

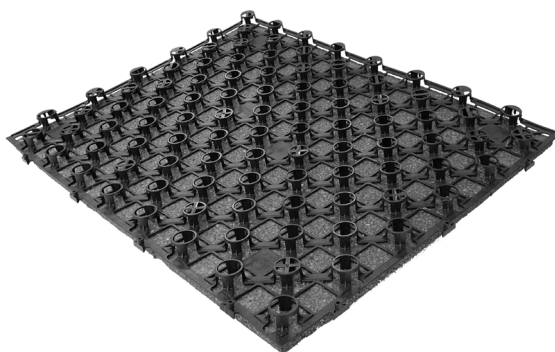
R979SA



Radiant
Systems

Spider Acoustic panel for radiant floors with enhanced soundproofing capacity

Datasheet
1045EN 03/2021



The R979SA panel is a loaded polypropylene molded grid combined to acoustic insulation. Radiant floor systems with *Spider Acoustic* panels represent the ideal solution for applications requiring enhanced soundproofing to trampling.

The patented geometry uses a three-dimensional grid to hold the pipe firmly in place during laying operations and embed it completely into the screed to guarantee an even temperature distribution with a low degree of thermal inertia to the system.

The innovative perforated protrusion makes this panel fit for sand and cement based screeds.

Thanks to its good resistance to trampling, installers can lay the pipe with no risk of crushing.

Each protrusion has four pipe-locking elements to conveniently install the pipe without using clips at direction-changing points.

The side interlocks guarantee firm anchoring between the panels.

➤ Versions and product codes

SERIES	PRODUCT CODE	VERSION	HEIGHT [MM]	FIELD OF APPLICATION
R979SA SPIDER ACOUSTIC	R979SAY023	With soundproofing insulation	22 + 30 insulation	Enhanced soundproofing capacity
	R979SAY025		22 + 50 insulation	

Completion codes

- K369PH: wall edge strip and coating accessories for structural elements
- R983Y001: pipe fixing clip

Technical data

Storage conditions

- Do not expose the panels to direct sunlight
- Store the panels in a dry and sheltered area at temperatures between 5 °C and 50 °C
- Keep the panels away from chemical agents
- Keep the panels away from open flames and heat sources

▲ WARNING. Store the panels in a sheltered area and do not expose to direct sunlight up to screed casting, even after installation.

R979SAY023

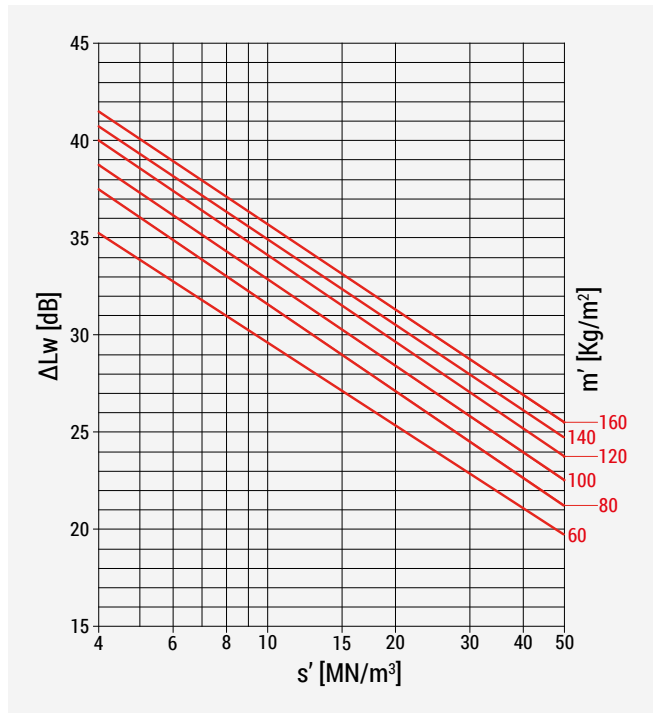
THREE-DIMENSIONAL GRID	
Dimensions	1200 x 800 mm
Surface	0,96 m ²
Total thickness	30 mm + protrusion: 22 mm
Pipe diameter	16÷17 mm
Allowed pitches	Multiples of 50 mm
Fluidity index	8 g/10'
Density at 23 °C	1,1 g/cm ³
Izod impact resistance at 23 °C	6 kJ/m ²
Vicat softening temperature	> 50 °C
INSULATION SHEET	
Material	Sintered expanded polystyrene EPS T with graphite
Thermal conductivity, λ_D	0,030 W/(m K)
Thermal resistance, R_λ According to EN1264-3 ($R_{INS} = s_{INS}/\lambda_{INS}$)	1,00 m ² K/W
Dynamic stiffness	SD 11 MN/m ³
Flexibility level	1200 MPa
Reaction to fire	Class E
Classification according to EN13163	EPS-13163-T(2)-W(3)-L(3)-S(5)-P(5)-DS(N)2-DLT(1)5-BS170-CS(10)80-WL(T)3

R979SAY025

THREE-DIMENSIONAL GRID	
Dimensions	1200 x 800 mm
Surface	0,96 m ²
Total thickness	50 mm + protrusion: 22 mm
Pipe diameter	16÷17 mm
Allowed pitches	Multiples of 50 mm
Fluidity index	8 g/10'
Density at 23 °C	1,1 g/cm ³
Izod impact resistance at 23 °C	6 kJ/m ²
Vicat softening temperature	> 50 °C
INSULATION SHEET	
Material	Sintered expanded polystyrene EPS T with graphite
Thermal conductivity, λ_D	0,030 W/(m K)
Thermal resistance, R_λ According to EN1264-3 ($R_{INS} = s_{INS}/\lambda_{INS}$)	1,67 m ² K/W
Dynamic stiffness	SD 11 MN/m ³
Flexibility level	1200 MPa
Reaction to fire	Class E
Classification according to EN13163	EPS-13163-T(2)-W(3)-L(3)-S(5)-P(5)-DS(N)2-DLT(1)5-BS170-CS(10)80-WL(T)3

Soundproofing

In compliance with EN 13163, *Spider Acoustic* panels are included in class SD11, which corresponds to a $s' \leq 11 \text{ MN/m}^3$ dynamic stiffness, according to EN 13172.



The diagram on the left extracted from standard UNI EN 12354-2 shows that with an equal mass for each screed surface unit (m'), a limited value of dynamic stiffness (s') leads to enhanced soundproofing to trampling (ΔL_w).

⚠ WARNING. The enhanced soundproofing capacity of the radiant panel is guaranteed only with cement screeds featuring the recommended minimum thickness (60 mm above the insulation layer).

Installation and laying

⚠ WARNING. Do not lay the product when worksite temperature is below -5°C .

- 1) Remove any dirt or liquid from the foundation.
- 2) Lay the edge strip and coating for K36gPH structural elements.
- 3) Lay the R97gSA panels on the foundation or the existing floor and fit the side hooks on top to connect the panels to each other.

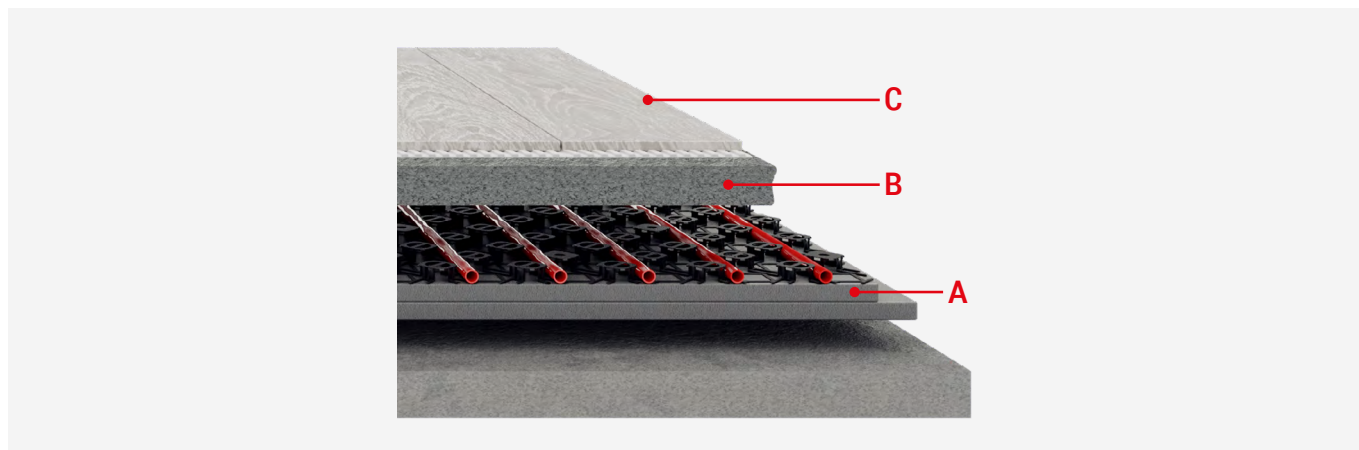


- 4) Lay the pipes.
- 5) Carry out a pressure test.
- 6) Cast the screed with the system pressurized.

⚠ WARNING. The enhanced soundproofing capacity of the radiant panel is guaranteed only with cement screeds featuring the recommended minimum thickness (60 mm above the insulation layer).

- 7) Complete the installation by laying the surface finish.

Components and dimensions



PRODUCT CODE	PANEL TOTAL HEIGHT [mm]	INSULATION/PROTRUSION HEIGHT "A" [mm]	SCREED MIN. HEIGHT "B" [mm]	MIN. HEIGHT "A+B" COATING "C" EXCLUDED [mm]
R979SAY023	52	30/22	60	90
R979SAY025	72	50/22	60	110

Reference standards

- UNI EN 1264 Floor heating systems
- Law decree 192/2005 and 311/2006 Energy saving
- ISO 1183, ISO 178, ISO180, ISO 306 Plastic materials
- UNI EN 12354-2: Construction soundproofing - Evaluation of building soundproofing performance starting from performance of employed products - Trampling soundproofing between rooms.
- EN 29052-1: Experimental measurement of dynamic stiffness.

Product specifications

R979SAY023

Three-dimensional loaded polypropylene molded grid for pipe installation in radiant floor heating systems combined to 30-mm thick EPS T insulation panel with graphite; fit for applications requiring enhanced levels of soundproofing to trampling. The patented geometry holds the pipe firmly in place during laying operations and embed it completely into the screed to guarantee an even temperature distribution with a low degree of thermal inertia. The perforated protrusion enables to use the panel with sand and cement based screeds. Good resistance to trampling. Dimensions 1200x800. For Ø 16+17 mm pipes. Panel pitch: multiples of 50 mm. Thermal conductivity: 0.030 W/(m K). Thermal resistance ($R = s/\lambda$) 1,00 m²K/W.

R979SAY025

Three-dimensional loaded polypropylene molded grid for pipe installation in radiant floor heating systems combined to 50-mm thick EPS T insulation panel with graphite; fit for applications requiring enhanced levels of soundproofing to trampling. The patented geometry holds the pipe firmly in place during laying operations and embed it completely into the screed to guarantee an even temperature distribution with a low degree of thermal inertia. The perforated protrusion enables to use the panel with sand and cement based screeds. Good resistance to trampling. Dimensions 1200x800. For Ø 16+17 mm pipes. Panel pitch: multiples of 50 mm. Thermal conductivity: 0.030 W/(m K). Thermal resistance ($R = s/\lambda$) 1,67 m²K/W.

⚠ Safety Warning. Installation, commissioning and periodical maintenance of the product must be carried out by qualified operators in compliance with national regulations and/or local standards. A qualified installer must take all required measures, including use of Individual Protection Devices, for his and others' safety. An improper installation may damage people, animals or objects towards which Giacomini S.p.A. may not be held liable.

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♻ Product Disposal. Do not dispose of product as municipal waste at the end of its life cycle. Dispose of product at a special recycling platform managed by local authorities or at retailers providing this type of service.