

## Stravibase Mat Datasheet



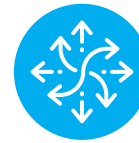
Easy  
Installation



Medium  
Performance



High Lateral  
Stiffness



Compatible with steel,  
wood & concrete  
constructions

Stravibase Mat is a full-surface elastomeric mat designed to protect buildings exposed to ground-borne vibrations and designed to meet natural frequencies as low as 10Hz. The Stravibase Mat range covers closed cell polyurethane (PU) mats, recycled rubbers (RR) and recycled foam (RF) materials. Stravibase Mat can be plain or wavy and can be applied both horizontally and vertically to decouple a building from its surrounding area .



### DESIGN REQUIREMENTS

For each project, the CDM Stravitec engineering service will help you find the optimum Stravibase Mat solution to achieve the acoustic performance required and the load bearing resistance needed to withstand the static and dynamic loads in your structure. For this reason, our team will require:

- Natural frequency requirements;
- The vertical and lateral load combinations (including dead loads and variable loads such as service live loads, wind loads, etc.);
- Occasional loads for stability checks;
- Substructure and superstructure drawings (sections, plan views, etc.).

Note:

In this particular case, the stability of the substructure (the bottom slab together with the sub-grade) is checked by the structural engineer of the project. The sub-grade should be clean, dry, flat, and stable under the building load pressure.



The PU Mat family refers to the polyurethane mat range of CDM Stravitec

PU Mats	P <sub>1</sub>	P <sub>2</sub>	P <sub>3</sub>	P <sub>4</sub>	P <sub>5</sub>	P <sub>6</sub>	P <sub>7</sub>
Color	Yellow	Green	Light Blue	Red	Orange	Dark Blue	Grey
Thickness [mm] <sup>(1)</sup>	12.5 - 50	12.5 - 50	12.5 - 50	12.5 - 75	12.5 - 75	12.5 - 75	12.5 - 75
Frequency [Hz]	6-25	6-25	6-25	6-25	6-25	6-25	6-25
Design Load [MPa]	0.075	0.15	0.35	0.75	1.5	3	6
Static modulus of elasticity (DIN 53513) [N/mm <sup>2</sup> ]	0.6	1.2	2.5	5.2	9.2	17	55
Dynamic modulus of Elasticity (DIN53513) [N/mm <sup>2</sup> ]	0.9	1.6	3.2	8.9	16.7	43	135
Shore hardness (ISO 48-4)	22° A	32° A	44° A	53° A	62° A	70° A	86° A
Creep rate [% initial height/dec]	≤1.0						
Temperature range	-30°C / +70°C						

<sup>(1)</sup>A 50 mm mat of P<sub>1</sub> for example, will be referred to as: P50<sub>1</sub>.

The RR Mat family refers to the recycled rubber mat range of CDM Stravitec

RR Mats	F <sub>a</sub>	F <sub>b</sub>	F <sub>c</sub>	F <sub>v</sub>	W <sub>a</sub> <sup>(1)</sup>
Color	Black (grey inserts)	Black (red inserts)	Black	Black/White	Black
Thickness [mm] <sup>(2)</sup>	35 - 40	35 - 40	20 - 60	40 - 50	W15 <sub>a</sub> : 15/7 W17 <sub>a</sub> : 17/8 W20 <sub>a</sub> : 20/10
Frequency [Hz]	10-25	10-25	10-25	10-25	12-25
Design Load [MPa]	0.60	1.2	2.4	0.12	0.6
Static modulus of elasticity <sup>(3)</sup> (DIN 53513) [N/mm <sup>2</sup> ]	1.8-3.3	4-8	6-15	0.85	0.2-4.0
Dynamic modulus of Elasticity <sup>(3)</sup> (DIN53513) [N/mm <sup>2</sup> ]	4.5-9	9-20	19-35	1.76	0.6-7.0
Shore hardness (ISO 48-4)	40° A	45° A	55° A	30° A	
Creep rate [% initial height/dec]	<2	<2	<2	1	<1.5
Temperature range	-30°C / +70°C				-20°C/+70°C

<sup>(1)</sup>The wavy form allows a lower contact area and reduces the dynamic stiffness of the material to maximise its performance.

<sup>(2)</sup>For flat products, a 30 mm mat of F<sub>a</sub> for example will be referred to as: F30<sub>a</sub>. While for wavy products, a 20 mm of W<sub>a</sub> for example will be referred to as W20<sub>a</sub>.

<sup>(3)</sup>With respect to a load range 30% around maximum static load.

The RF Mat family refers to the upcycled polyurethane foam and cellular rubber range of CDM Stravitec

RF Mats	$F_x$	$W_x^{(1)}$
Color	Black/Beige	Black/White
Thickness [mm] <sup>(2)</sup>	10 - 60	W25 <sub>x</sub> : 25/7
Frequency [Hz]	10-25	12-25
Design Load [MPa]	0.15	0.10
Static modulus of elasticity <sup>(3)</sup> [N/mm <sup>2</sup> ]	0.7-1.2	0.7-1.4
Dynamic modulus of Elasticity <sup>(3)</sup> [N/mm <sup>2</sup> ]	1.7-3.0	1.7-3.5
Creep rate [% initial height/dec]	<2	
Temperature range	-30°C / +80°C	

<sup>(1)</sup>The wavy form allows a lower contact area and reduces the dynamic stiffness of the material to maximise its performance.

<sup>(2)</sup>For the flat product, a 30 mm mat of  $F_x$  will be referred to as: F30<sub>x</sub>. While for the wavy product, a 15 mm of  $W_x$  will be referred to as W15<sub>x</sub>.

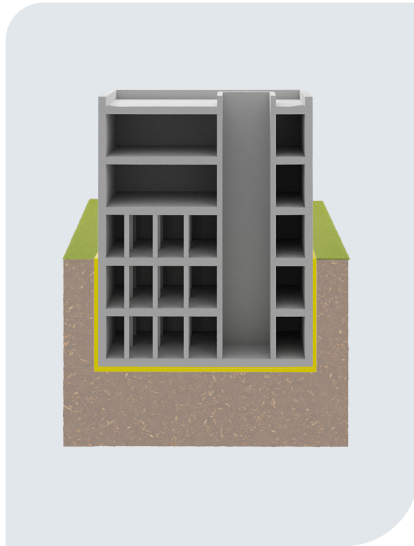
<sup>(3)</sup>With respect to a load range 30% around maximum static load.



## TYPICAL APPLICATIONS

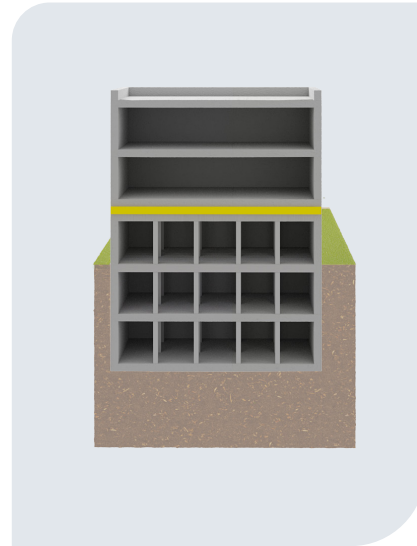
Stravibase Mat ( — ) can be applied at different levels:

Figure 1.1 - Decoupling the entire building from the soil



Stravibase Mat can be applied when the full underground building structure needs to be decoupled from the surrounding soil pressures (both at foundation level and around its perimeter).

Figure 1.2 - Decoupling at floor level



Stravibase Mat could be integrated at any level in a building for vertical isolation between two relatively rigid surfaces.



For acoustic isolation of walls and beams, Stravibase Mat can be provided as a continuous support in the form of strips.

## DISCLAIMER

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.