-06: Part 8: Reference service life and service-life estimation

/CPR/

Construction Products Regulation, Regulation (EU) No 305/2011 of the European Parliament and of the Council of 9 March 2011

/BNB/

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**Publisher**

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