SENTINEL HOLDING
INSTITUT

SHI PRODUCT PASSPORT

Find products. Certify buildings.

SHI Product Passport No.:

1275-10-1007

Roth Systemrohr DUOPEX S5

Product group: Surface heating systems - Pipes / pipe cladding - Pipe systems / Fittings

Roth Werke GmbH
Am Seerain 2
35232 Dautphetal-Buchenau

Product qualities:

- SHI Product Assessment 2024 ✓
- QNG Qualitätssiegel Nachhaltiges Gebäude ✓
- DGNB NEW CONSTRUCTION 2023.2 ✓
- DGNB NEW CONSTRUCTION 2023 ✓
- DGNB NEW CONSTRUCTION 2018 ✓
- BNB-BN NEUBAU V2015 ✓
- EU TAXONOMY ✓
- BREEAM DE NEUBAU 2018 ✓
- LEED v4.1 (outside US) ✓

CERTIFIED SUSTAINABLE PRODUCT – SHI PRODUCT PASSPORT – SENTINEL HOLDING INSTITUT – www.sentinel-holding.eu

Köttner

Helmut Köttner
Scientific Director
Freiburg, 26 August 2026

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The SHI Database is the first and only database for construction products whose comprehensive processes and data accuracy are regularly verified by the independent auditing company SGS-TÜV Saar

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SHI Product Assessment 2024

Since 2008, Sentinel Holding Institut GmbH (SHI) has been establishing a unique standard for products that support healthy indoor air. Experts carry out independent product assessments based on clear and transparent criteria. In addition, the independent testing company SGS regularly audits the processes and data accuracy.

Criteria	Product category	Assessment
SHI Product Assessment		Indoor air neutral

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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			QNG ready - Not relevant for assessment

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DGNB New Construction 2023.2

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

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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	Assessment
ECO1.1 Life cycle cost (*)	May positively contribute to the overall building score
Verification: aufgrund der niedrigen Systemtemperaturen im Gesamtsystem Flächenheizung und in Verbindung mit dem Wärmeerzeuger	

Criteria	Assessment
ECO2.6 Climate resilience (*)	May positively contribute to the overall building score
Verification: im Rahmen des Gesamtsystems der Flächenheizung	

Criteria	Assessment
ENV1.1 Climate action and energy (*)	May positively contribute to the overall building score
Verification: im Rahmen des Gesamtsystems der Flächenheizung in Verbindung mit der Wärmeerzeugung	

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 relevant for assessment

Criteria	Assessment
SOC1.1 Thermal comfort (*)	May positively contribute to the overall building score
Verification: im Rahmen des Gesamtsystems der Flächenheizung	

Criteria	Assessment
SOC2.1 Barrier-free design (*)	May positively contribute to the overall building score
Verification: Flächenheizung in den Baukörper integriert	

Criteria	Assessment
TEC1.4 Use and integration of building technology (*)	May positively contribute to the overall building score
Verification: im Rahmen des Gesamtsystems der Flächenheizung	

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 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	Sonstige	Stoffe nach Anlage C	compliant
Verification: Herstellererklärung vom 22.04.2026			

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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

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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	Considered substances	Assessment
EQ Credit: Low-Emitting Materials			Not relevant for assessment

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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.

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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%BCfkriterien%20f%C3%BCr%20Produkte

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Roth Systemrohr DUOPEX S5®
Datenblatt

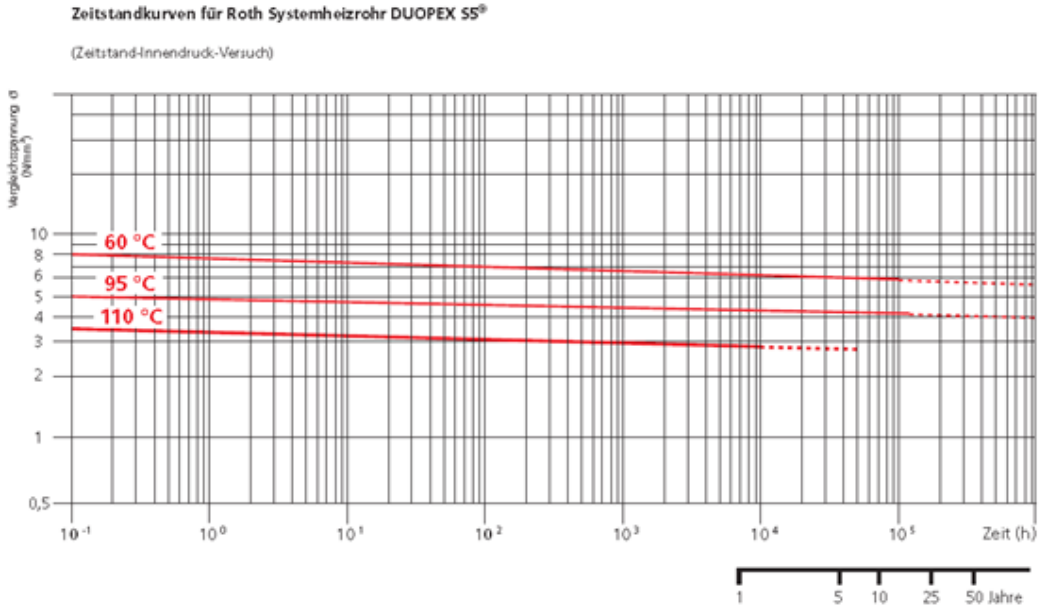
Beschreibung

Die Roth Systemrohre DUOPEX S5® sind 5-schichtige Sicherheitsrohre aus PE-X nach DIN 15875 und mit einer Sauerstoffsperrschicht nach DIN 4726. Die Sauerstoffsperrschicht ist zusätzlich durch eine PE-X-Schicht vor erhöhten mechanischen Anforderungen (Baustellenbetrieb und Transport) geschützt.
Die einzelnen Rohrschichten sind durch die Roth S5 Co Ex-Technology untrennbar miteinander verbunden. Die, durch alle Materialschichten gehende, Vernetzung gewährleistet einen gleichmäßigen Vernetzungsgrad. Die Systemrohre sind beständig gegen Spannungsrissbildung und wärmealterungsstabilisiert.

Rohrverbindungen

Für die Rohrverbindungen und Rohranschlüsse werden ausschließlich, die im Roth Programm dafür vorgesehene Komponenten eingesetzt.
Kupplungen dürfen nicht in Rohrbögen verlegt werden und sind vor Estrichanmachwasser durch Ummantelungen zu schützen.

Technische Daten



Rohr ø und Wandstärke [mm]	14,4 x 2,2	17,4 x 2,2	20,4 x 2,2	25,1 x 2,5	32,0 x 3,1
Lieferlängen [m]	600	200 600 3000	200 600 2000	200 500 1500	50
Max. Temperatur [°C]	95 (kurzzeitig 110)				
Max. Druck [bar]	6				
Wärmeleitfähigkeit [W/mK]	0,35				
Linearer Ausdehnungskoeffizient [1/K]	1,15 x10^4				
Biegeradius (min) [mm]	5 x øa				
Sauerstoffpermeabilität	< 0,1g /(m³ x Tag) (bei 40°C)				
Zulassungsnummer	DIN CERTCO 3V203				

Lieferung und Lagerung

Die Roth Systemrohre DUOPEX S5 werden lichtgeschützt geliefert und müssen auch so gelagert werden.

ROTH WERKE GMBH · Am Seerain 2 · 35232 Dautphetal · Telefon 06466/922-0 · service@roth-werke.de · www.roth-werke.de

07.22 · Technische Änderungen vorbehalten.

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Dautphetal, 22.04.2026

Roth Produkt - **Roth Systemplatte Flipfix®**
Roth Systemrohr X-PERT S5®+
Roth Systemrohr DUOPEX S5®
Roth Randdämmstreifen

Sehr geehrte Frau Schweizer,

für die Roth-Produkte aus unserem Produktprogramm Fußbodenheizungssysteme, welche Sie für die Prüfung nach der Schadstoffbewertung SHI angefragt haben:

- Roth Systemplatte Flipfix®
- Roth Systemrohr X-PERT S5®+
- Roth Systemrohr DUOPEX S5®
- Roth Randdämmstreifen

haben uns unsere Lieferanten von Rohstoffen und Komponenten bestätigt, dass nach heutigem Kenntnisstand rezeptiv

- keine Stoffe aus der derzeit aktuellen SVHC-Liste mit mehr als 0,1 Masseprozent enthalten sind,
- die Produkte frei von CMR-Stoffen Kategorie 1A/1B sind bzw. einen Gehalt von kleiner 0,01 % besitzen
- frei von halogenierten Treibmitteln sind
- keine HBCD Flammschutzmittel enthalten

Unsere Lieferanten haben uns die eingeforderten REACH-Erklärungen abgegeben. Eine rechtsverbindliche Garantie und Überprüfung der Lieferanten können nicht erfolgen. Sie wurden analytisch nicht überprüft.

Der Lieferant der Roth Systemplatte Flipfix® hat uns mitgeteilt, dass im Produkt ein Flammschutzmittel verwendet wird, welches auf Antimontrioxid (Sb_2O_3; CAS 1309-64-4) basiert. Der Anteil des Flammschutzmittels in der HKPP-Rezeptur beträgt 4,5 %.

Freundliche Grüße

ROTH WERKE GMBH
F&E/Labor
i. A. Doris Neubert

Dieses Dokument wurde elektronisch erstellt und ist ohne Unterschrift gültig.

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