



SHI PRODUCT PASSPORT

Find products. Certify buildings.

SHI Product Passport No.:

15557-10-1002

dBlue

Product group: Drainage / Pipes - Pipe systems / Fittings - Plumbing



Marley Deutschland GmbH
Adolf-Oesterheld-Str. 28
31515 Wunstorf



Product qualities:



Köttner

Helmut Köttner
Scientific Director
Freiburg, 02 March 2026



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QNG - Qualitätssiegel Nachhaltiges Gebäude

The Qualitätssiegel Nachhaltiges Gebäude (Quality Seal for Sustainable Buildings), developed by the German Federal Ministry for Housing, Urban Development and Building (BMWSB), defines requirements for the ecological, socio-cultural, and economic quality of buildings. The Sentinel Holding Institut evaluates construction products in accordance with QNG requirements for certification and awards the QNG ready label. Compliance with the QNG standard is a prerequisite for eligibility for the KfW funding programme. For certain product groups, the QNG currently has no specific requirements defined. Although classified as not assessment-relevant, these products remain suitable for QNG-certified projects.

Criteria	Pos. / product group	Considered substances	QNG assessment
3.1.3 Schadstoffvermeidung in Baumaterialien	not applicable	not applicable	QNG ready - Not relevant for assessment



DGNB New Construction 2023

The DGNB System (German Sustainable Building Council) assesses the sustainability of various types of buildings. It can be applied to both large-scale private and commercial projects as well as smaller residential buildings. The 2023 version sets high standards for ecological, economic, socio-cultural, and functional aspects throughout the entire life cycle of a building.

Criteria	No. / Relevant building components / construction materials / surfaces	Considered substances / aspects	Quality level
ENV 1.2 Local environmental impact, 03.05.2024 (3rd edition)	not applicable		Not relevant for assessment

Criteria	No. / Relevant building components / construction materials / surfaces	Considered substances / aspects	Quality level
ENV 1.2 Local environmental impact, 29.05.2025 (4th edition)	not applicable		Not relevant for assessment



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DGNB New Construction 2018

The DGNB System (German Sustainable Building Council) assesses the sustainability of various types of buildings. It can be applied to both large-scale private and commercial projects as well as smaller residential buildings.

Criteria	No. / Relevant building components / construction materials / surfaces	Considered substances / aspects	Quality level
ENV 1.2 Local environmental impact	not applicable	not applicable	Not relevant for assessment



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BNB-BN Neubau V2015

The Bewertungssystem Nachhaltiges Bauen (Assessment System for Sustainable Building) is a tool for evaluating public office and administrative buildings, educational facilities, laboratory buildings, and outdoor areas in Germany. The BNB was developed by the former Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB) and is now overseen by the Federal Ministry for Housing, Urban Development and Building (BMWSB).

Criteria	Pos. / product type	Considered substance group	Quality level
1.1.6 Risiken für die lokale Umwelt			Not relevant for assessment



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EU taxonomy

The EU Taxonomy classifies economic activities and products according to their environmental impact. At the product level, the EU regulation defines clear requirements for harmful substances, formaldehyde and volatile organic compounds (VOCs). The Sentinel Holding Institut GmbH labels qualified products that meet this standard.

Criteria	Product type	Considered substances	Assessment
DNSH - Pollution prevention and control		Substances according to Annex C	EU taxonomy compliant

Verification: REACH-Erklärung Oleśnica, 29th October 2025



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BREEAM DE Neubau 2018

BREEAM (Building Research Establishment Environmental Assessment Methodology) is a UK-based building assessment system that evaluates the sustainability of new constructions, refurbishments, and conversions. Developed by the Building Research Establishment (BRE), the system aims to assess and improve the environmental, economic, and social performance of buildings.

Criteria	Product category	Considered substances	Quality level
Hea 02 Indoor Air Quality			Not relevant for assessment



Product:

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LEED v4.1

LEED (Leadership in Energy and Environmental Design) is an internationally recognised building certification system developed by the U.S. Green Building Council. It is one of the most widely used sustainability standards for buildings worldwide and is particularly applied in internationally oriented projects. LEED assesses buildings holistically across categories such as energy efficiency, resource conservation, material selection, indoor environmental quality and site sustainability. Depending on the number of points achieved, projects are awarded one of the certification levels: LEED Certified, Silver, Gold or Platinum.

Criteria	Product category	Assessment
EQ Credit: Low-Emitting Materials		Not relevant for assessment



Product:
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Product labels

In the construction industry, high-quality materials are crucial for a building's indoor air quality and sustainability. Product labels and certificates offer guidance to meet these requirements. However, the evaluation criteria of these labels vary, and it is important to carefully assess them to ensure products align with the specific needs of a construction project.



Products bearing the Sentinel Holding Institute QNG-ready seal are suitable for projects aiming to achieve the "Qualitätssiegel Nachhaltiges Gebäude" (Quality Seal for Sustainable Buildings). QNG-ready products meet the requirements of QNG Appendix Document 3.1.3, "Avoidance of Harmful Substances in Building Materials." The KfW loan program Climate-Friendly New Construction with QNG may allow for additional funding.



EPD Hub is a global EPD program that digitizes and streamlines the entire process from data collection and verification to the publication of Environmental Product Declarations (EPDs). EPD Hub operates in accordance with internationally recognized standards such as ISO 14025, EN 15804 + A2, and ISO 21930, and uses its own established rule sets (GPI and PCR) to ensure a consistent methodology.



Product:

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Legal notices

(*) These criteria apply to the construction project as a whole. While individual products can positively contribute to the overall building score through proper planning, the evaluation is always conducted at the building level. The information was provided entirely by the manufacturer.

Find our criteria here: <https://www.sentinel-holding.eu/de/Themenwelten/Pr%C3%BCfverfahren/kriterien%20f%C3%BCr%20Produkte>

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NEU

Unsere Schallschutzlösung

Schalldämmende Rohre

zur Luftschalldämmung



Schalldämmende Formteile

zur Luftschalldämmung

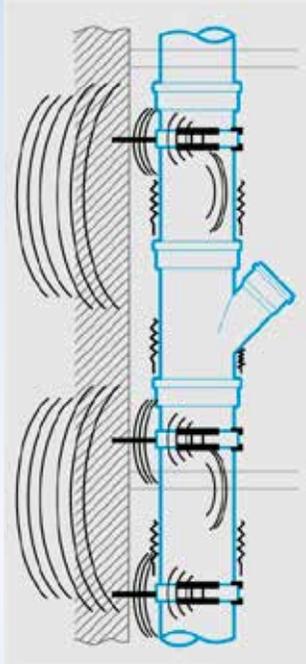


Schalldämmende Befestigungsschellen

zur Körperschalldämmung



Komplettes System



Vorteile auf einen Blick



- Hochschalldämmende Eigenschaften
- Erfüllt schallschutztechnische Anforderungen der DIN 4109 und VDI 4100
- Optimale Strömung von Flüssigkeiten durch äußerst glatte und gleitfähige Innenschicht
- Erhöhte Verlegefreundlichkeit durch zähe Außenschicht
- Kälteschlagzähigkeit, Verlegesicherheit bei niedrigen Temperaturen
- Abmessungen DN 50 bis DN 110 nach DIN EN 1451-1
- Ablängen mit Rohrabschneidern für Kunststoffrohre oder Feinsäge
- Steckmuffenverbindung
- Werkseitig eingelegte Dichtringe
- Anschluss an herkömmliche HT- und KG-Rohre ohne spezielle Übergangsstücke
- Umweltfreundlich, da recyclebar

dBlue



Das Sortiment

- Rohre
- Bögen
- Einfachabzweige
- Doppelabzweige
- Eckabzweige
- Übergangsröhre
- Langmuffen
- Überschiebemuffen
- Reinigungsrohre
- Muffenstopfen
- Schellen



Zertifizierte Qualität



Deutschland



Australien



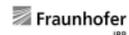
Schweden



Dänemark



Polen



EN 14366
Schallmessung von
Luft/Körperschall



EN 13501
Bestimmung der
Brandschutzklasse



ISO 9001
Qualitäts-
Managementsystem



ISO 14001
Umwelt-
Managementsystem

Deutsches
Institut
für
Bautechnik

DIBt



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dBlue schalldämmendes Abwassersystem

Innovativ. Schalldämmend. Komplett.

- Rohre und Formstücke aus mineralverstärktem PP-MD
- Abmessungen DN 50 bis DN 110 nach DIN EN 1451-1
- Anschluss an herkömmliche HT- und KG-Rohre ohne spezielle Übergangsstücke
- Kälteschlagzähigkeit, Verlegesicherheit bei niedrigen Temperaturen
- Umweltfreundlich, da recyclebar

02/25 - 912134 - Technische Änderungen vorbehalten.

Mach's mit Marley.

dBlue schalldämmendes Abwassersystem – Entwässerungssystem für höchste Anforderungen

Mehrschichttechnologie

1 Innenschicht – PP grau

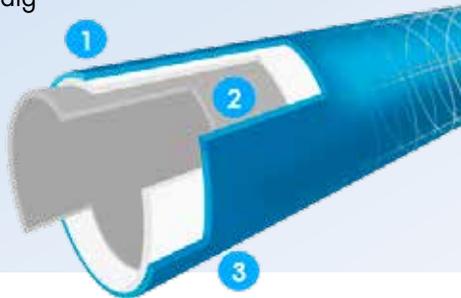
- abriebfest
- hochgleitfähig
- temperaturbeständig
- chemikalienbeständig

3 Außenschicht – PP blau, RAL 5012

- schlagfest
- witterungsbeständig
- bruchsicher bis -10°C

2 Mittelschicht – PP-MD

- mineralverstärkt
- hochsteif
- schalldämmend



Formteile

- Vollgespritzt aus mineralverstärktem PP-MD = Weniger Geräusche

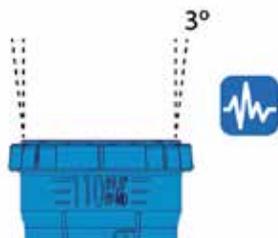
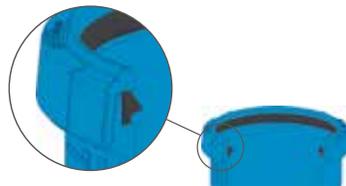
- Kompakter Wandaufbau

- Snap-Cap Technologie

- Winkelkennzeichnungen zur einfachen Montage (45° Intervalle)

- Werkseitig eingelegte Dichtringe

- Reduzierung von Vibration
- Reduzierung von Spannung
- Schnelle und einfache Montage
- Keine elektrischen Werkzeuge notwendig



Technische Daten

Werkstoff	PP-MD mineralverstärkt (Rohre und Formstücke)
Farbe	Blau, RAL 5012
Abmessungen	DN 50, DN 75, DN 90, DN 110
Einsatzbereich	Druckloses häusliches Abwasser mit pH-Wert 2 - 12
Anwendungskennzeichen	BD: Innerhalb und unterhalb der Gebäudestruktur
Temperaturbeständigkeit	Dauerbelastung: 90 °C Kurzzeitig: 95 °C
Min. Verarbeitungstemperatur	-10 °C
Dichte	Rohre: 1,1 - 1,3 g/cm ³ Formstücke: 1,1 - 1,4 g/cm ³
Längenausdehnungskoeffizient	0,10 mm/mK
Ringsteifigkeit	4,0 kN/m ² (SN4)
Dichtungen	SBR nach DIN EN 681-1
Schallverhalten nach DIN EN 14366	P-BA 124/2020: 16 dB(A) bei 4 l/s (mit dBlue Schelle)
Brandverhalten	B2 (normal entflammbar) nach DIN 4102 E (normal entflammbar) nach EN 13501-1
Verwendbarkeitsnachweis	abZ Z-42.1-399: Allgemeine bauaufsichtliche Zulassung (DIBt)
Prüfungen	Systemprüfung in Anlehnung an DIN EN 1451-1 „Eiskristall“ nach DIN EN 1451-1 und DIN EN 1411

Prüfergebnisse des Fraunhofer-Instituts der Bauphysik, Stuttgart (IBP)

- Befestigung mit dBlue Befestigungsschellen inkl. Kunststoffeinleger
- Mit **16 db(A)** bei **4 l/s** Volumenstrom erfüllt dBlue die Anforderungen der **DIN 4109** sowie die verschärften Anforderungen der **VDI 4100**

Messergebnisse nach EN14366 (P-BA 124/2020)



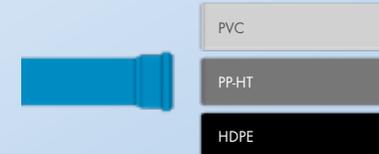
Hochmoderne Materialformel



Mehrschicht-technologie



Hochschalldämmend



Einfacher Übergang zu PVC, PP-HT und HDPE ohne zusätzliche Übergangsfittings

Mach's mit Marley.

ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH EN 15804+A2 & ISO 14025 / ISO 21930

dBlue Acoustic Soil & Waste System

Aliaxis Poland Sp. z o.o.



EPD HUB, HUB-1997

Publishing date 06 October 2024, last updated on 06 October 2024, valid until 06 October 2029.

GENERAL INFORMATION

MANUFACTURER

Manufacturer	Aliaxis Poland Sp. z o.o.
Address	ul. Energetyczna 6 56-400 Oleśnica (Poland)
Contact details	biuro.pl@aliaxis.com
Website	www.aliaxis.pl

EPD STANDARDS, SCOPE AND VERIFICATION

Program operator	EPD Hub, hub@epdhub.com
Reference standard	EN 15804+A2:2019 und ISO 14025
PCR	EPD Hub Core PCR Version 1.1, 5 Dec 2023 EN 16904 Product Category Rules (PCR) for plastics piping systems inside buildings
Sector	Construction product
Category of EPD	Third party verified EPD
Scope of the EPD	Cradle to gate with options, A4-A5, and modules C1-C4, D
EPD author	Lemonnier Elisa
EPD verification	Independent verification of this EPD and data, according to ISO 14025: <input type="checkbox"/> Internal verification <input checked="" type="checkbox"/> External verification
EPD verifier	Magaly González Vázquez, as an authorized verifier acting for EPD Hub Limited

The manufacturer has the sole ownership, liability, and responsibility for the EPD. EPDs within the same product category but from different programs may not be comparable. EPDs of construction products may not be comparable if they do not comply with EN 15804 and if they are not compared in a building context.

PRODUCT

Product name	dBlue Acoustic Soil & Waste System
Additional labels	-
Product reference	-
Place of production	Oleśnica, Poland
Period for data	01/01/2023 - 31/12/2023
Averaging in EPD	No averaging

ENVIRONMENTAL DATA SUMMARY

Declared unit	1 m
Declared unit mass	1.473 kg
GWP-fossil, A1-A3 (kgCO ₂ e)	4.31E+00
GWP-total, A1-A3 (kgCO ₂ e)	4.00E+00
Secondary material, inputs (%)	2.13
Secondary material, outputs (%)	17
Total energy use, A1-A3 (kWh)	20.6
Net freshwater use, A1-A3 (m ³)	0.07

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

The Aliaxis Group

Driven by passion, we create sustainable, innovative solutions for water and power supply. We provide to people all over the planet innovating plastic piping systems by operating our business to stay future-proof for the growing needs of our customers.

We're local at heart and global in spirit!

We leverage the global perspective of the Aliaxis Group to support our local activities. The sum of local experiences allows us to create solutions beneficial to the customers around the world. We have over 100 distribution centers and more than 75 production plants in over 40 countries. Every day, over 15.500 of our team members passionately and responsibly create and deliver reliable solutions to our customers.

PRODUCT DESCRIPTION

dBlue is a purpose-designed sound reducing drainage system made from a state-of-the-art combination of PP polymer and sound absorbing mineral filler (PP-MD) to maximize absorbance of sound. Used in conjunction with the acoustic pipe brackets, the acoustic system is designed to reduce noise and acoustic vibrations, which makes it is suitable for use in multi-occupancy applications as well as hospitals, hotels and other commercial applications, where reduced noise levels are preferred. It is also lightweight, resistant to temperature change and is jointed using the push-fit ring seal method.

The triple-layer pipe structure is produced using the latest co-extrusion technology. Each layer has its own function optimised to reduce sound levels, increase mechanical characteristics and improve the drainage flow. The dBlue system is resistant to hot waste water flow and can also be installed at extremely low temperatures in winter. The pipe has been manufactured in

three colours, to distinguish the different layers. dBlue acoustic fittings combine many unique technical and practical properties. The fittings are produced in a compact version and are classified as products of high area of mechanical resistance.

dBlue offers a versatile system with a superior application range. It will reach from the highest point in a skyscraper to the exit point of the building structure. dBlue system has the diameter range (40-200 mm), special fittings, acoustic performance, resistance, ring stiffness and installation advantage that makes it useable at any place in the building.

Further information can be found at: www.dblueacousticdrainage.com or www.aliaxis.pl.

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass %	Material origin
Minerals	24.3	Europe
Fossil materials	63.3	Europe
Internally re-granulated materials (pipes)	9.2	Europe
Bio-based materials	0	-
Metals (for bracketing)	3.2	Europe

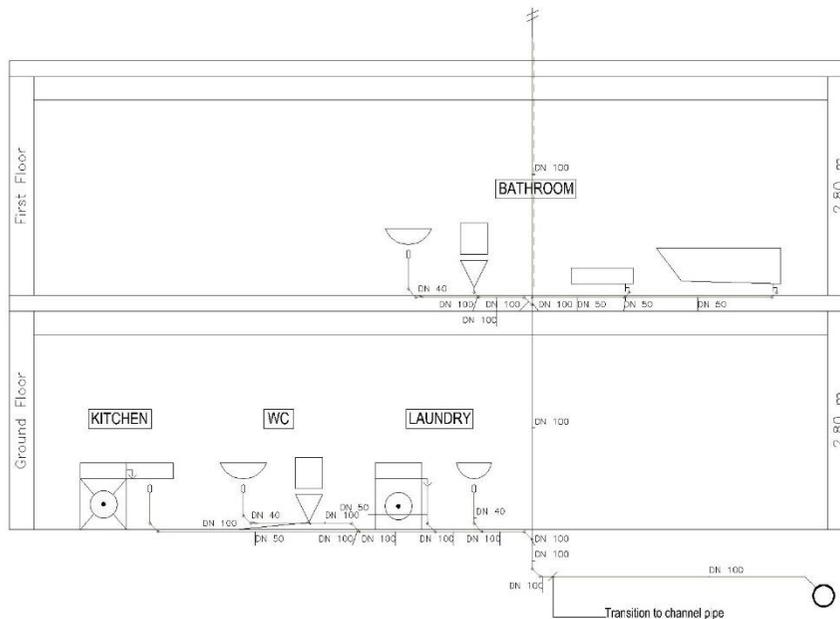
BIOGENIC CARBON CONTENT

Product's biogenic carbon content at the factory gate

Biogenic carbon content in product, kg C	0
Biogenic carbon content in packaging, kg C	0.0123

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1 m
Mass per declared unit	1.473 kg
Functional unit	The functional unit represents 100 m ² of a typical detached house, incorporating a bathroom, a separate WC, one kitchen and laundry room.
Reference service life	-



Functional unit representation

SUBSTANCES, REACH - VERY HIGH CONCERN

The product does not contain any REACH SVHC substances in amounts greater than 0,1 % (1000 ppm).

PRODUCT LIFE-CYCLE

SYSTEM BOUNDARY

This EPD covers the life-cycle modules listed in the following table.

Product stage			Assembly stage		Use stage							End of life stage				Beyond the system boundaries		
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D		
x	x	x	x	x	MND	MND	MND	MND	MND	MND	MND	x	x	x	x	x		
Raw materials	Transport	Manufacturing	Transport	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstr./demol.	Transport	Waste processing	Disposal	Reuse	Recovery	Recycling

Modules not declared = MND. Modules not relevant = MNR

MANUFACTURING AND PACKAGING (A1-A3)

The environmental impacts considered for the product stage cover the manufacturing of raw materials used in the production as well as packaging materials and other ancillary materials. Also, fuels used by machines, and handling of waste formed in the production processes at the manufacturing facilities are included in this stage. The study also considers the material losses occurring during the manufacturing processes as well as losses during electricity transmission.

The pipes are made through co-extrusion. Co-extrusion involves running two or more extruders simultaneously to produce a single, multi-layered extruded tube. The process starts with feeding raw materials into extruders where they are heated and melted. Each extruder feeds a different material into a co-extrusion die head. The die head combines these materials to create a multi-layered structure with distinct layers. Once sheared off the die face, the extruded pipe undergoes calibration and cooling to reach the desired dimensions. It then moves to a cutting station where it is cut into required

lengths. The pipe sections are passed to the socketing machines that create the sockets at the pipe ends through plastic deformation. Ring seals are inserted into these sockets. The finished product is then packed for storage and shipment.

Fittings are manufactured through injection molding. The process begins with heating raw material until it melts. The molten material is then injected into a mold, which is shaped to match the specific design of the fitting. Once injected, the molten material quickly cools within the mold. As the material solidifies, it takes on the desired shape, including threads, grooves, and other essential features. After cooling, the mold opens, revealing the newly formed fitting. Ring seals are then inserted into the sockets. Once inspected and approved, the finished fitting is packed, ready for storage and shipment.

TRANSPORT AND INSTALLATION (A4-A5)

Transportation impacts occurred from final products delivery to construction site (A4) cover fuel direct exhaust emissions, environmental impacts of fuel production, as well as related infrastructure emissions.

The transportation distance from manufacturing site to the building site corresponds to an average transport distance based on Aliaxis Poland sales. The transportation method used is lorry. The packaging waste are taken into account in the installation section (A5).

PRODUCT USE AND MAINTENANCE (B1-B7)

This EPD does not cover the use phase.

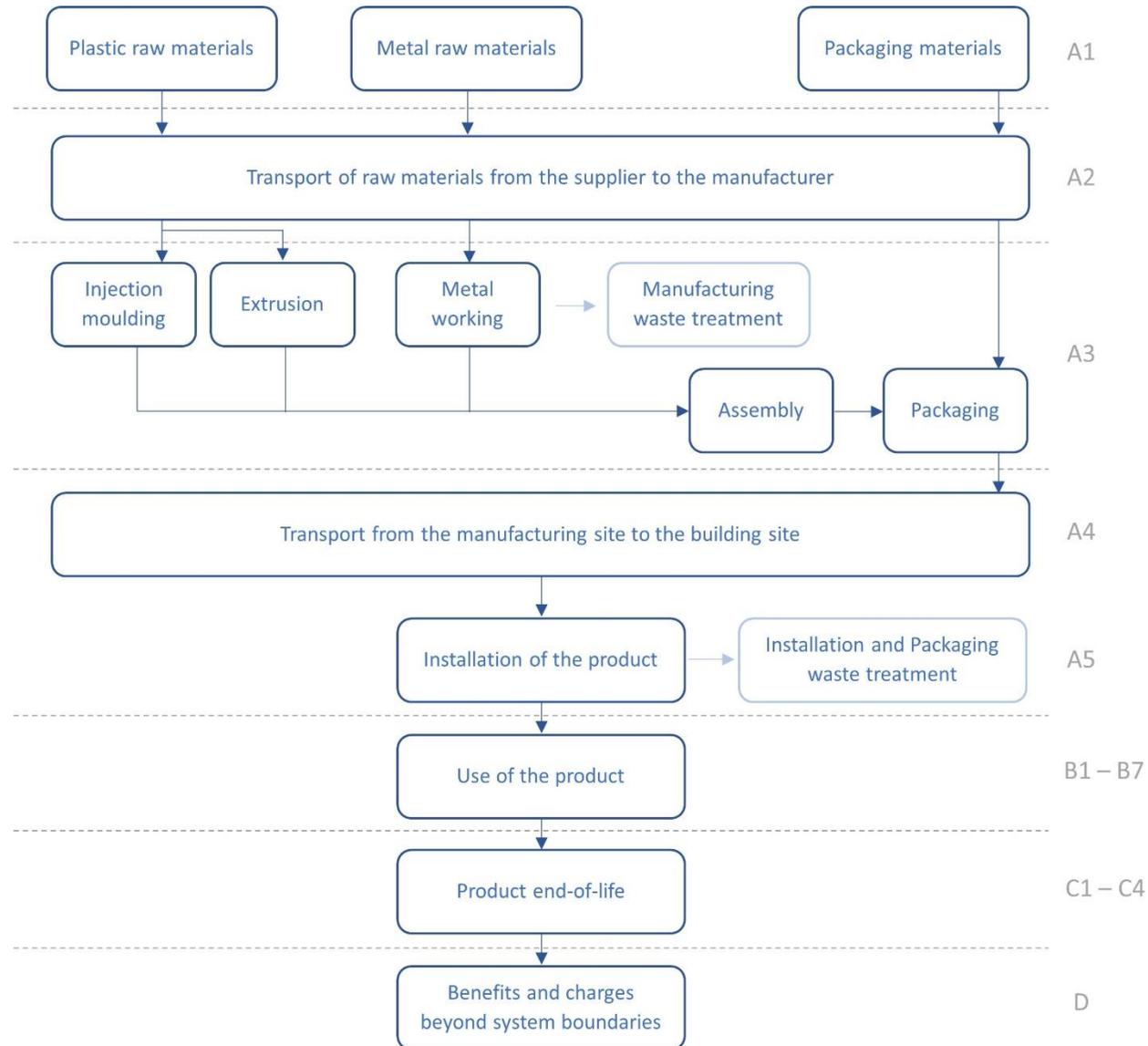
Air, soil, and water impacts during the use phase have not been studied.

PRODUCT END OF LIFE (C1-C4, D)

The end-of-life product materials are transported by lorry to several facilities: a recycling facility 800 km from the demolition site, an incineration facility 150 km away and a landfill facility 50 km away (C2). The PP is collected from the demolition site: 36.8% is sent for incineration, 18.3% is recycled and 44.9% is landfilled. The EPDM is collected from the demolition site: 45% is sent for incineration and 55% is landfilled. 100% of the steel is landfilled (C3 - C4).

The benefits and loads of PP recycling are considered in module D. The energy and heat produced by the incineration of EPDM, PP and of waste packaging materials are also taken into account in module D.

FLOW DIAGRAM



LIFE-CYCLE ASSESSMENT

CUT-OFF CRITERIA

The study does not exclude any modules or processes which are stated mandatory in the reference standard and the applied PCR. The study does not exclude any hazardous materials or substances. The study includes all major raw material and energy consumption. All inputs and outputs of the unit processes, for which data is available for, are included in the calculation. There is no neglected unit process more than 1% of total mass or energy flows. The module specific total neglected input and output flows also do not exceed 5% of energy usage or mass.

ALLOCATION, ESTIMATES AND ASSUMPTIONS

Allocation is required if some material, energy, and waste data cannot be measured separately for the product under investigation. All allocations are done as per the reference standards and the applied PCR. In this study, allocation has been done in the following ways:

Data type	Allocation
Raw materials	No allocation
Packaging material	No allocation
Ancillary materials	No allocation
Manufacturing energy and waste	Allocation according to weight or volume

AVERAGES AND VARIABILITY

Type of average	No average
Averaging method	Not applicable

This EPD is product and factory specific and does not contain average calculations.

LCA SOFTWARE AND BIBLIOGRAPHY

This EPD has been created using One Click LCA EPD Generator. The LCA and EPD have been prepared according to the reference standards and ISO 14040/14044. The EPD Generator uses Ecoinvent v3.8, Plastics Europe, Federal LCA Commons and One Click LCA databases as sources of environmental data.

ENVIRONMENTAL IMPACT DATA

CORE ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, PEF

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP – total ¹⁾	kg CO ₂ e	2,74E+00	1,23E-01	1,13E+00	4,00E+00	9,31E-01	4,12E-01	MND	MNR	2,95E-02	1,37E+00	8,03E-02	-3,86E+00						
GWP – fossil	kg CO ₂ e	2,74E+00	1,23E-01	1,45E+00	4,31E+00	9,31E-01	9,18E-02	MND	MNR	2,95E-02	1,37E+00	8,03E-02	-2,10E+00						
GWP – biogenic	kg CO ₂ e	0,00E+00	0,00E+00	-3,20E-01	-3,20E-01	0,00E+00	3,20E-01	MND	MNR	0,00E+00	0,00E+00	0,00E+00	-1,76E+00						
GWP – LULUC	kg CO ₂ e	1,00E-03	4,52E-05	1,03E-03	2,07E-03	3,43E-04	5,25E-06	MND	MNR	1,09E-05	5,11E-06	7,77E-06	8,76E-04						
Ozone depletion pot.	kg CFC-11e	1,04E-07	2,82E-08	6,65E-08	1,98E-07	2,14E-07	1,68E-09	MND	MNR	6,79E-09	1,21E-09	2,18E-09	-4,88E-08						
Acidification potential	mol H ⁺ e	1,12E-02	5,19E-04	9,53E-03	2,12E-02	3,94E-03	9,65E-05	MND	MNR	1,25E-04	1,82E-04	6,35E-05	-1,42E-02						
EP-freshwater ²⁾	kg Pe	6,86E-05	1,00E-06	1,61E-04	2,31E-04	7,62E-06	9,00E-07	MND	MNR	2,42E-07	1,73E-07	2,55E-07	-1,78E-04						
EP-marine	kg Ne	1,89E-03	1,54E-04	1,30E-03	3,34E-03	1,17E-03	4,78E-05	MND	MNR	3,71E-05	8,47E-05	6,80E-05	-1,72E-03						
EP-terrestrial	mol Ne	2,15E-02	1,70E-03	1,34E-02	3,66E-02	1,29E-02	2,61E-04	MND	MNR	4,10E-04	9,17E-04	2,31E-04	-1,88E-02						
POCP (“smog”) ³⁾	kg NMVOCe	9,04E-03	5,44E-04	3,78E-03	1,34E-02	4,14E-03	8,19E-05	MND	MNR	1,31E-04	2,22E-04	8,92E-05	-5,89E-03						
ADP-minerals & metals ⁴⁾	kg Sbe	4,43E-03	2,87E-07	2,29E-06	4,43E-03	2,18E-06	2,75E-08	MND	MNR	6,92E-08	5,15E-08	2,50E-08	-3,81E-06						
ADP-fossil resources	MJ	8,71E+01	1,84E+00	1,81E+01	1,07E+02	1,40E+01	1,83E-01	MND	MNR	4,43E-01	1,34E-01	1,68E-01	-3,49E+01						
Water use ⁵⁾	m ³ e depr.	1,35E+00	8,23E-03	3,57E-01	1,71E+00	6,26E-02	8,29E-03	MND	MNR	1,98E-03	4,62E-02	1,02E-03	-3,65E-01						

1) GWP = Global Warming Potential; 2) EP = Eutrophication potential. Required characterisation method and data are in kg P-eq. Multiply by 3,07 to get PO4e; 3) POCP = Photochemical ozone formation; 4) ADP = Abiotic depletion potential; 5) EN 15804+A2 disclaimer for Abiotic depletion and Water use and optional indicators except Particulate matter and Ionizing radiation, human health. The results of these environmental impact indicators shall be used with care as the uncertainties on these results are high or as there is limited experience with the indicator.

ADDITIONAL (OPTIONAL) ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, PEF

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Particulate matter	Incidence	1,18E-07	1,41E-08	3,06E-08	1,63E-07	1,07E-07	9,83E-10	MND	MNR	3,40E-09	9,37E-10	1,23E-09	-7,30E-08						
Ionizing radiation ⁶⁾	kBq 11235e	1,81E-01	8,76E-03	4,99E-02	2,39E-01	6,66E-02	6,98E-04	MND	MNR	2,11E-03	2,87E-04	8,22E-04	-3,80E-02						
Ecotoxicity (freshwater)	CTUe	6,95E+01	1,66E+00	2,01E+01	9,13E+01	1,26E+01	2,86E-01	MND	MNR	3,99E-01	4,40E-01	3,00E-01	-2,54E+01						
Human toxicity, cancer	CTUh	6,29E-09	4,07E-11	7,15E-10	7,05E-09	3,09E-10	1,06E-11	MND	MNR	9,80E-12	4,88E-11	5,99E-12	-7,00E-10						
Human tox. non-cancer	CTUh	3,76E-08	1,64E-09	2,22E-08	6,14E-08	1,25E-08	4,77E-10	MND	MNR	3,95E-10	1,82E-09	1,38E-10	-2,64E-08						
SQP ⁷⁾	-	4,86E+00	2,12E+00	2,14E+01	2,84E+01	1,61E+01	1,64E-01	MND	MNR	5,11E-01	4,41E-02	3,99E-01	-6,73E+00						

6) EN 15804+A2 disclaimer for Ionizing radiation, human health. This impact category deals mainly with the eventual impact of low-dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator; 7) SQP = Land use related impacts/soil quality.

USE OF NATURAL RESOURCES

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Renew. PER as energy ⁸⁾	MJ	2,12E+00	2,07E-02	2,94E+00	5,08E+00	1,58E-01	6,78E-03	MND	MNR	4,99E-03	3,34E-03	3,28E-03	-1,46E+00						
Renew. PER as material	MJ	0,00E+00	0,00E+00	2,78E+00	2,78E+00	0,00E+00	-2,78E+00	MND	MNR	0,00E+00	0,00E+00	0,00E+00	1,53E+01						
Total use of renew. PER	MJ	2,12E+00	2,07E-02	5,73E+00	7,86E+00	1,58E-01	-2,78E+00	MND	MNR	4,99E-03	3,34E-03	3,28E-03	1,38E+01						
Non-re. PER as energy	MJ	4,99E+01	1,84E+00	1,72E+01	6,89E+01	1,40E+01	1,83E-01	MND	MNR	4,43E-01	1,34E-01	1,68E-01	-2,62E+01						
Non-re. PER as material	MJ	3,72E+01	0,00E+00	8,83E-01	3,81E+01	0,00E+00	-8,83E-01	MND	MNR	0,00E+00	-2,04E+01	-1,69E+01	1,22E+01						
Total use of non-re. PER	MJ	8,71E+01	1,84E+00	1,81E+01	1,07E+02	1,40E+01	-6,99E-01	MND	MNR	4,43E-01	-2,03E+01	-1,67E+01	-1,40E+01						
Secondary materials	kg	3,14E-02	5,11E-04	1,01E-01	1,33E-01	3,88E-03	6,56E-05	MND	MNR	1,23E-04	2,24E-04	5,93E-05	2,93E-01						
Renew. secondary fuels	MJ	8,05E-04	5,16E-06	5,97E-02	6,05E-02	3,92E-05	7,43E-07	MND	MNR	1,24E-06	1,25E-06	2,23E-06	-2,09E-02						
Non-ren. secondary fuels	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	MNR	0,00E+00	0,00E+00	0,00E+00	0,00E+00						
Use of net fresh water	m ³	3,49E-02	2,38E-04	3,64E-02	7,15E-02	1,81E-03	2,29E-04	MND	MNR	5,74E-05	1,74E-04	1,79E-04	-4,13E-02						

8) PER = Primary energy resources.

END OF LIFE – WASTE

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste	kg	3,09E-01	2,44E-03	1,44E-01	4,55E-01	1,85E-02	8,00E-04	MND	MNR	5,88E-04	0,00E+00	0,00E+00	-1,70E-01						
Non-hazardous waste	kg	3,99E+00	4,01E-02	7,07E+00	1,11E+01	3,05E-01	2,29E-01	MND	MNR	9,66E-03	5,32E-01	6,94E-01	-8,83E+00						
Radioactive waste	kg	6,75E-05	1,23E-05	2,06E-05	1,00E-04	9,36E-05	5,46E-07	MND	MNR	2,97E-06	0,00E+00	0,00E+00	-2,38E-05						

END OF LIFE – OUTPUT FLOWS

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Components for re-use	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	MNR	0,00E+00	0,00E+00	0,00E+00	0,00E+00						
Materials for recycling	kg	0,00E+00	0,00E+00	1,41E-01	1,41E-01	0,00E+00	2,62E-01	MND	MNR	0,00E+00	5,00E-01	0,00E+00	0,00E+00						
Materials for energy rec	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	MNR	0,00E+00	0,00E+00	0,00E+00	0,00E+00						
Exported energy	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,27E+00	MND	MNR	0,00E+00	6,46E+00	0,00E+00	0,00E+00						

ENVIRONMENTAL IMPACTS – EN 15804+A1, CML / ISO 21930

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Global Warming Pot.	kg CO ₂ e	2,61E+00	1,21E-01	1,43E+00	4,16E+00	9,22E-01	1,14E-01	MND	MNR	2,92E-02	1,37E+00	8,11E-02	-2,04E+00						
Ozone depletion Pot.	kg CFC ₁₁ e	8,81E-08	2,23E-08	5,40E-08	1,64E-07	1,70E-07	1,35E-09	MND	MNR	5,38E-09	1,06E-09	1,73E-09	-4,02E-08						
Acidification	kg SO ₂ e	9,29E-03	4,03E-04	8,11E-03	1,78E-02	3,06E-03	7,72E-05	MND	MNR	9,71E-05	1,28E-04	4,84E-05	-1,22E-02						
Eutrophication	kg PO ₄ ³ e	6,01E-03	9,18E-05	5,17E-03	1,13E-02	6,98E-04	4,12E-04	MND	MNR	2,21E-05	1,11E-04	3,01E-03	-5,76E-03						
POCP ("smog")	kg C ₂ H ₄ e	6,14E-04	1,57E-05	3,37E-04	9,67E-04	1,20E-04	8,36E-06	MND	MNR	3,79E-06	2,35E-06	1,54E-05	-5,20E-04						
ADP-elements	kg Sbe	4,47E-03	2,78E-07	2,18E-06	4,48E-03	2,11E-06	2,61E-08	MND	MNR	6,70E-08	4,32E-08	2,41E-08	-3,75E-06						
ADP-fossil	MJ	8,71E+01	1,84E+00	1,81E+01	1,07E+02	1,40E+01	1,83E-01	MND	MNR	4,43E-01	1,34E-01	1,68E-01	-3,49E+01						

ENVIRONMENTAL IMPACTS – FRENCH NATIONAL COMPLEMENTS

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
ADP-elements	kg Sbe	4,47E-03	2,78E-07	2,18E-06	4,48E-03	2,11E-06	2,61E-08	MND	MNR	6,70E-08	4,32E-08	2,41E-08	-3,75E-06						
Hazardous waste disposed	kg	3,09E-01	2,44E-03	1,44E-01	4,55E-01	1,85E-02	8,00E-04	MND	MNR	5,88E-04	0,00E+00	0,00E+00	-1,70E-01						
Non-haz. waste disposed	kg	3,99E+00	4,01E-02	7,07E+00	1,11E+01	3,05E-01	2,29E-01	MND	MNR	9,66E-03	5,32E-01	6,94E-01	-8,83E+00						
Air pollution	m ³	4,70E+02	2,20E+01	3,52E+02	8,45E+02	1,67E+02	3,46E+00	MND	MNR	5,29E+00	7,08E+00	1,96E+00	-4,86E+02						
Water pollution	m ³	2,49E+01	1,30E-01	7,54E+00	3,26E+01	9,85E-01	4,57E-01	MND	MNR	3,12E-02	9,93E-01	3,67E+00	-7,76E+00						

VERIFICATION STATEMENT

VERIFICATION PROCESS FOR THIS EPD

This EPD has been verified in accordance with ISO 14025 by an independent, third-party verifier by reviewing results, documents and compliance with reference standard, ISO 14025 and ISO 14040/14044, following the process and checklists of the program operator for:

- This Environmental Product Declaration
- The Life-Cycle Assessment used in this EPD
- The digital background data for this EPD

Why does verification transparency matter? Read more online

This EPD has been generated by One Click LCA EPD generator, which has been verified and approved by the EPD Hub.

THIRD-PARTY VERIFICATION STATEMENT

I hereby confirm that, following detailed examination, I have not established any relevant deviations by the studied Environmental Product Declaration (EPD), its LCA and project report, in terms of the data collected and used in the LCA calculations, the way the LCA-based calculations have been carried out, the presentation of environmental data in the EPD, and other additional environmental information, as present with respect to the procedural and methodological requirements in ISO 14025:2010 and reference standard.

I confirm that the company-specific data has been examined as regards plausibility and consistency; the declaration owner is responsible for its factual integrity and legal compliance.

I confirm that I have sufficient knowledge and experience of construction products, this specific product category, the construction industry, relevant standards, and the geographical area of the EPD to carry out this verification.

I confirm my independence in my role as verifier; I have not been involved in the execution of the LCA or in the development of the declaration and have no conflicts of interest regarding this verification.

Magaly González Vázquez, as an authorized verifier acting for EPD Hub Limited
06.10.2024



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www.alixis.pl



Oleśnica, 29th October 2025

To Whom It May Concern,

Aliaxis Poland hereby declares that the **dBlue system** does **not contain any Substances of Very High Concern (SVHC)** as defined by the European Chemicals Agency (ECHA) under the REACH Regulation (EC) No 1907/2006. The product is fully **compliant with REACH requirements**.

Furthermore, Aliaxis Poland confirms that **none of the following substances** are used in the manufacturing process of the dBlue system:

- Asbestos
- Lead
- Cadmium
- Chromium (including hexavalent forms)
- Mercury
- Arsenic

This declaration is made in good faith based on current knowledge and available information from our suppliers and internal processes.

Should you require any further details, please do not hesitate to contact us.

Rafał Zębik

Quality Manager,
Integrated management
System Representative




ALIXIS POLAND Sp. z o.o.
56-400 Oleśnica
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Tel. 71/ 399 56 00
NIP 725-10-21-629
REGON 471220811

NIP PL 725-10-21-629 / REGON 471220811 / Kapitał podstawowy 51 539 700 PLN / Sąd Rejonowy we Wrocławiu, IX Wydział Gospodarczy
KRS 0000013868

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CONFORMITY CERTIFICATEReg.-No. **4300**

Herewith we confirm in accordance with Article 18 and Article 21 of the Bavarian Building Regulations (BayBO), as published on 14 August 2007 (GVBl. p. 588 BayRS 2132-1-B), last amended by Article 4 of the Act of 25 May 2021 (GVBl. p. 286) that the building products

**Waste water pipes made of mineral filled PP
with three layer wall structure
and fittings made of mineral filled PP
in the nominal sizes DN 40 to DN 200 with the trade name "dBlue"**

of the producer

**Aliaxis Poland Sp. z.o.o.
ul. Energetyczna 6
56-400 OLESNICA
POLAND**

production plant

Aliaxis Poland Sp. z.o.o.
ul. Energetyczna 4
56-400 OLESNICA
POLAND

according to the results of the internal production control and the third-party control carried out by the testing institute, recognized under building regulations,

SKZ - Testing GmbH
Friedrich-Bergius-Ring 22
97076 Würzburg
Germany

comply with the regulations of

the national technical approval no.: **Z-42.1-399** of **24 September 2021**
valid until: **3 October 2026**

Würzburg, 8 October 2021



i. V. 
Dipl.-Ing. Hans-Peter Krause
Head of Certification Body

Test Report P-BA 124/2020e**Determination of the Acoustic
Performance of a Wastewater
Installation System in the
Laboratory according to EN 14366**

Client: Nicoll Polska Sp. z o.o. Aliaxis Nederland B.V.
Ul. Energetyczna 6 P.O. Box 7149
56-400 Oleśnica 5980 AC Panningen
POLAND The Netherlands

Hereinafter referred to "Aliaxis Companies".

Test object: Wastewater installation system consisting of plastic pipes and fittings
"dBlue DN 110 x 3.4, PP-ML: PP/PP-MD/PP, 10-03-2020" with pipe
clamps with elastic inlay "dBlue Clamp" (manufacturer: Aliaxis
Companies), mounted as supporting and fixing clamp.

Content: Results sheet 1: Summary of test results
Figures 1 to 3: Detailed results
Figures 4 and 5: Test set-up
Annex A: Measurement set-up, noise excitation, acoustic
parameters, compliance with requirements
Annex F: Evaluation of measurements
Annex P: Description of the test facility
Annex V: Assessment according to VDI 4100

Test date: The measurement was carried out on July 07, 2020 in the test facilities
of the Fraunhofer Institute for Building Physics in Stuttgart.

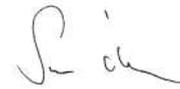
Stuttgart, October 28, 2020

Responsible Test Engineer:



B.Sc. (FH) O. Born

Head of Laboratory:



M.BP. Dipl.-Ing.(FH) S. Öhler

The test was carried out in a laboratory, accredited according to DIN EN ISO/IEC 17025:2018 by DAkkS. The
accreditation certificate is D-PL-11140-11-01.

Any publication of this document in part is subject to written permission by the Fraunhofer Institute for
Building Physics (IBP).

Determination of the Acoustic Performance of a Wastewater Installation System in the Laboratory according to EN 14366

P-BA 124/2020e

Results sheet 1

Client: Aliaxis Companies

Test specimen: Wastewater installation system consisting of plastic pipes and fittings "dBlue DN 110 x 3.4, PP-ML: PP/PP-MD/PP, 10-03-2020" with pipe clamps with elastic inlay "dBlue Clamp" (manufacturer: Aliaxis Companies), mounted as supporting and fixing clamp. Test object no.: 11445-01; see figure 4 and 5.

Test set-up:

- The pipe system was mounted according to figure 4 (see also Annex A).
- The system consisted of wastewater pipes (nominal size OD 110), three inlet tees (88°), two 45°-basement bends with intermediate calming section (25 cm) and a horizontal drain section. The inlet tees in the basement and in the ground floor were closed by lids supplied by the manufacturer.
 - Pipe system "dBlue DN 110 x 3.4, PP-ML: PP/PP-MD/PP, 10-03-2020": Three-layer pipe with attached sleeve. Internal layer: PP copo; medial layer: PP MD, external layer: PP copo. Wall thickness 3.7 mm, weight 1.56 kg/m, density 1.33 g/cm³, values measured by IBP. One-layer fittings: PP MD, wall thickness 3.6 mm, density 1.15 g/cm³, values measured by IBP. Connection of the pipes by plug-on socket connection. Information supplied by the client.
 - Pipe clamps "dBlue Clamp" (figure 5): Steel pipe clamp with elastomeric insert and with one-sided closure, mounted as supporting and fixing clamp. In every storey (EG and UG) two pipe clamps were mounted: In the upper wall area a single guidance clamp with 3 spacers (3 x 6 mm) on one side of the clamp. In the lower wall area a double clamp consisting of a supporting/guidance clamp with 3 spacers (3 x 6 mm) on one side of the clamp and above a fixing clamp without spacers closed with 3 Nm (completely closed). The supporting and guidance clamps were fixed to the installation wall with dowels and thread rods. The fixing clamp had no contact to the wall (figure 5).

The wastewater installation system was mounted by a technician under the authority of Fraunhofer IBP.

Test facility: Installation test facility P12, mass per unit area of the installation wall: 220 kg/m², mass per unit area of the ceiling: 440 kg/m². Installation rooms: sub-basement (KG), basement (UG) front, ground floor (EG) front and top floor (DG), measuring rooms: UG front, UG rear (details in Annex P and DIN EN 14366: 2020-02)

Test method: The measurements were performed according to DIN EN 14366:2020-02; noise excitation by steady water flow with 0.5 l/s, 1.0 l/s, 2.0 l/s and 4.0 l/s. Additional evaluation for comparison with requirements following German standards DIN 4109-1:2018-01 and VDI 4100:2012-10 (details in Annexes A, F and V).

Result:

Test specimen: Wastewater installation system consisting of plastic pipes and fittings "dBlue DN 110 x 3.4, PP-ML: PP/PP-MD/PP, 10-03-2020" with pipe clamps with elastic inlay "dBlue Clamp" (manufacturer: Aliaxis Companies), mounted as supporting and fixing clamp.	Flow rate [l/s]				
	0.5	1.0	2.0	4.0	
Airborne sound pressure level $L_{a,A}$ [dB(A)] according to EN 14366 for the basement test-room	UG front	47	50	52	53
Structure-borne sound characteristic level $L_{sc,A}$ [dB(A)] according to EN 14366 for the basement test-room	UG rear	<10	13	13	16
Installation sound level $L_{AFeq,n}$ [dB(A)] following DIN 4109 in the basement test-room	UG front	47	50	52	53
	UG rear	13	16	17	20
Installation sound level $\overline{L}_{AFeq,nT}$ [dB(A)] following VDI 4100 in the basement test-room	UG front	45	47	50	50
	UG rear	<10	13	13	16

Test date: July 07, 2020

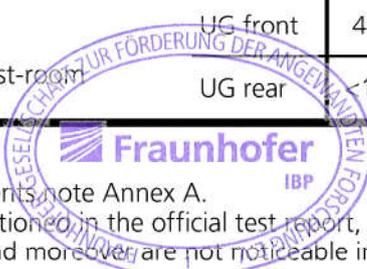
Notes:

- For comparing test results with requirements, note Annex A.
- Sound levels below 10 dB(A) are not mentioned in the official test report, since they are subject to an increased measurement uncertainty and moreover are not noticeable in a normal living environment.
- The above-mentioned measurement results require careful assembly of the pipe clamps (see test set-up).



The test was carried out in a laboratory, accredited according to DIN EN ISO/IEC 17025:2018 by DAkKS. The accreditation certificate is D-PL-11140-11-01.

Stuttgart, July 22, 2020
Head of Laboratory



[Handwritten signature]