

Stravifloor Mat-F4.5_e Datasheet

Resilient **acoustic underlayment** made of agglomerated recycled SBR (Styrene Butadiene Rubber) with PU (polyurethane) elastomer bonding agent for impact noise insulation for different types of flooring: glued and non-glued flooring.



SYSTEM COMPONENTS & DIMENSIONS

- Mat dimension: 1 000 x 7 000 x 4.5 mm (3' 3-3/8" x 22' 11-5/8" x 3/16")



PHYSICAL & MECHANICAL PROPERTIES

Physical & Mechanical Properties

| | | | |
|--|---|---|--|
| Max. total load 0.1 MPa (14.5 psi) | Max. occasional load 0.25 MPa (36.3 psi) | Density⁽¹⁾ 880 kg/m ³ (54.9 lb/ft ³) | Surface weight⁽¹⁾ 3.96 kg/m ² (0.81 lb/ft ²) (±5%) |
| Max. dynamic stiffness⁽²⁾ 152 MN/m ³ (9,39 lb/in ³) | Squareness⁽³⁾ ≤ 5 mm/m (≤ 0.006 in/ft) | Compressibility⁽⁴⁾ ≤ 0.3 mm (≤ 0.012 in) | Compressive stress at 10%, σ_{10%}⁽⁵⁾ ≥ 38.7 kPa (≥ 5.61 psi) |
| Max. change of the relative deformation, Δε₁^{(6) (7)} < 5% | | Resistance to breaking⁽⁸⁾ Pass ⁽⁹⁾ | |
| Compressive creep @20 kPa (2.9 psi), X_{ct}⁽¹⁰⁾ - [10 years] 0.13 mm (0.005 in) | | Total thickness reduction @20 kPa (2.9 psi), X_t⁽¹⁰⁾ - [10 years] 0.42 mm (0.017 in) | |

⁽¹⁾ISO 845 - ⁽²⁾ISO 9052-1 & ISO 7626-5 - ⁽³⁾EN 824 - ⁽⁴⁾EN 12431 - ⁽⁵⁾EN 826 - ⁽⁶⁾EN 1605 - ⁽⁷⁾Δε corresponds to the difference between the relative deformation ε₁ after step A (23 ± 5) °C (73.4 ± 9 °F) / (48 ± 1) h) and ε₂ after step B [(70 ± 1) °C (158 ± 1.8 °F) / (168 ± 1) h] - ⁽⁸⁾EN 14499 - ⁽⁹⁾Cracks longer than 50 mm (1.97 in) weren't observed - ⁽¹⁰⁾EN 1606:2013

Thermal Properties

| | | | |
|---|--|---|---|
| Temperature range -30°C / 80°C (-22°F / 176°F) | Reaction to fire⁽¹⁾ Class E | Thermal conductivity⁽²⁾ 0.1381 W/m°C (0.080 W/ft°F) | Thermal resistance⁽²⁾ 0.033 m ² °C/W (1.88 ft ² °F/W) |
|---|--|---|---|

Notes:

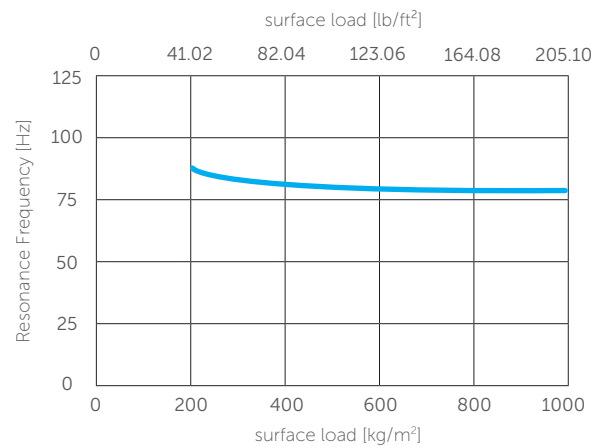
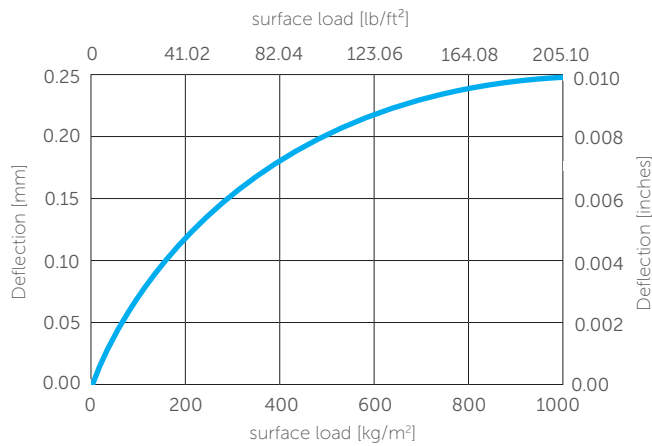
The emission of volatile organic compounds (VOC) and semi-volatile organic compounds (SVOC) was assessed according to EN 16516.

The specific organic compounds polyaromatic hydrocarbons (PAH) and Benzo(a)pyrene (B[a]P) were determined according to AfPS GS 2014:01.

The content of nitrosamines was determined according DIK-Method: AA-3.3.14 "Analytical method for the determination of N-nitrosamines, version 1, 2022-01".

⁽¹⁾ ISO 11925-2 & EN 13501-1 - ⁽²⁾EN 12664

Test report available upon request.



ACOUSTICAL RESULTS

Test Setup 1

- 140 mm (5-1/2") reinforced concrete slab
- Stravifloor Mat-F4.5_e [4.5 mm (3/16")]
- Laminate [12 mm (1/2")]

Test Setup 2

- 140 mm (5-1/2") reinforced concrete slab
- Stravifloor Mat-F4.5_e [4.5 mm (3/16")]
- LVT [8.5 mm (5/16")]

Test Setup 3

- 140 mm (5-1/2") reinforced concrete slab
- Stravifloor Mat-F4.5_e [4.5 mm (3/16")]
- Ceramic tiles [9 mm (3/8")]

Setup $L_{n,w}$ (C_f) ΔL_w (C_f) IIC*

Assembly 1 61 (-1) 17 (-10) 48

Assembly 2 59 (1) 19 (-12) 48

Assembly 3 59 19 (-11) 51

Bare Slab 78 (-11) NA 28

Laboratory report available upon request

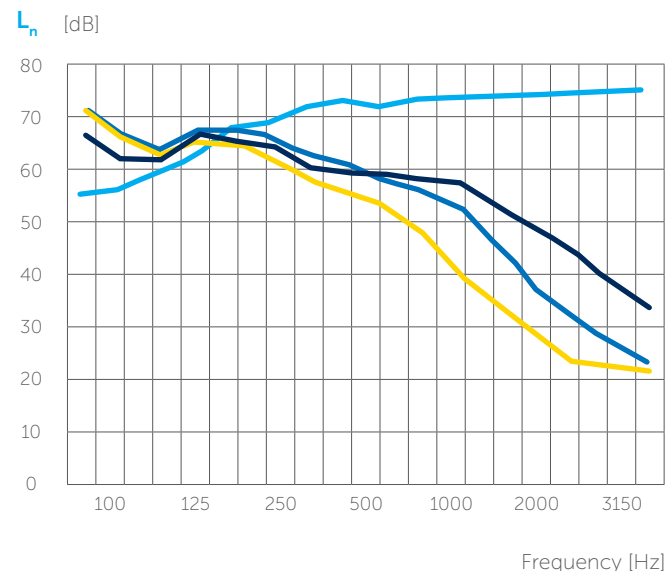
Setup 1: Test Report ACL 337/22

Setup 2: Test Report ACL 336/22

Setup 3: Test Report ACL 338/22

*IIC single figure rating determined in accordance with ASTM E989:1999 by CDM Stravitec, based on ISO measurements.

| Frequency [Hz] | L_n [dB] | | | |
|----------------|------------|------------|------------|------------|
| | Bare Slab | Assembly 1 | Assembly 2 | Assembly 3 |
| 100 | 68 | 71.3 | 71.3 | 66.3 |
| 125 | 68 | 66.4 | 66.1 | 61.9 |
| 160 | 68 | 63.5 | 63.1 | 61.9 |
| 200 | 69 | 67.1 | 65.1 | 67.1 |
| 250 | 69 | 67.6 | 65.1 | 65.3 |
| 315 | 70 | 65.9 | 62.0 | 64.3 |
| 400 | 70 | 62.9 | 58.0 | 60.4 |
| 500 | 71 | 60.9 | 55.4 | 59.4 |
| 630 | 71 | 57.9 | 53.1 | 59.3 |
| 800 | 72 | 56.1 | 48.1 | 58.2 |
| 1000 | 72 | 52.7 | 39.6 | 57.3 |
| 1250 | 72 | 45.7 | 34.6 | 53.1 |
| 1600 | 72 | 37.6 | 29.4 | 48.9 |
| 2000 | 72 | 32.2 | 24.0 | 44.6 |
| 2500 | 72 | 27.5 | 23.1 | 38.9 |
| 3150 | 72 | 24.1 | 21.9 | 34.2 |



● Bare Slab ● Assembly 1 ● Assembly 2 ● Assembly 3

Test Setup 4

- 16 mm (5/8") engineered hardwood
- 4.5 mm (3/16") Stravifloor Mat-F4.5_e underlayment
- 150 mm (6") precast concrete slab
- Stravilink Zbar frameless ceiling isolators
- 100 mm (4") Z-channels, spaced at 610 mm (24") on centers
- 89 mm (3-1/2") glass fibre insulation batts in the cavity
- 2 layers of 16 mm (5/8") Type X gypsum board

Setup

IIC

STC

Assembly

66

67

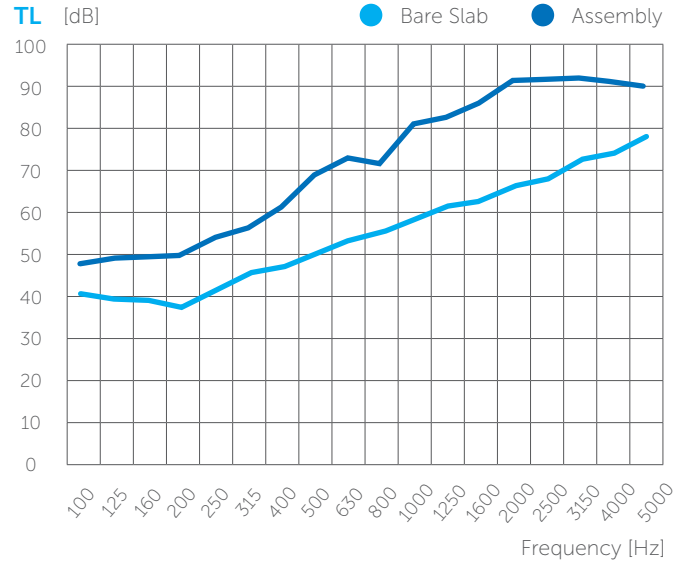
Bare Slab

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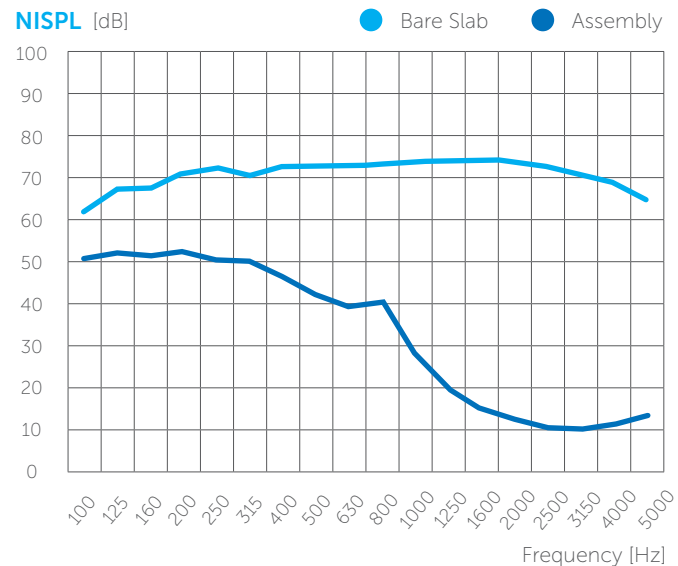
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Laboratory report available upon request
NRC Test Report A1-021983.2

| Frequency [Hz] | Airborne TL [dB] | |
|----------------|------------------|----------|
| | Bare Slab | Assembly |
| 50 | 39 | 39 |
| 63 | 39 | 43 |
| 80 | 41 | 46 |
| 100 | 40 | 48 |
| 125 | 39 | 49 |
| 160 | 39 | 50 |
| 200 | 37 | 50 |
| 250 | 41 | 54 |
| 315 | 45 | 56 |
| 400 | 47 | 61 |
| 500 | 50 | 69 |
| 630 | 53 | 73 |
| 800 | 55 | 72 |
| 1000 | 58 | 81 |
| 1250 | 61 | 83 |
| 1600 | 63 | 86 |
| 2000 | 66 | 91 |
| 2500 | 68 | 92 |
| 3150 | 72 | 93 |
| 4000 | 74 | 91 |
| 5000 | 78 | 90 |



| Frequency [Hz] | NISPL [dB] | |
|----------------|------------|----------|
| | Bare Slab | Assembly |
| 50 | 55 | 55 |
| 63 | 56 | 51 |
| 80 | 59 | 53 |
| 100 | 62 | 51 |
| 125 | 67 | 52 |
| 160 | 68 | 52 |
| 200 | 71 | 52 |
| 250 | 72 | 50 |
| 315 | 71 | 50 |
| 400 | 73 | 46 |
| 500 | 73 | 42 |
| 630 | 73 | 39 |
| 800 | 73 | 40 |
| 1000 | 74 | 28 |
| 1250 | 74 | 19 |
| 1600 | 74 | 14 |
| 2000 | 74 | 12 |
| 2500 | 73 | 10 |
| 3150 | 71 | 10 |
| 4000 | 69 | 11 |
| 5000 | 65 | 13 |





Other Stravifloor Mat assemblies available on our test data platform Stravi-dB.



SCAN
ME

DISCLAIMER

The documentation prepared by CDM Stravitec (including but not limited to installation guidelines) contain generally accepted procedures for a successful installation of Stravifloor Mat for structure-borne noise protection (including rolling noise). Any part of the suggestions presented herein, or other documentation, may be followed, modified, or rejected by the owner, engineer, contractor, and/or their representative(s) since they, and not CDM Stravitec, are responsible for planning and execution procedures appropriate to a specific application. CDM Stravitec reserves the right to alter in part or in whole the documentation prepared as well any recommendations included. It is the responsibility of the Client (direct or indirect) to ensure they have always the latest documentation and to that effect CDM Stravitec encourage contact with its local representatives to review any project specific modifications to the suggested guidelines prior to the start of the installation on site. This documentation prepared by CDM Stravitec contains loading information for the Stravifloor Mat-F4.5_e for acoustically structure-borne noise protection (including rolling noise). It should be noted that any loading information contained herein represent the loading information for the Stravifloor Mat-F4.5_e only as supplied to the Client. This information does not in any way represent an indication and/ or validation of the load capacity of any other elements not supplied by CDM Stravitec. This information is accurate to the best of our knowledge at the time of issue. Information, data and recommendations provided are based on industry accepted testing and prior product usage. It is intended as descriptive of the general capabilities and performance of our products and does not endorse applicability for any particular project. We reserve the right to change products, performance, and data without notice. This document replaces all information supplied prior to the publication hereof.

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