Regupol® | Regufoam®

Technical Data Handbook

ARMADILLO
NOISE & VIBRATION

Armadillo Noise & Vibration
1 Titleist Drive
Acushnet
MA 02743

Tel: 800 580 3984
Email: sales@armadillonvinc.com
Website: www.armadillonvinc.com

High performance acoustic isolation for:
ADAC Headquarter
Munich, Germany

REGUPOL
AMERICA

1.1 Table of Contents

1.2 Company Information

1.3 Reference Projects of Vibration Isolation and Heavy-Duty Floating Floors

1.4 Overview Technical Details Regufoam® vibration and Regupol® vibration

2 Technical Details **Regupol**® vibration

2.1 **Regupol**® vibration 200
Max. static load 2.9 psi

2.2 **Regupol**® vibration 300
Max. static load 7.3 psi

2.3 **Regupol**® vibration 400
Max. static load 14.5 psi

2.4 **Regupol**® vibration 450
Max. static load 17.4 psi

2.5 **Regupol**® vibration 480
Max. static load 21.8 psi

2.6 **Regupol**® vibration 550
Max. static load 43.5 psi

2.7 **Regupol**® vibration 800
Max. static load 116.0 psi

2.8 **Regupol**® vibration 1000
Max. static load 218.0 psi

3 Technical Details **Regufoam**® vibration

3.1 **Regufoam**® vibration 150 plus
Max. static load 1.6 psi

3.2 **Regufoam**® vibration 190 plus
Max. static load 2.6 psi

3.3 **Regufoam**® vibration 220 plus
Max. static load 4.1 psi

3.4 **Regufoam**® vibration 270 plus
Max. static load 6.1 psi

3.5 **Regufoam**® vibration 300 plus
Max. static load 8.0 psi

3.6 **Regufoam**® vibration 400 plus
Max. static load 16.0 psi

3.7 **Regufoam**® vibration 510 plus
Max. static load 32.0 psi

3.8 **Regufoam**® vibration 570 plus
Max. static load 44.0 psi

3.9 **Regufoam**® vibration 680 plus
Max. static load 66.0 psi

3.10 **Regufoam**® vibration 740 plus
Max. static load 88.0 psi

3.11 **Regufoam**® vibration 810 plus
Max. static load 124.0 psi

3.12 **Regufoam**® vibration 990 plus
Max. static load 363.0 psi

Vibration Isolation

AGBU administration building, Yerevan, Armenia: full-surface decoupling of the building foundation with **Regupol®**

Flight simulator Airbus A400M, Wunstorf, Germany: full-surface decoupling of machine foundation with **Regupol®**

Southhampton Row, London, UK: full-surface isolation of the building foundation with **Regufoam®**

Nextower, Palaisquartier, Frankfurt, Germany: vibration isolation of heating, ventilating, and air conditioning with **Regupol®**

Kurfürstenplatz, Munich, Germany: vertical isolation of the building foundation with **Regupol®**

Suburban train station, Helsinki, Finland: **Regupol®** ballast mats

High Performance Floating Floors

RTL-Studios, Cologne, Germany: room-in-room construction with a **Regupol**® floating floor

ADAC Building, Munich, Germany: a **Regupol**® floating floor for printing machines

Wisseloord-Studios, Hilversum, Netherlands: room-in-room construction with **Regufoam**®

Cinemagnum Cinema, Nuremberg, Germany: **Regupol**® floating floor in an underground parking garage

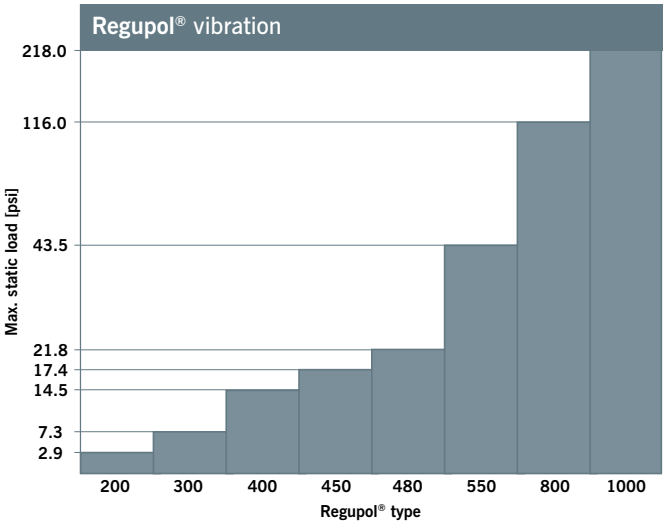
Audi plant, Györ, Hungary: heavy-duty floating floor with **Regupol**® for forklift traffic and excellent isolation

Elbe Philharmonic Hall, Hamburg, Germany: **Regupol**® floating floors in concert halls and studios

Technical Details Overview

Regupol® vibration is a high performance elastomer made of rubber fibers, granules and polyurethane. It is available in 8 unique types, each engineered for a specific load range, and is available in rolls or sheets.

Regupol® vibration offers low natural frequencies ($f_0 \geq 7.5$ Hz), which are constant over wide load ranges. This provides additional reliability when actial loads differ from the (theoretical) design load. Regupol® vibration 200, 300, 400 are supplied with a dimpled underside to decrease the dynamic rigidity and to provide an air gap.



Regupol® vibration		200	300	400	450	480	550	800	1000
Permanent static load	psi N/mm²	2.9 0.02	7.3 0.05	14.5 0.10	17.4 0.12	21.8 0.15	43.5 0.30	116.0 0.80	218.0 1.50
Optimum load range	psi	0.6 to 2.0	1.5 to 7.3	7.3 to 14.5	--[6]	6.1 to 21.8	21.8 to 43.5	30.0 to 117.0	117.0 to 218.0
Tensile strength[1]	psi N/mm²	17.4 0.12	43.5 0.30	49.3 0.34	21.8 0.15	52.2 0.36	87.0 0.60	130.5 0.90	333.6 2.3
Mechanical loss factor[2]		0.22	0.18	0.17	0.2	0.17	0.16	0.18	0.16
Static modulus of elasticity[3]	psi	2.9 to 11.6	14.5 to 29.0	43.5 to 79.8	29.0 to 58.0	36.3 to 116.0	72.5 to 247.0	174.0 to 421.0	580.0 to 1,595.0
Dynamic modulus of elasticity[4]	psi	7.3 to 55.1	29.0 to 203	131.0 to 348.0	65.3 to 392.0	174.0 to 479.0	363.0 to 1,015.0	522.0 to 2,640.0	2,146 to 6,527.0
Compression hardness[5]	kPa	14	50	180	83	220	415	545	1650
Fire behavior		B2 (DIN 4102) Class E (EN ISO 11925-225)							

1 Measurement based on DIN EN ISO 1798
2 Measurement based on DIN 53513; load-, amplitude- and frequency-dependent.
3 Measurement based on an EN 826.
4 Measurement based on DIN 53513; depending on frequency, load and thickness.
5 Measurement based on DIN EN ISO 3386-2; compressive stress at 25 % deformation, depending on thickness.
6 **Regupol® vibration 450** is recommended for use as vertical isolation only.

Technical services and offers based on these are subject to our General Terms and Conditions of sale. In so far, please be advised as follows: Our expertise is the development and manufacturing of products. With our recommendation we can only assist you in selecting a product that is suitable for your demand. However, we cannot act as your architect or consulting expert. This would only be possible subject to a separately concluded service contract that we would have to bill you for. Such contracts are not part of our scope of supply and services. Hence, our recommendation does not lay claim for its correctness. The technical information given in the documents are guideline values. They are liable to manufacturing tolerances, which may vary depending on the type of underlying properties.

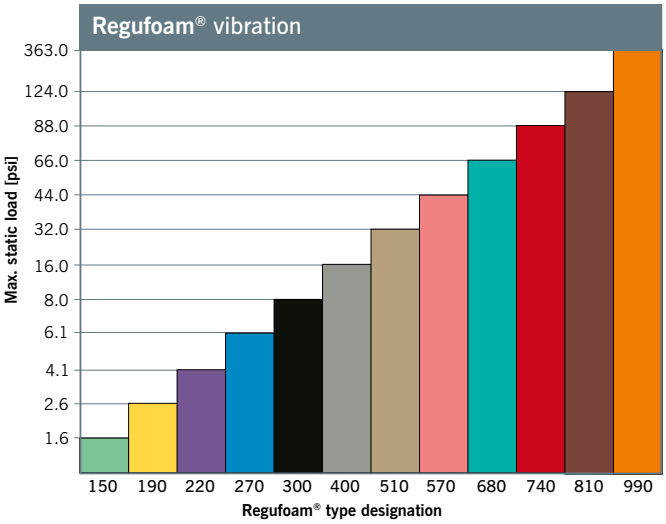
REGUPOL AMERICA
Phone: +1 800-537-8737
Email: vibration@regupol.com
Downloads: www.regupol.com

Technical Details Overview

Regufoam® vibration is a mixed-cell polyurethane foam, developed and engineered for vibration and structure-borne sound isolation. It is available in 12 unique types, each for a specific load range.

Regufoam® vibration offers outstanding internal damping and low frequency isolation at minimal deflection. This material comes in standard thicknesses of 25 mm (1”) and 12.5 mm (½”) and can be installed in multiple layers to achieve total thicknesses of 37.5 mm (1 ½”), 50 mm (2”) or more.

Supplied dimensions:
Rolls, each 59” x 16.4’ (1,500 x 5,000 mm)
Sheets, each 59” x 3.3’ (1,500 x 1,000 mm)



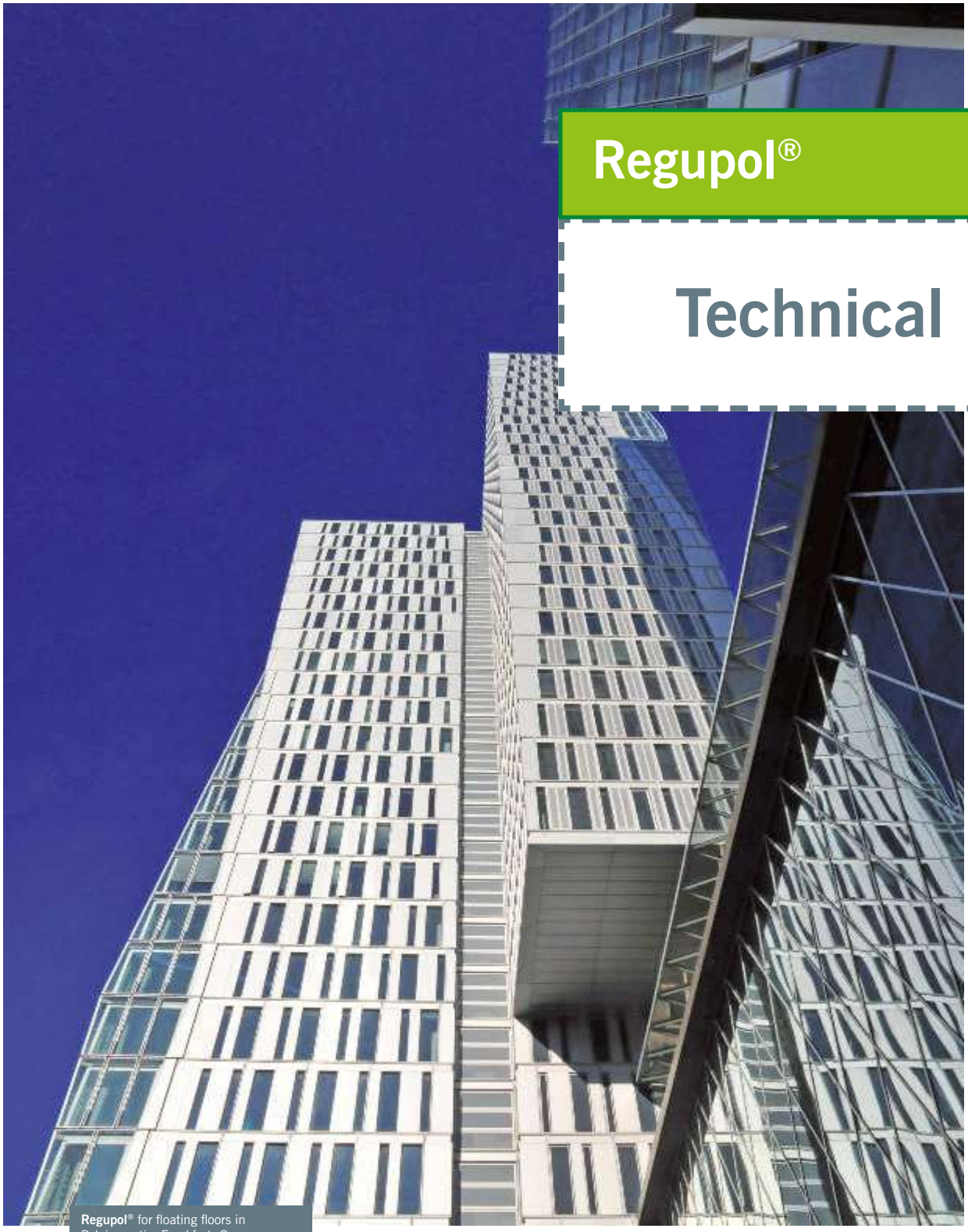
Regufoam® vibration Color		150 plus Green	190 plus Yellow	220 plus Purple	270 plus Blue	300 plus Black	400 plus Grey	510 plus Beige	570 plus Rose	680 plus Turquois	740 plus Red	810 plus Brown	990 plus Orange
Max. static load	psi N/mm²	1.6 0.011	2.6 0.018	4.1 0.028	6.1 0.042	8.0 0.055	16.0 0.11	32.0 0.22	44.0 0.30	66.0 0.45	88.0 0.60	124.0 0.85	363.0 2.50
Optimum load range	psi	0.6 to 1.6	1.6 to 2.6	2.6 to 4.1	4.1 to 6.1	6.1 to 8.0	8.0 to 16.0	16.0 to 32.0	32.0 to 44.0	44.0 to 66.0	66.0 to 88.0	88.0 to 124.0	124.0 to 363.0
Tensile strength[1]	psi N/mm²	45.0 0.31	58.0 0.4	72.5 0.5	130.5 0.9	174.0 1.2	217.6 1.5	348.1 2.4	420.6 2.9	522.1 3.6	580.2 4.0	667.2 4.6	1000.8 6.9
Mechanical loss factor[2]		0.28	0.25	0.22	0.20	0.18	0.17	0.15	0.14	0.12	0.11	0.10	0.09
Static modulus of elasticity[3]	psi	8.7 to 23.2	14.5 to 36.3	21.8 to 50.8	36.3 to 65.3	50.8 to 84.1	87.0 to 145.0	159.5 to 246.6	377.1to 420.6	290.1to 420.6	623.7 to 855.7	783.2 to 1160.0	2901 to 11,313
Dynamic modulus of elasticity[4]	psi	21.8 to 55.1	36.3 to 79.8	50.8 to 104.4	87.0 to 152.3	98.6 to 181	174 to 290	319 to 537	769 to 943	1015 to 1450	1291 to 1886	1595 to 2393	5947 to 23206
Compression hardness[5]	kPa	14	22	22	63	82	170	330	620	840	1050	1241	3640
Fire behavior		B2 (DIN 4102) Class E (EN ISO 11925-2											

1 Measurement based on DIN EN ISO 1798
2 Measurement based on DIN 53513; load-, amplitude- and frequency-dependent.
3 Measurement based on an EN 826.
4 Measurement based on DIN 53513; depending on frequency, load and thickness.
5 Measurement based on DIN EN ISO 3386-2; compressive stress at 25 % deformation, depending on thickness.

Technical services and offers based on these are subject to our General Terms and Conditions of sale. In so far, please be advised as follows: Our expertise is the development and manufacturing of products. With our recommendation we can only assist you in selecting a product that is suitable for your demand. However, we cannot act as your architect or consulting expert. This would only be possible subject to a separately concluded service contract that we would have to bill you for. Such contracts are not part of our scope of supply and services. Hence, our recommendation does not lay claim for its correctness. The technical information given in the documents are guideline values. They are liable to manufacturing tolerances, which may vary depending on the type of underlying properties.

Regufoam overview, version 1, Release 02/2015, Page 1 of 1

REGUPOL AMERICA
Phone: +1 800-537-8737
Email: vibration@regupol.com
Downloads: www.regupol.com



Regupol®

Technical Data

Regupol® for floating floors in Palaisquartier Frankfurt, Germany

REGUPOL AMERICA

Standard forms of delivery, ex Lebanon, PA

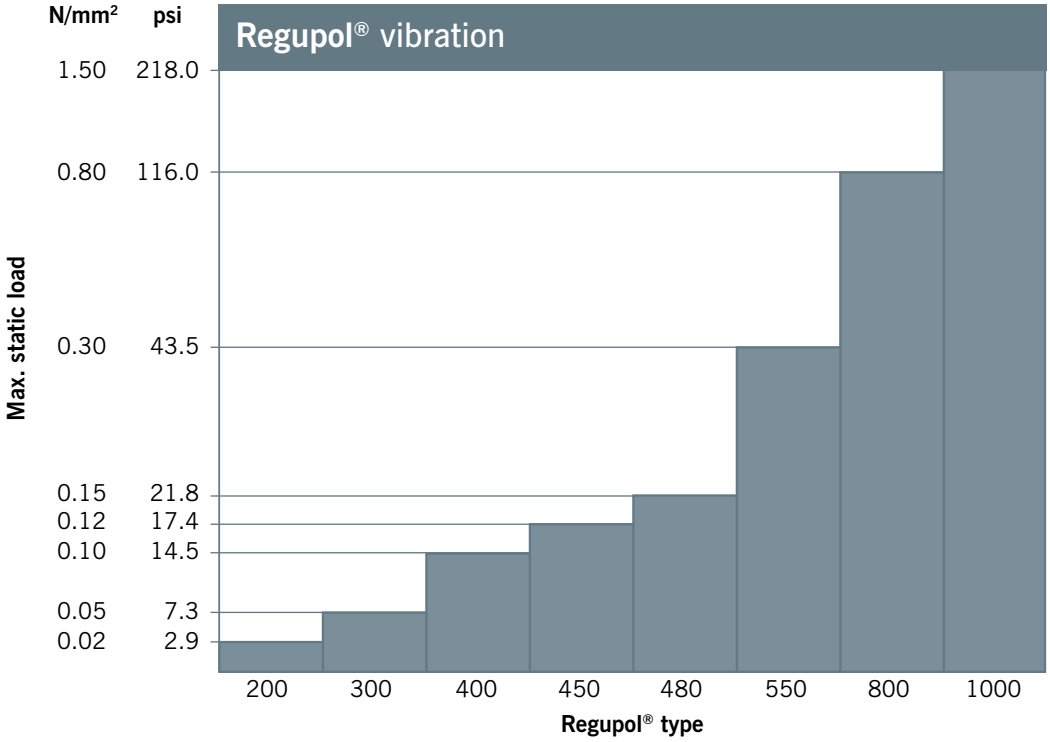
Rolls
Thickness: 17 mm, dimpled on underside
Length: 33' (10,000 mm)
Width: 50" (1,250 mm)

Max. static load
2.9 psi
Peak loads (rare, short-term loads)
7.3 psi

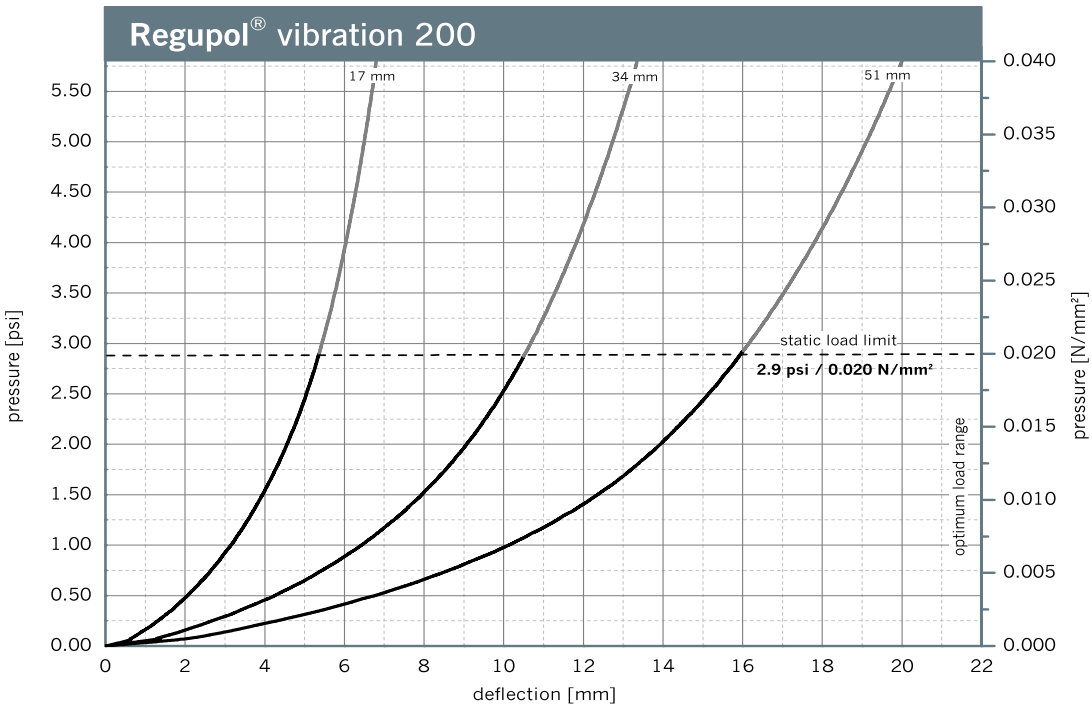
Protect the material sufficiently against moisture and wetness.

Static modulus of elasticity	Based on EN 826	2.9 - 11.6 0.02 - 0.08	psi N/mm²	Tangential modulus, see figure "Modulus of elasticity"
Dynamic modulus of elasticity	Based on DIN 53513	7.3 - 55.1 0.05 - 0.38	psi N/mm²	Depending on frequency, load and thickness, see figure "dynamic stiffness"
Mechanical loss factor	DIN 53513	0.22	[-]	Load-, amplitude- and frequency-dependent
Compression set	Based on DIN EN ISO 1856	3.1	%	Measured 30 minutes after decompression with 50% deformation / 23 °C after 72 hrs
Tensile strength	Based on DIN EN ISO 1798	17.4 0.12	psi N/mm²	
Elongation at break	Based on DIN EN ISO 1798	40	%	
Tear resistance	Based on DIN ISO 34-1	5.71	lbs/in	
Fire behavior	DIN 4102 DIN EN 13501	B2 E	[-] [-]	Normal flammability
Sliding friction	in-house laboratory in-house laboratory	0.7 0.8	[-] [-]	Steel (dry) Concrete (dry)
Compression hardness	Based on DIN EN ISO 3386-2	14	kPa	Compressive stress at 25 % deformation
Rebound elasticity	Based on DIN EN ISO 8307	14	%	Depending on thickness, Test specimen h = 25 mm
Force reduction	DIN EN 14904	73	%	Depending on thickness, Test specimen h = 25 mm

Load Ranges



Load Deflection



Examination of deflection in accordance to DIN EN 826, between two stiff panels. Illustration based on the third loading.
Velocity of loading and unloading 20 seconds. Tested at room temperature. Dimensions of test specimens 300 mm x 300 mm.

Vibration Isolation

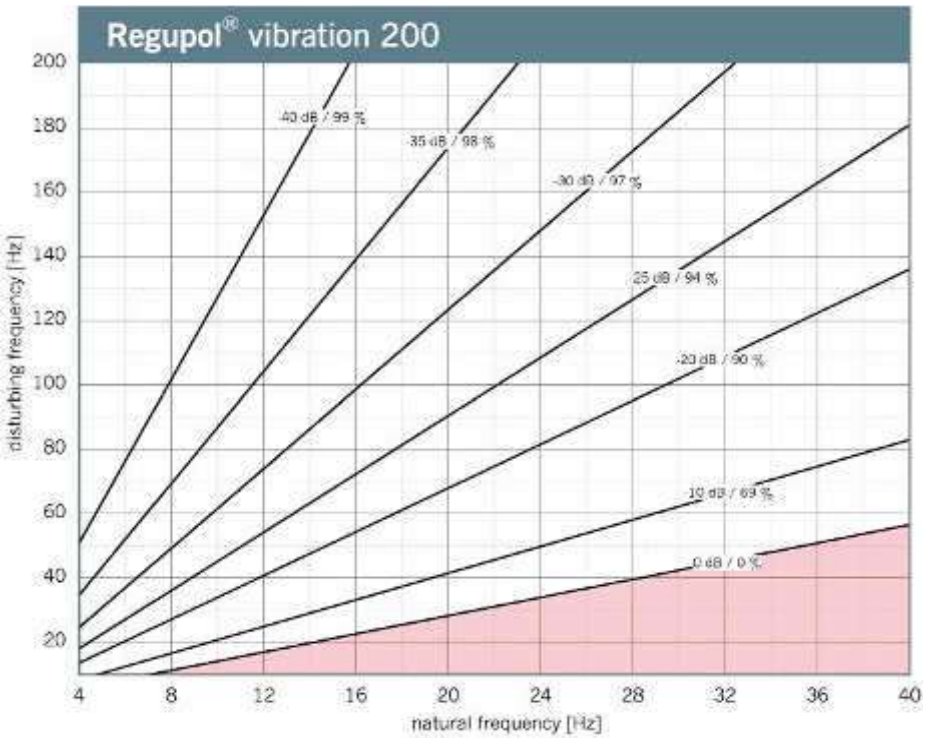
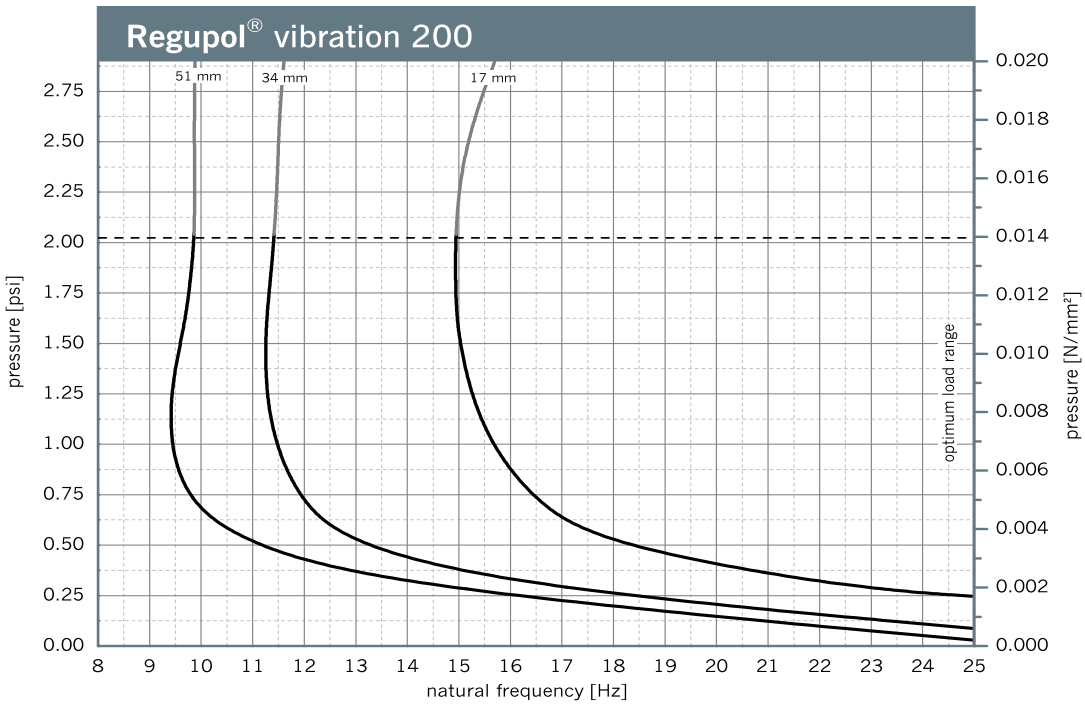


Illustration of the isolation efficiency of a single-degree-of-freedom system (SDOF system) on a rigid base with **Regupol® vibration 200**. Parameter: power transmission (insertion loss) in dB, isolation factor in %.

Natural Frequency



Natural frequency of a single-degree-of-freedom system (SDOF system) considering the dynamic stiffness of **Regupol® vibration 200** on a rigid base. Dimensions of test specimens 300 mm x 300 mm.

Modulus of Elasticity

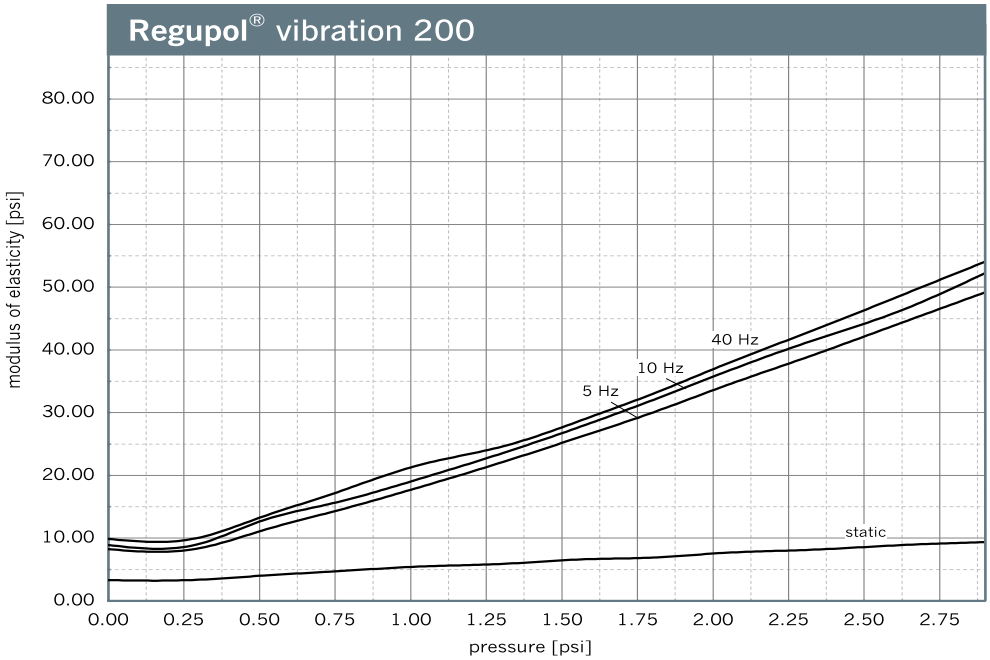


Illustration of the dynamic modulus of elasticity for sinusoidal excitation at a constant mean load and an amplitude of +/- 0.25 mm. Dimensions of specimens 300 mm x 300 mm x 34 mm; static modulus of elasticity as a result of the tangent modulus of the spring characteristic. Tested in accordance to DIN 53513.

Dynamic Stiffness

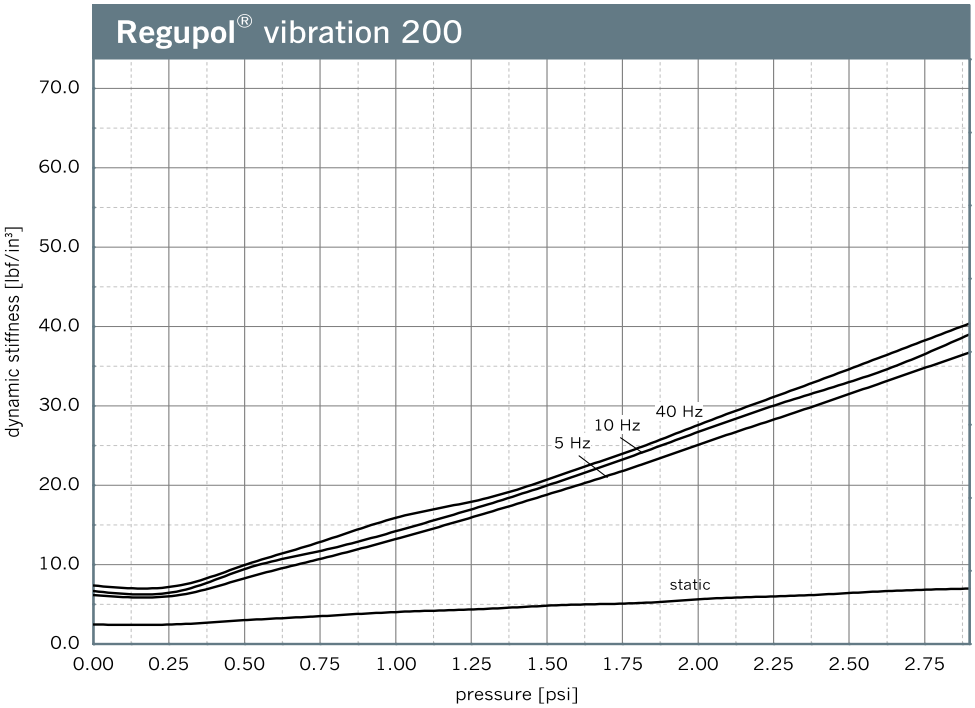
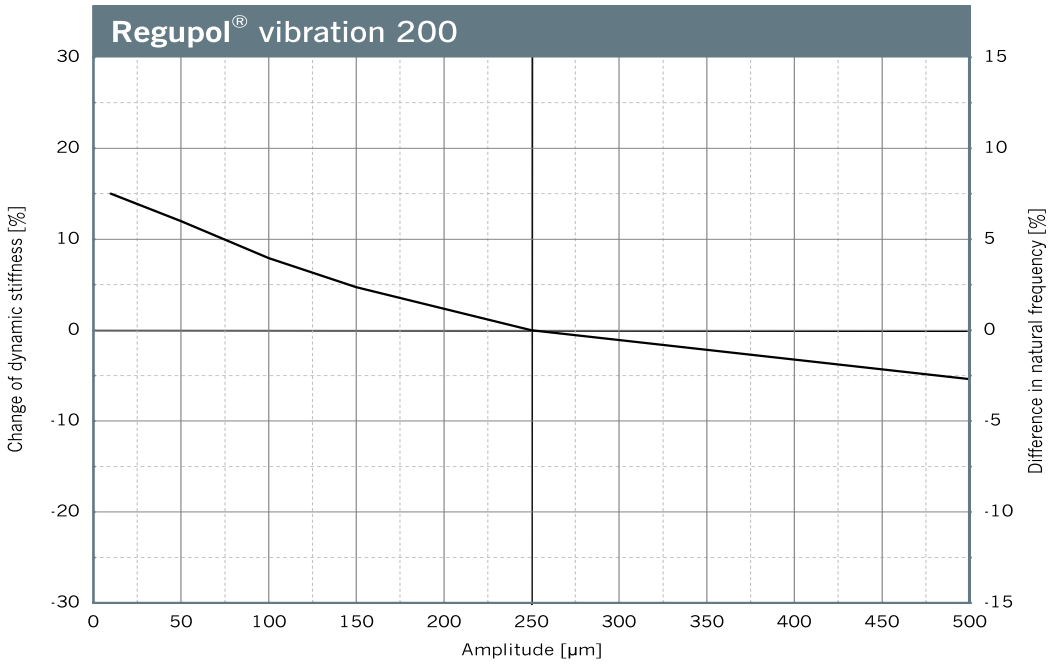
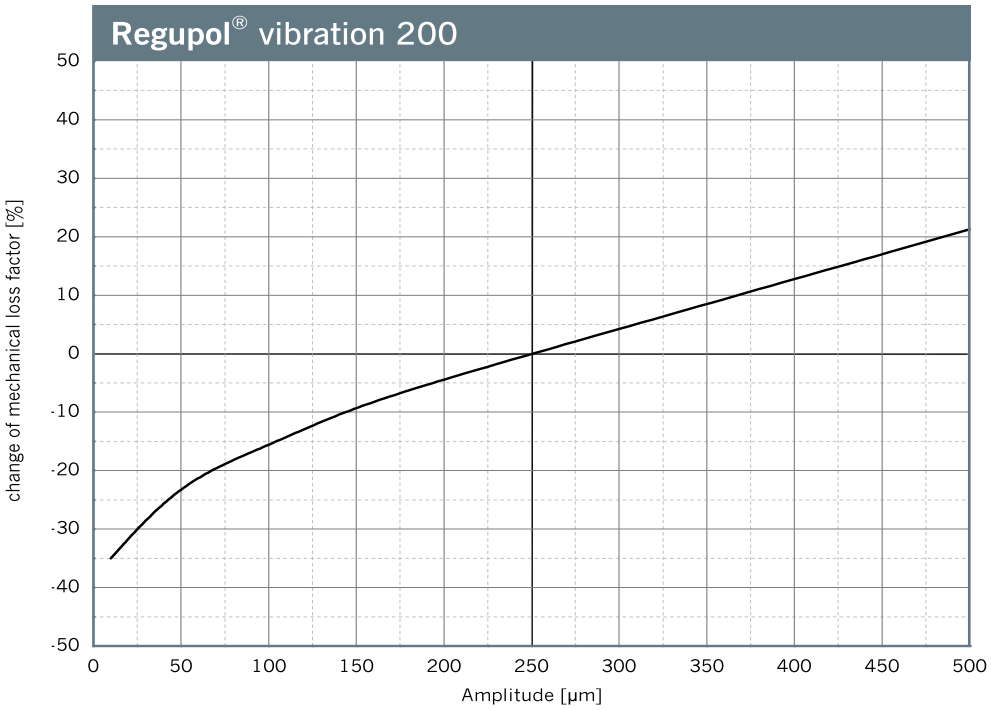


Illustration of the dynamic stiffness for sinusoidal excitation at a constant mean load and an amplitude of ± 0.25 mm. Dimension of specimens 300 x 300 x 34 mm; static stiffness as a result of the tangent modulus of the spring characteristic. Tested in accordance with DIN 53513.

Influence of Amplitude

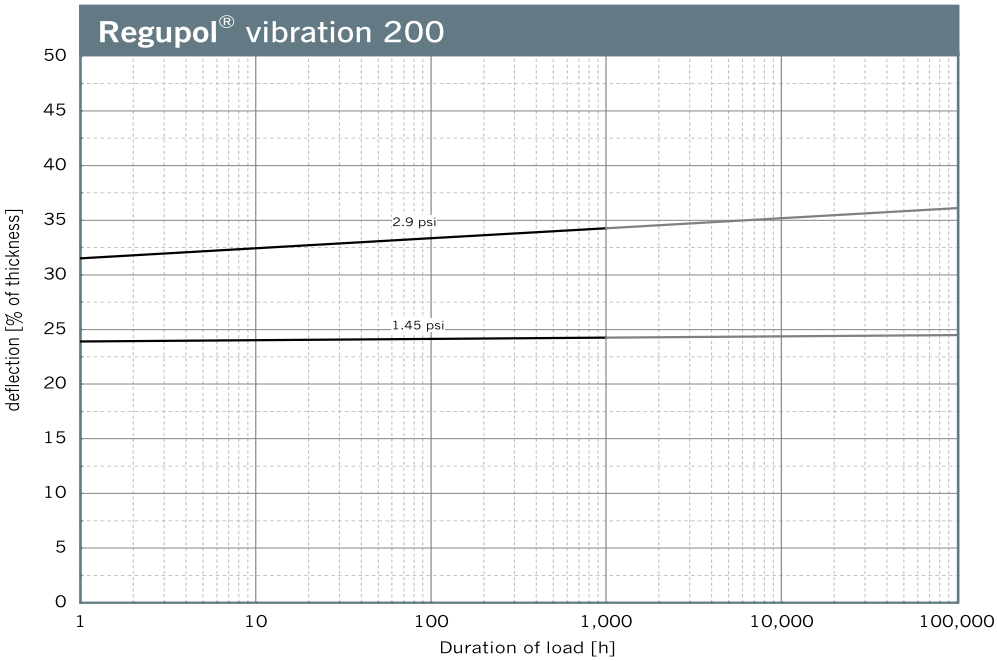


Change of the dynamic stiffness due to changes in amplitudes. Average for 5 Hz, 10 Hz and 40 Hz excitation.
Sinusoidal excitation at a constant mean load of 0.011 N/mm², dimensions of the specimens 300 x 300 x 51 mm.
Natural frequency of a single-degree-of-freedom system (SDOF system) on a rigid base.



Change of the mechanical loss factor due to changes in amplitudes.
Sinusoidal excitation at a constant mean load of 0.011 N/mm², dimensions of the specimens 300 x 300 x 51 mm.

Long-Term Creep Test



Dimension of specimens 300 x 300 x 51 mm

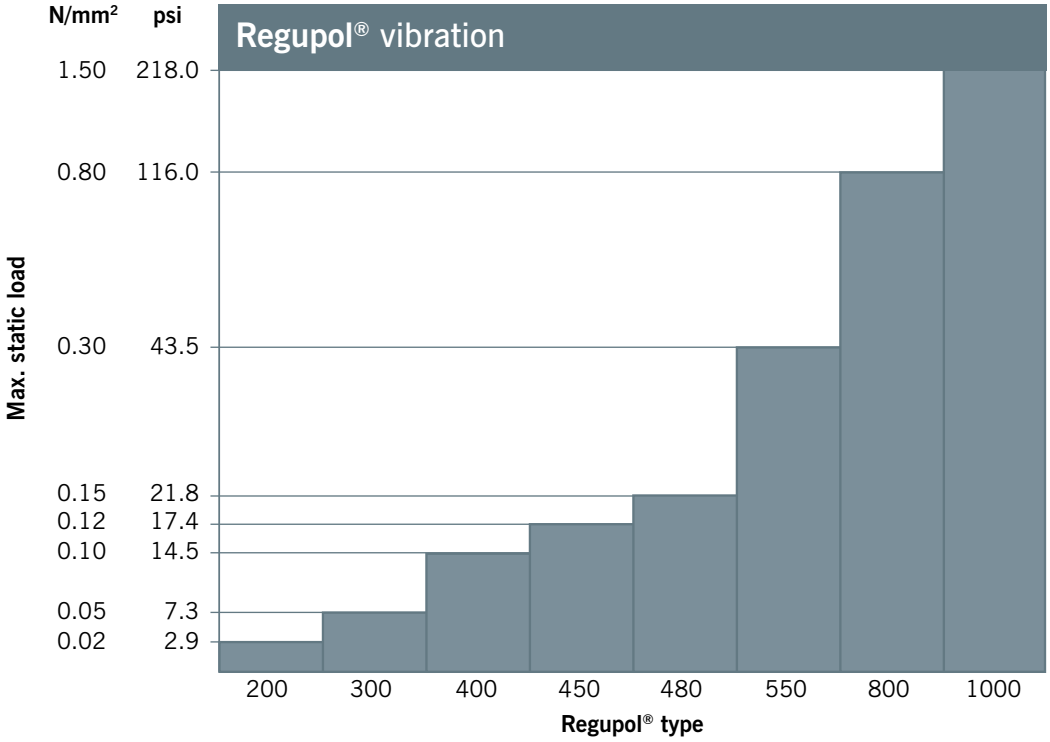
Standard forms of delivery, ex Lebanon, PA

Rolls
Thickness: 17 mm, dimpled on underside
Length: 30' (9,144 mm)
Width: 48" (1,219 mm)

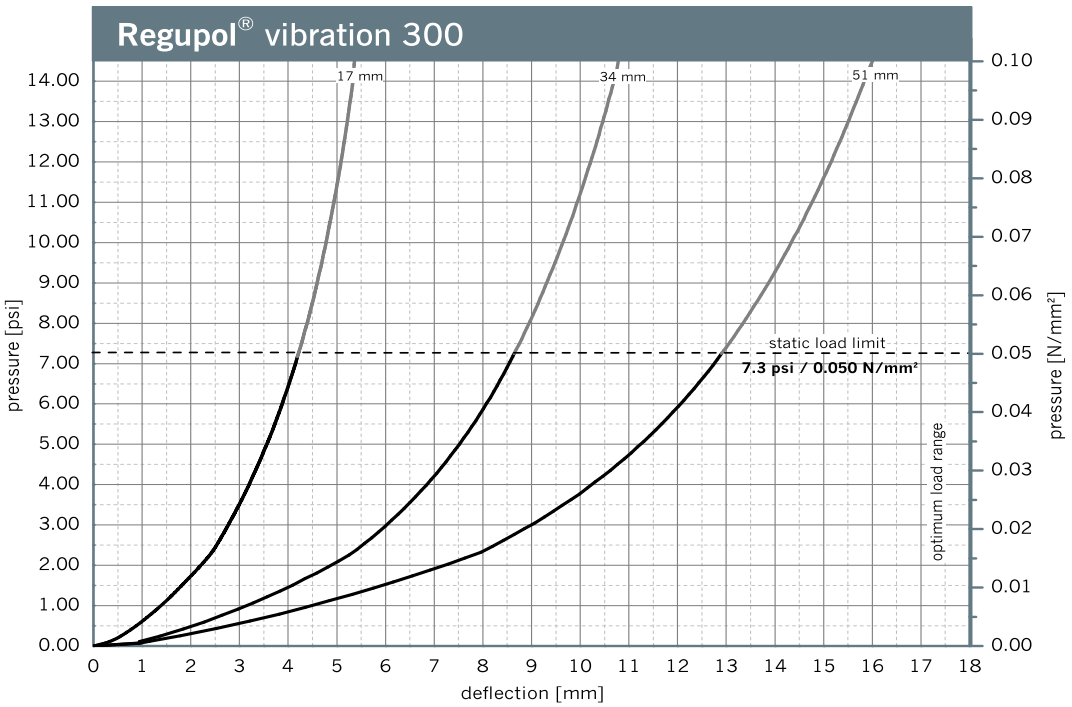
Max. static load
7.3 psi
Peak loads (rare, short-term loads)
11.6 psi

Static modulus of elasticity	Based on EN 826	14.5 - 29.0 0.10 - 0.20	psi N/mm²	Tangential modulus, see figure "Modulus of elasticity"
Dynamic modulus of elasticity	Based on DIN 53513	29.0 - 203.0 0.20 - 1.4	psi N/mm²	Depending on frequency, load and thickness, see figure "dynamic stiffness"
Mechanical loss factor	DIN 53513	0.18	[-]	Load-, amplitude- and frequency-dependent
Compression set	Based on DIN EN ISO 1856	1.6	%	Measured 30 minutes after decompression with 50% deformation / 23 °C after 72 hrs
Tensile strength	Based on DIN EN ISO 1798	43.5 0.30	psi N/mm²	
Elongation at break	Based on DIN EN ISO 1798	55	%	
Tear resistance	Based on DIN ISO 34-1	12.0	lbs/in	
Fire behavior	DIN 4102 DIN EN 13501	B2 E	[-] [-]	Normal flammability
Sliding friction	in-house laboratory in-house laboratory	0.7 0.8	[-] [-]	Steel (dry) Concrete (dry)
Compression hardness	Based on DIN EN ISO 3386-2	50	kPa	Compressive stress at 25 % deformation Test specimen h = 51 mm
Rebound elasticity	Based on DIN EN ISO 8307	10	%	Depending on thickness, Test specimen h = 51 mm
Force reduction	DIN EN 14904	73	%	Depending on thickness, Test specimen h = 51 mm
Ozone resistance	DIN EN ISO 17025	Cracking stage 0	[-]	

Load Ranges



Load Deflection



Examination of deflection in accordance to DIN EN 826, between two stiff panels. Illustration based on the third loading.
Velocity of loading and unloading 20 seconds. Tested at room temperature. Dimensions of test specimens 300 mm x 300 mm.

Vibration Isolation

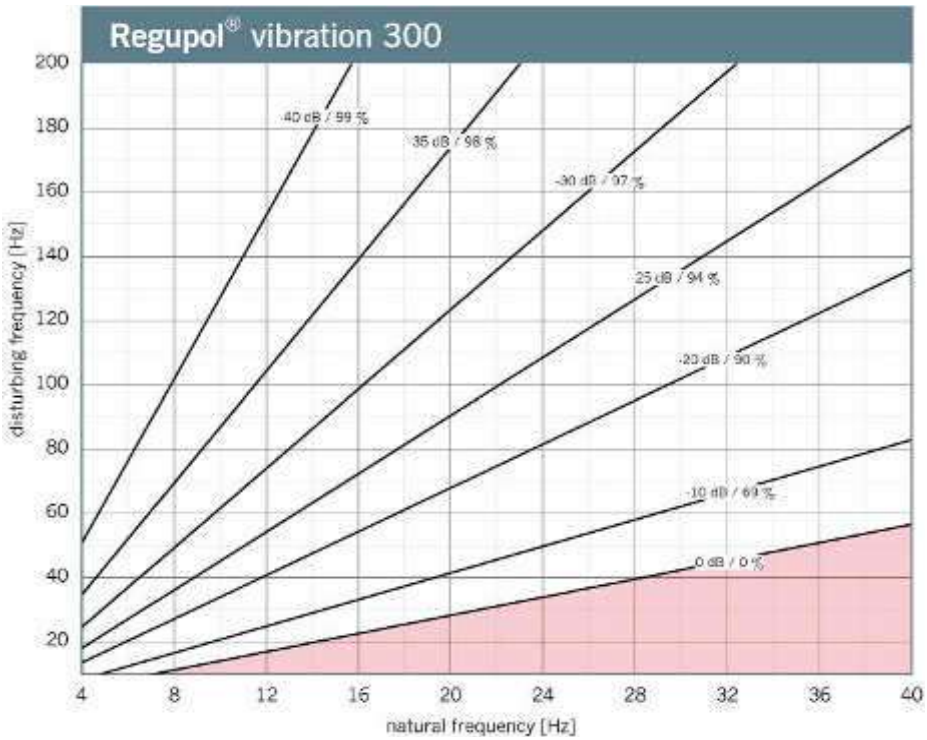
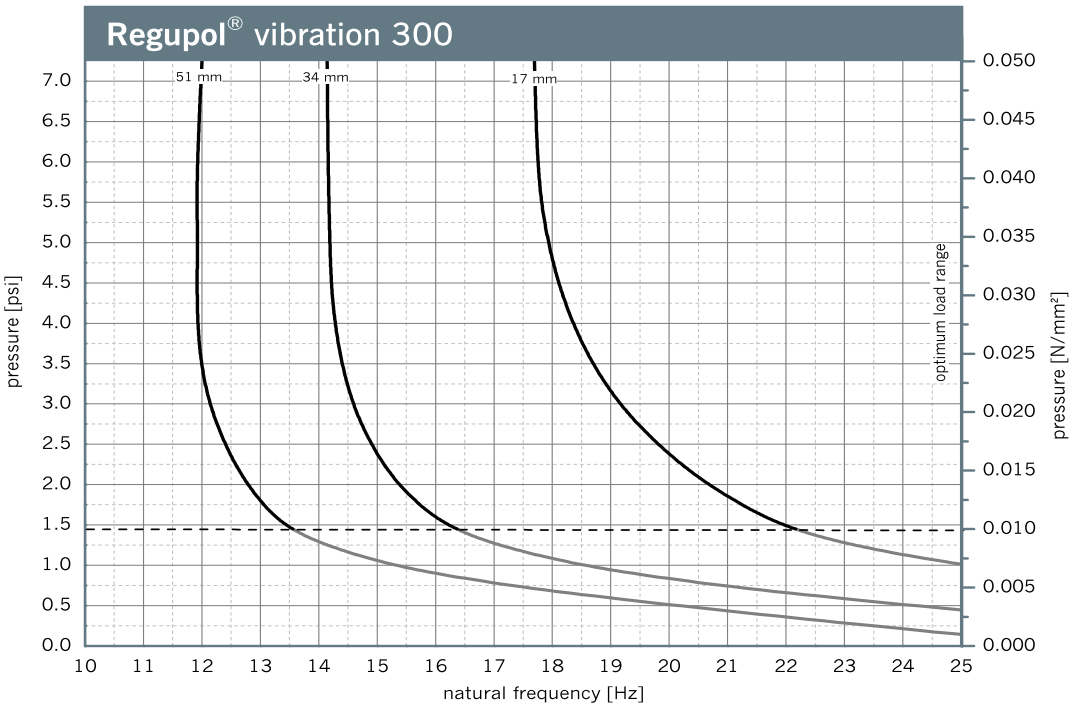


Illustration of the isolation efficiency of a single-degree-of-freedom system (SDOF system) on a rigid base with **Regupol® vibration 300**. Parameter: power transmission (insertion loss) in dB, isolation factor in %.

Natural Frequency



Natural frequency of a single-degree-of-freedom system (SDOF system) considering the dynamic stiffness of **Regupol® vibration 300** on a rigid base. Dimensions of test specimens 300 mm x 300 mm.

Modulus of Elasticity

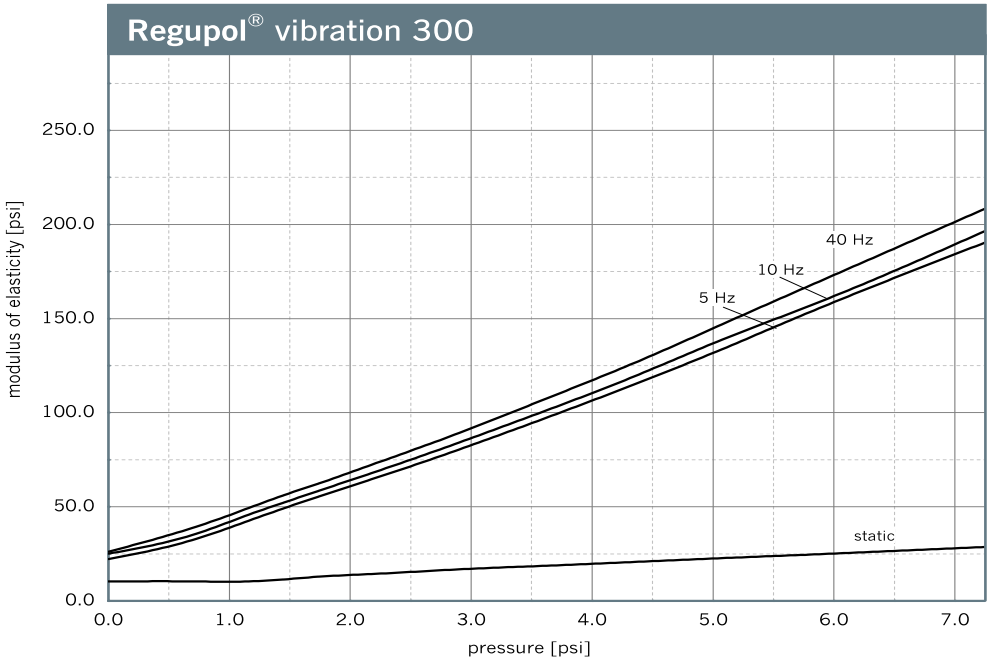


Illustration of the dynamic modulus of elasticity for sinusoidal excitation at a constant mean load and an amplitude of +/- 0.25 mm. Dimensions of specimens 300 mm x 300 mm x 34 mm; static modulus of elasticity as a result of the tangent modulus of the spring characteristic. Tested in accordance to DIN 53513.

Dynamic Stiffness

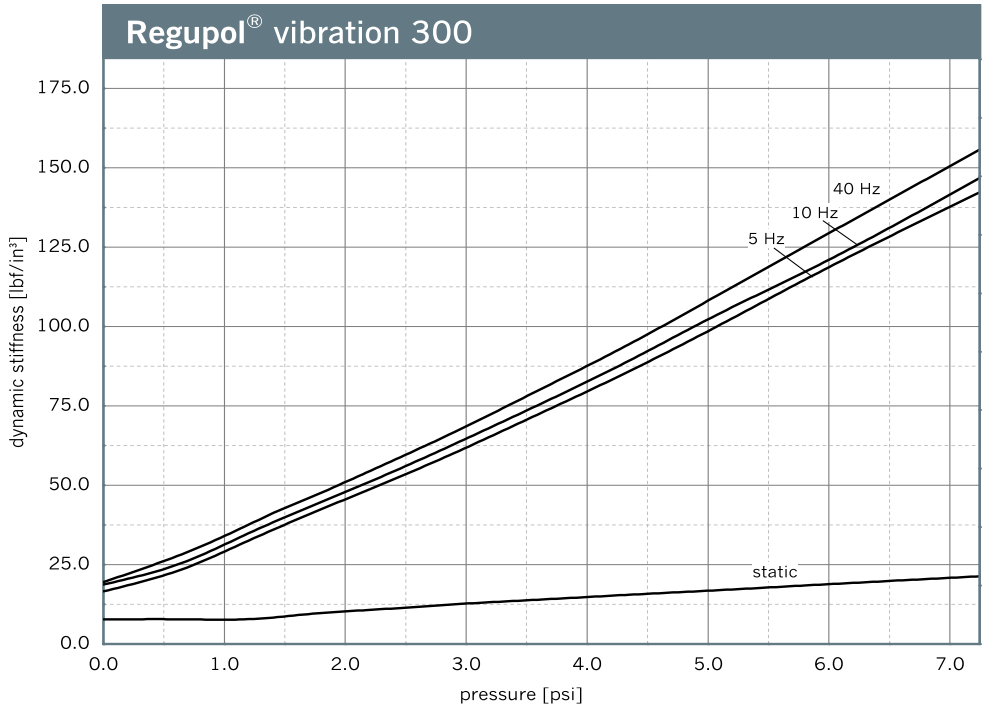
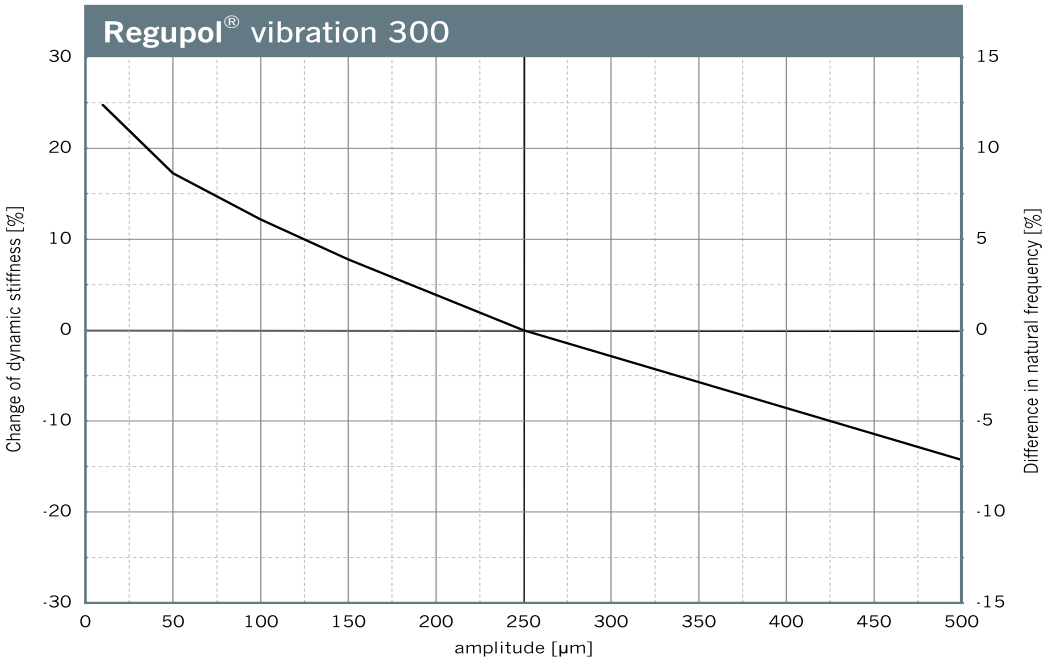
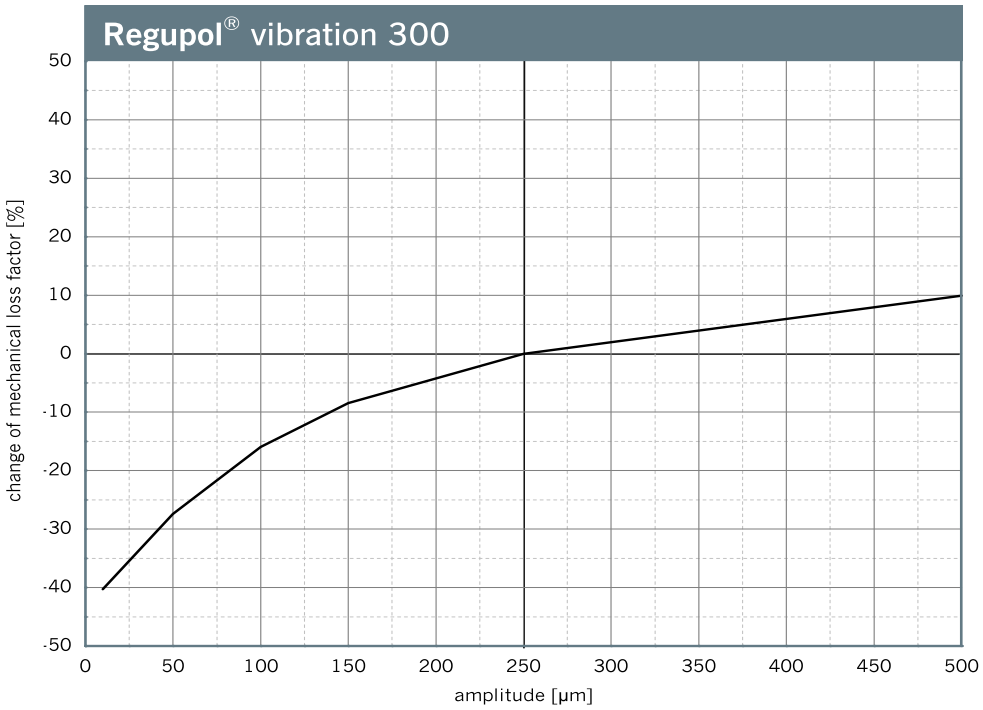


Illustration of the dynamic stiffness for sinusoidal excitation at a constant mean load and an amplitude of ± 0.25 mm. Dimension of specimens 300 x 300 x 34 mm; static stiffness as a result of the tangent modulus of the spring characteristic. Tested in accordance with DIN 53513.

Influence of Amplitude

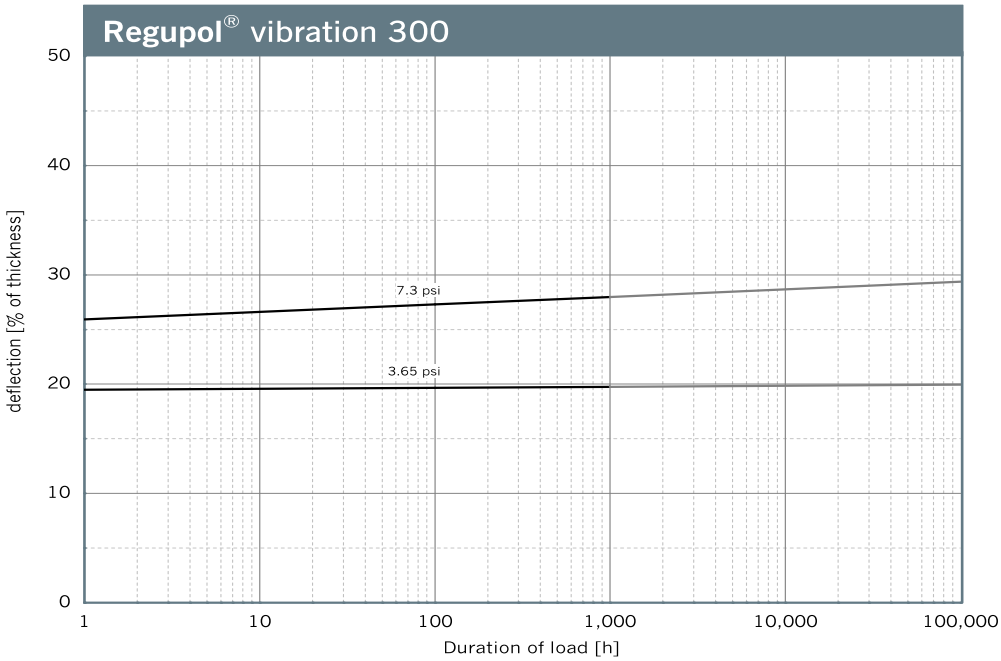


Change of the dynamic stiffness due to changes in amplitudes. Average for 5 Hz, 10 Hz and 40 Hz excitation.
Sinusoidal excitation at a constant mean load of 0.05 N/mm², dimensions of the specimens 300 x 300 x 51 mm.
Natural frequency of a single-degree-of-freedom system (SDOF system) on a rigid base.



Change of the mechanical loss factor due to changes in amplitudes.
Sinusoidal excitation at a constant mean load of 0.05 N/mm², dimensions of the specimens 300 x 300 x 51 mm.

Long-Term Creep Test



Dimension of specimens 300 x 300 x 51 mm

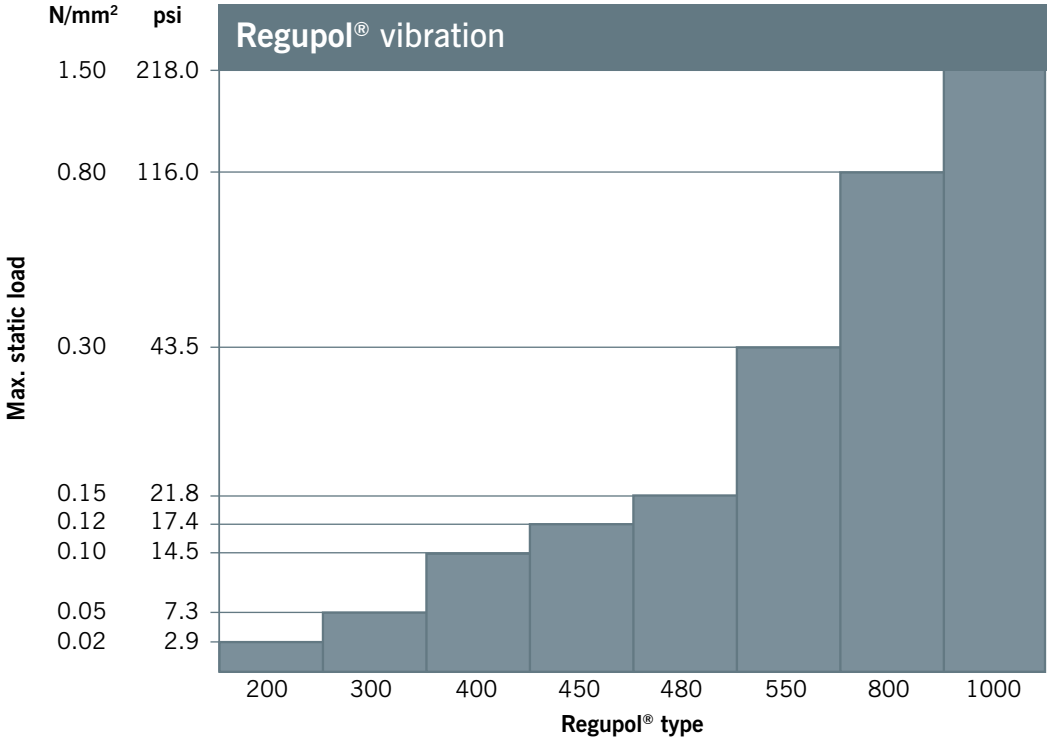
Standard forms of delivery, ex Lebanon, PA

Rolls
Thickness: 15 mm, dimpled on underside
Length: 33' (10,000 mm)
Width: 50" (1,250 mm)

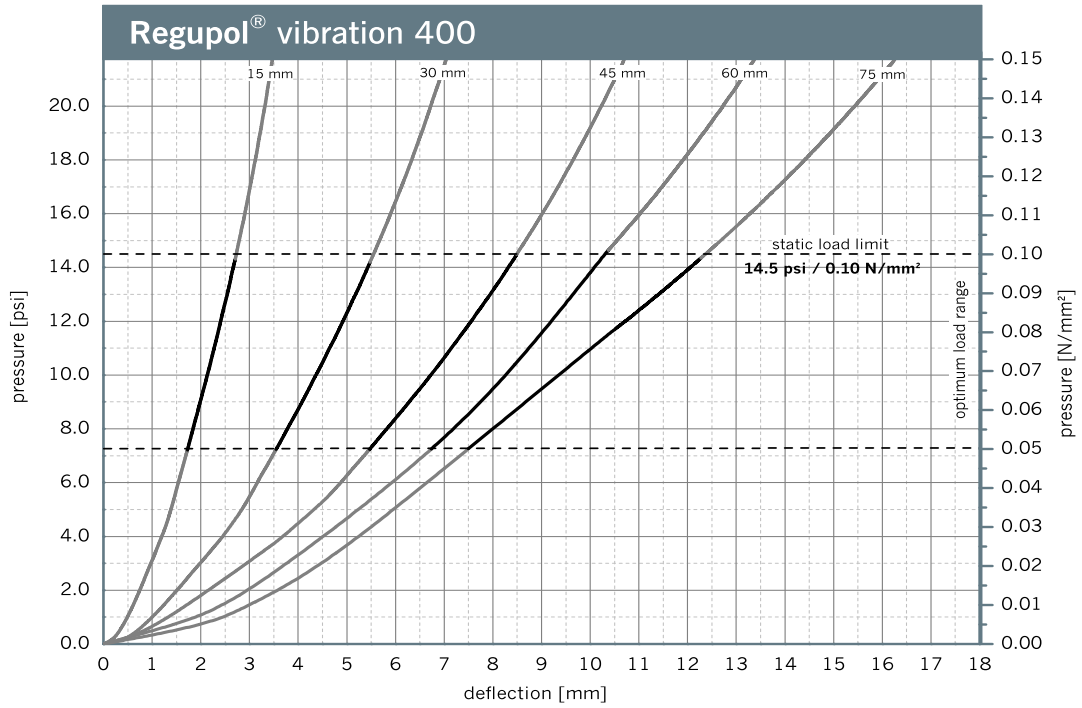
Max. static load
14.5 psi
Peak loads (rare, short-term loads)
21.8 psi

Static modulus of elasticity	Based on EN 826	43.5 - 79.8 0.30 - 0.55	psi N/mm²	Tangential modulus, see figure "Modulus of elasticity"
Dynamic modulus of elasticity	Based on DIN 53513	131.0 - 348.0 0.90 - 2.4	psi N/mm²	Depending on frequency, load and thickness, see figure "dynamic stiffness"
Mechanical loss factor	DIN 53513	0.17	[-]	Load-, amplitude- and frequency-dependent
Compression set	Based on DIN EN ISO 1856	2.1	%	Measured 30 minutes after decompression with 50% deformation / 23 °C after 72 hrs
Tensile strength	Based on DIN EN ISO 1798	49.3 0.34	psi N/mm²	
Elongation at break	Based on DIN EN ISO 1798	55	%	
Tear resistance	Based on DIN ISO 34-1	18.3	lbs/in	
Fire behavior	DIN 4102 DIN EN 13501	B2 E	[-] [-]	Normal flammability
Sliding friction	in-house laboratory in-house laboratory	0.7 0.8	[-] [-]	Steel (dry) Concrete (dry)
Compression hardness	Based on DIN EN ISO 3386-2	180	kPa	Compressive stress at 25 % deformation Test specimen h = 60 mm
Rebound elasticity	Based on DIN EN ISO 8307	22	%	Depending on thickness, Test specimen h = 60 mm
Force reduction	DIN EN 14904	73	%	Depending on thickness, Test specimen h = 60 mm
Ozone resistance	DIN EN ISO 17025	Cracking stage 0	[-]	

Load Ranges



Load Deflection



Examination of deflection in accordance to DIN EN 826, between two stiff panels. Illustration based on the third loading. Velocity of loading and unloading 20 seconds. Tested at room temperature. Dimensions of test specimens 300 mm x 300 mm.

Vibration Isolation

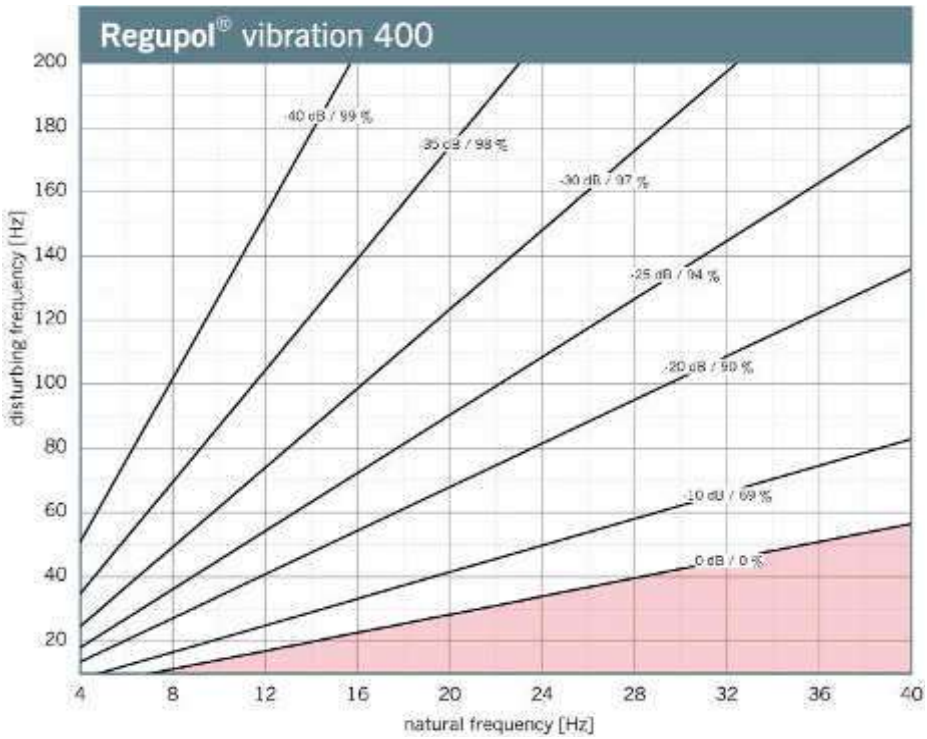
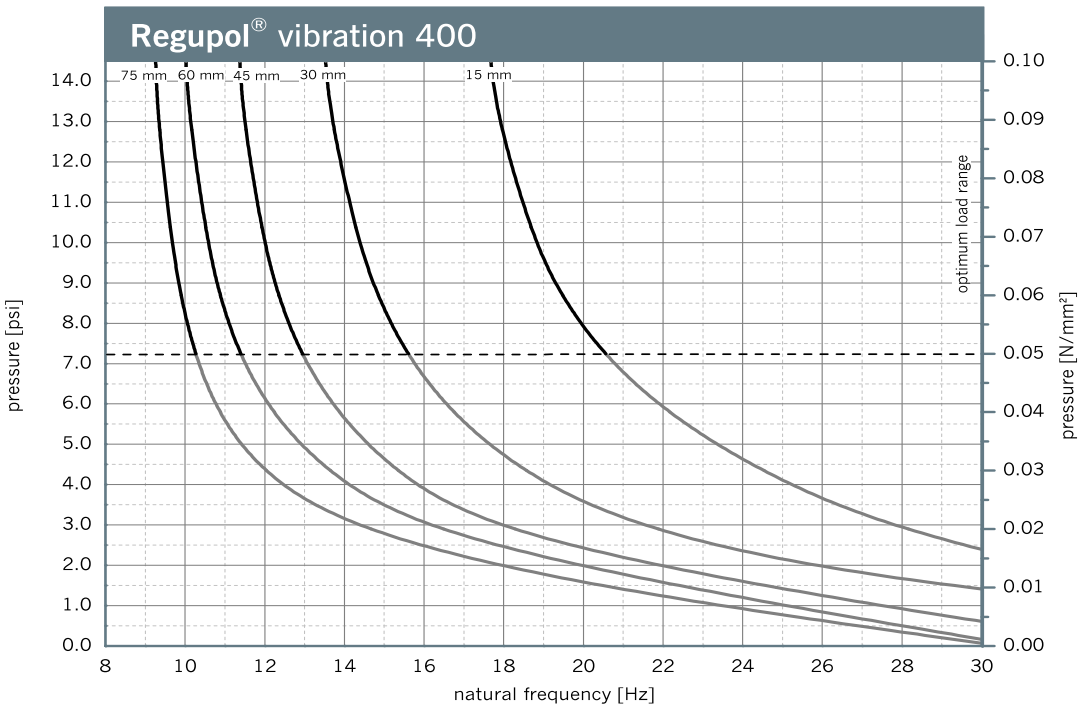


Illustration of the isolation efficiency of a single-degree-of-freedom system (SDOF system) on a rigid base with **Regupol® vibration 400**. Parameter: power transmission (insertion loss) in dB, isolation factor in %.

Natural Frequency



Natural frequency of a single-degree-of-freedom system (SDOF system) considering the dynamic stiffness of **Regupol® vibration 400** on a rigid base. Dimensions of test specimens 300 mm x 300 mm.

Modulus of Elasticity

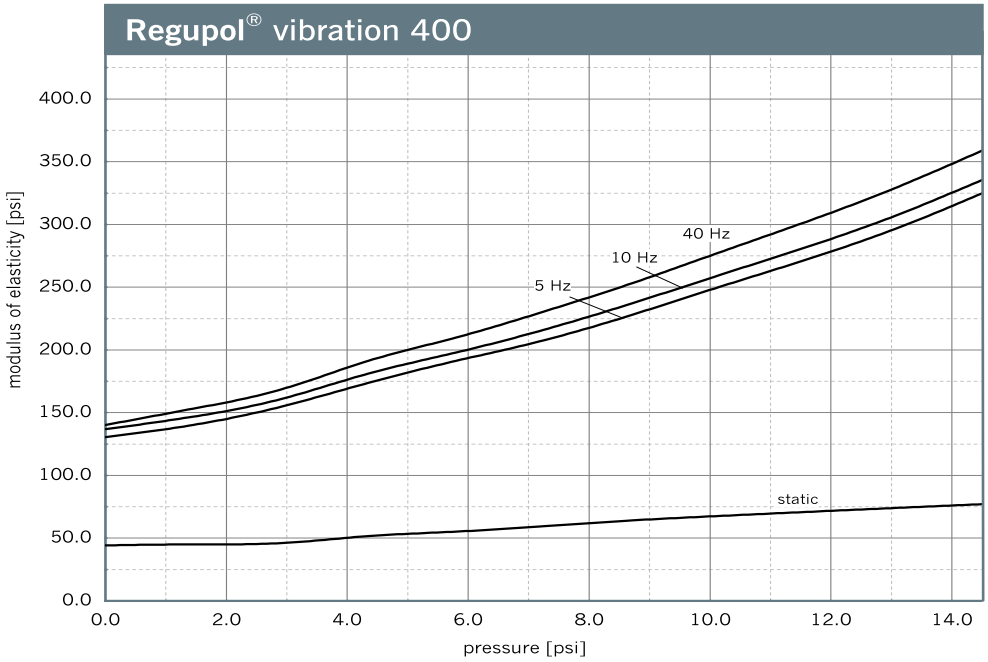


Illustration of the dynamic modulus of elasticity for sinusoidal excitation at a constant mean load and an amplitude of +/- 0.25 mm. Dimensions of specimens 300 mm x 300 mm x 45 mm; static modulus of elasticity as a result of the tangent modulus of the spring characteristic. Tested in accordance to DIN 53513.

Dynamic Stiffness

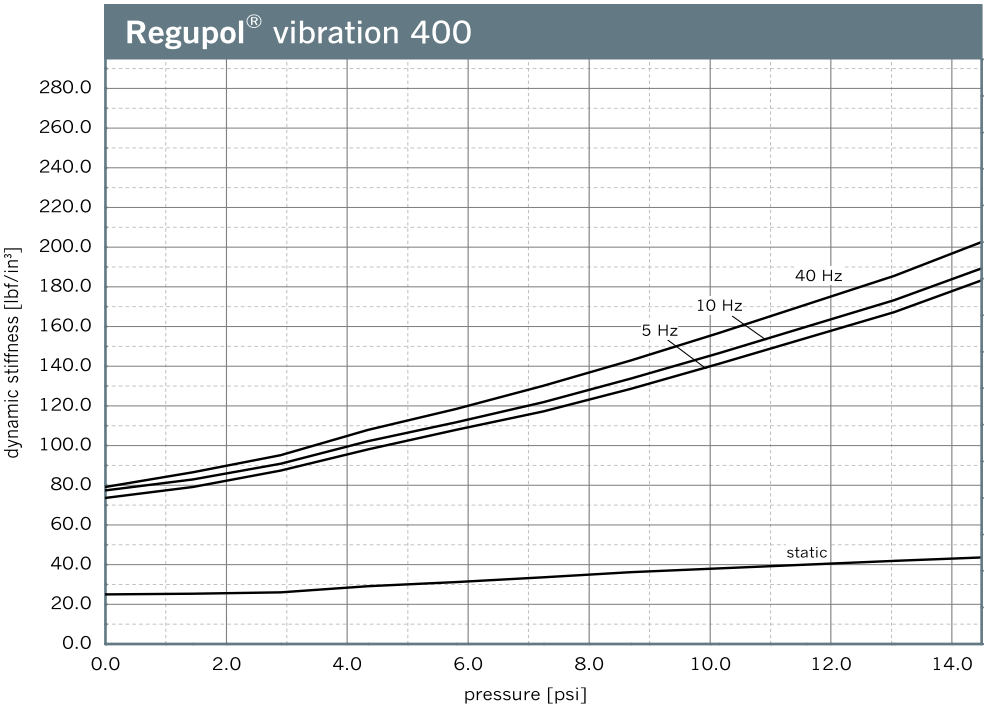
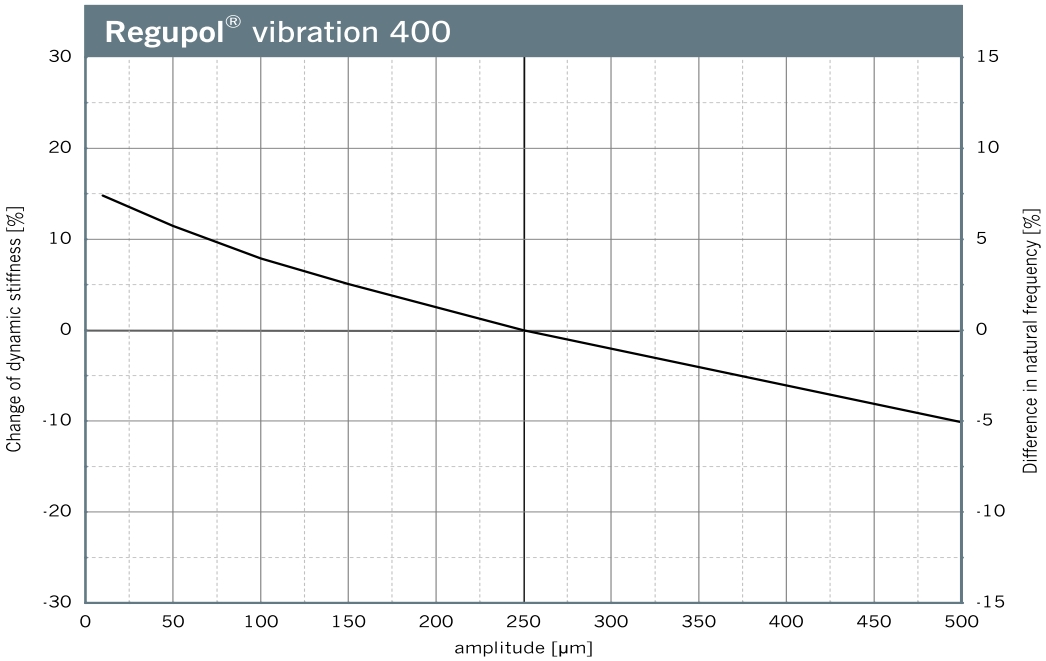
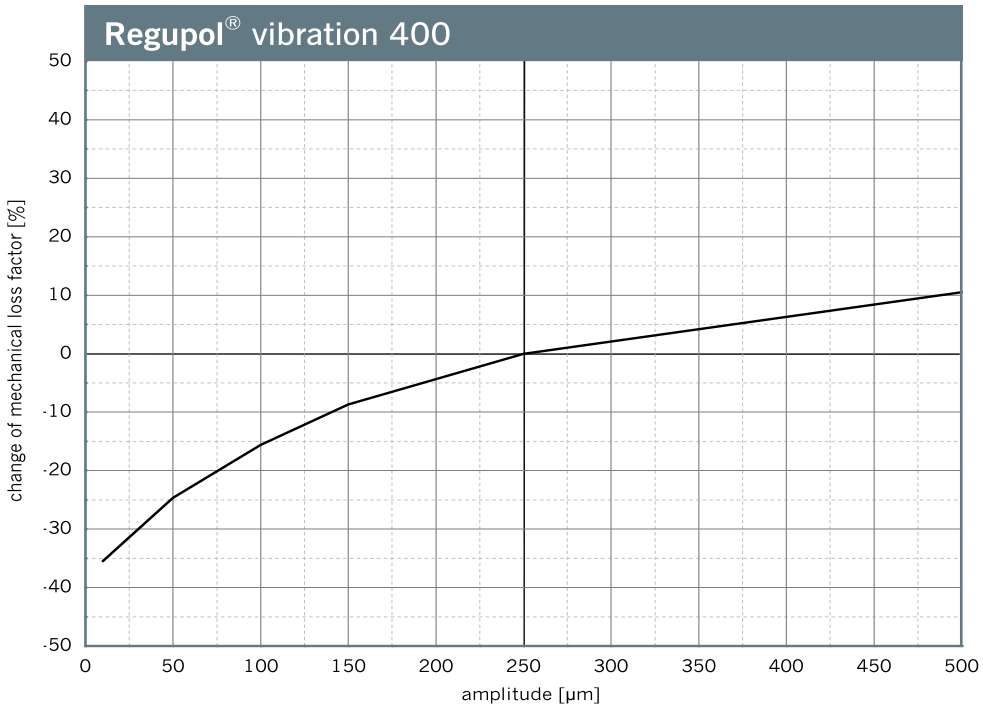


Illustration of the dynamic stiffness for sinusoidal excitation at a constant mean load and an amplitude of ± 0.25 mm. Dimension of specimens 300 x 300 x 45 mm; static stiffness as a result of the tangent modulus of the spring characteristic. Tested in accordance with DIN 53513.

Influence of Amplitude

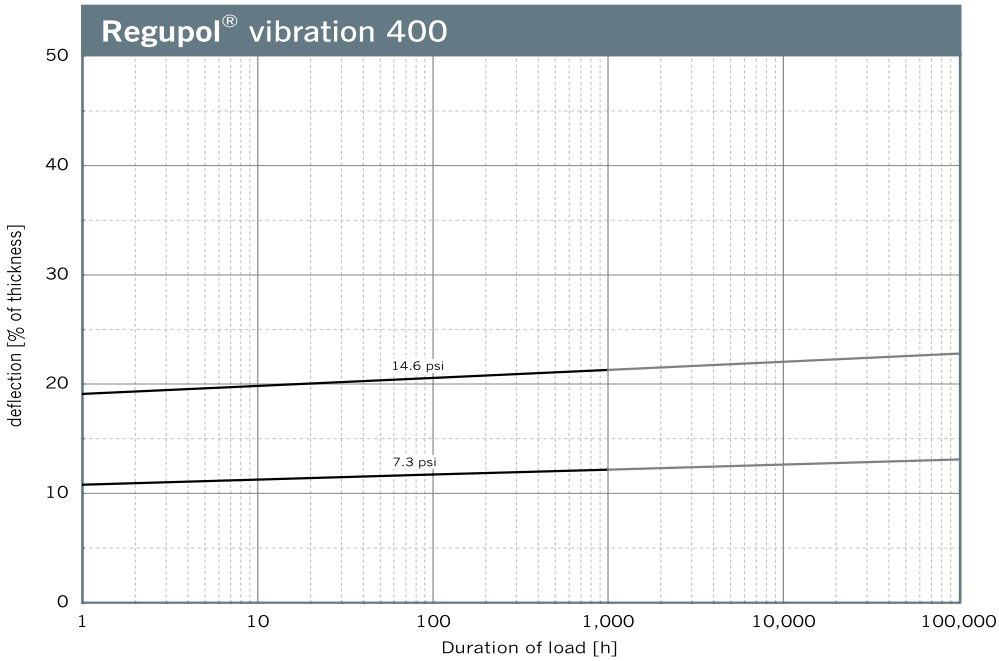


Change of the dynamic stiffness due to changes in amplitudes. Average for 5 Hz, 10 Hz and 40 Hz excitation.
Sinusoidal excitation at a constant mean load of 0.10 N/mm², dimensions of the specimens 300 x 300 x 60 mm.
Natural frequency of a single-degree-of-freedom system (SDOF system) on a rigid base.



Change of the mechanical loss factor due to changes in amplitudes.
Sinusoidal excitation at a constant mean load of 0.10 N/mm², dimensions of the specimens 300 x 300 x 60 mm.

Long-Term Creep Test



Dimension of specimens 300 x 300 x 60 mm

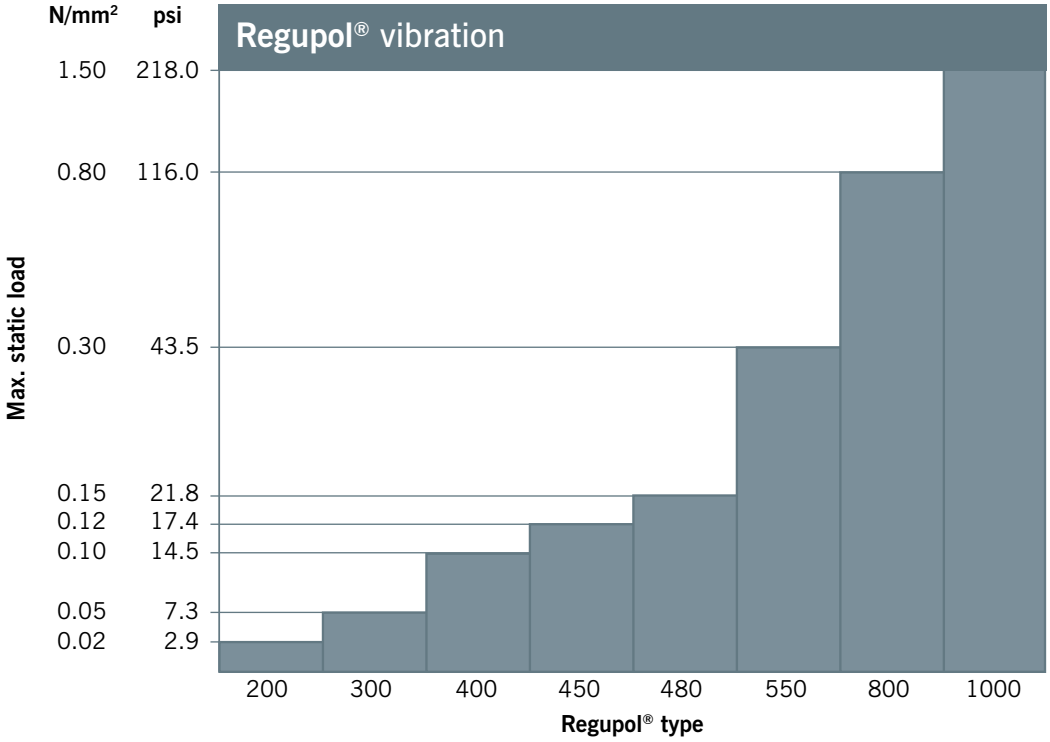
Standard forms of delivery, ex Lebanon, PA

Sheets
Thickness: 50 mm (2”) and 25 mm (1”)
Length: 39.4” (1,000 mm)
Width: 19.7” (500 mm)

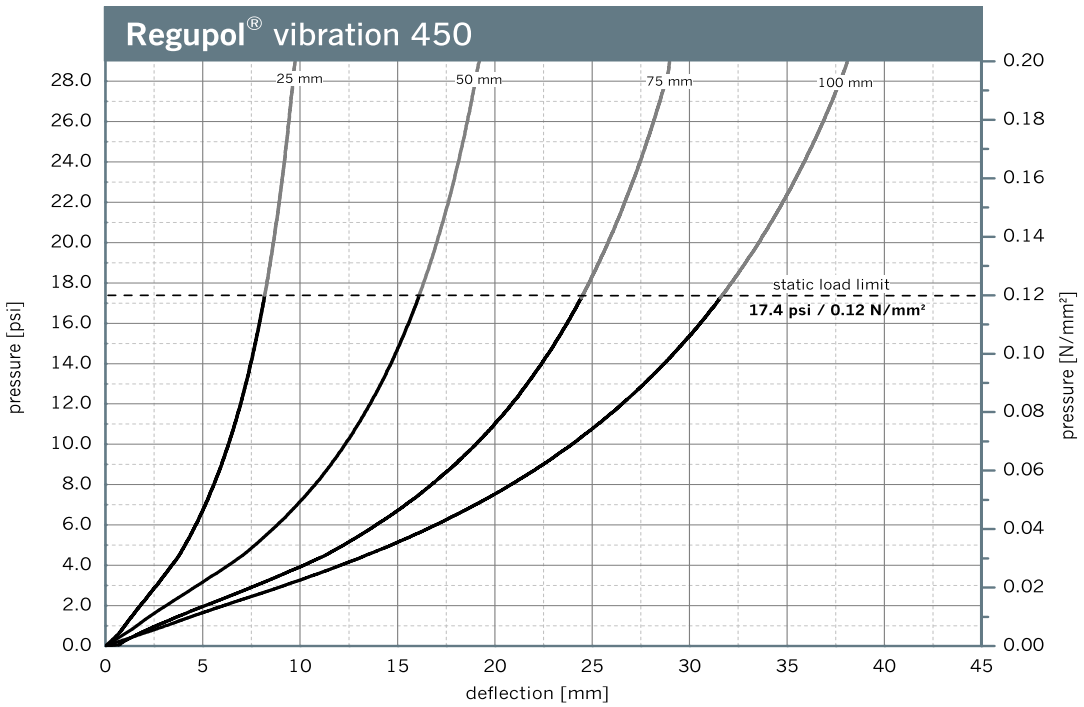
Max. static load
17.4 psi
Peak loads (rare, short-term loads)
26.1 psi

Static modulus of elasticity	Based on EN 826	29.0 - 58.0 0.20 - 0.40	psi N/mm²	Tangential modulus, see figure “Modulus of elasticity”
Dynamic modulus of elasticity	Based on DIN 53513	65.3 - 392.0 0.45 - 2.7	psi N/mm²	Depending on frequency, load and thickness, see figure “dynamic stiffness“
Mechanical loss factor	DIN 53513	0.2	[-]	Load-, amplitude- and frequency-dependent
Compression set	Based on DIN EN ISO 1856	4.1	%	Measured 30 minutes after decompression with 50% deformation / 23 °C after 72 hrs
Tensile strength	Based on DIN EN ISO 1798	21.8 0.15	psi N/mm²	
Elongation at break	Based on DIN EN ISO 1798	40	%	
Tear resistance	Based on DIN ISO 34-1	10.8	lbs/in	
Fire behavior	DIN 4102 DIN EN 13501	B2 E	[-] [-]	Normal flammability
Sliding friction	in-house laboratory in-house laboratory	0.5 0.6	[-] [-]	Steel (dry) Concrete (dry)
Compression hardness	Based on DIN EN ISO 3386-2	83	kPa	Compressive stress at 25 % deformation Test specimen h = 50 mm
Rebound elasticity	Based on DIN EN ISO 8307	42.7	%	Depending on thickness, Test specimen h = 50 mm
Force reduction	DIN EN 14904	74	%	Depending on thickness, Test specimen h = 50 mm
Ozone resistance	DIN EN ISO 17025	Cracking stage 0	[-]	

Load Ranges



Load Deflection



Examination of deflection in accordance to DIN EN 826, between two stiff panels. Illustration based on the third loading. Velocity of loading and unloading 20 seconds. Tested at room temperature. Dimensions of test specimens 300 mm x 300 mm.

Vibration Isolation

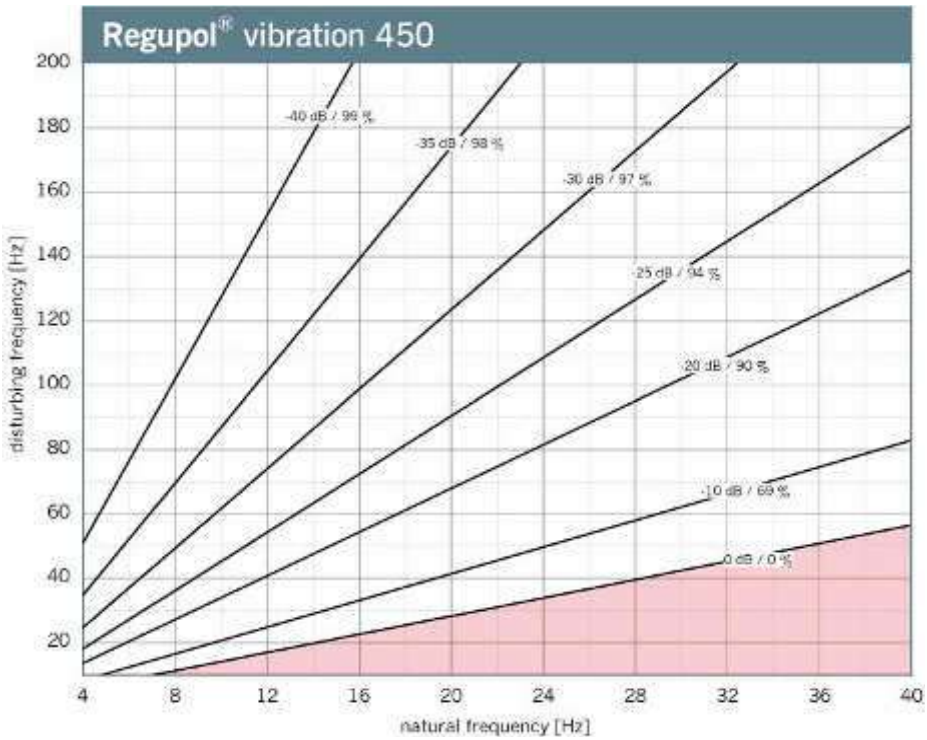
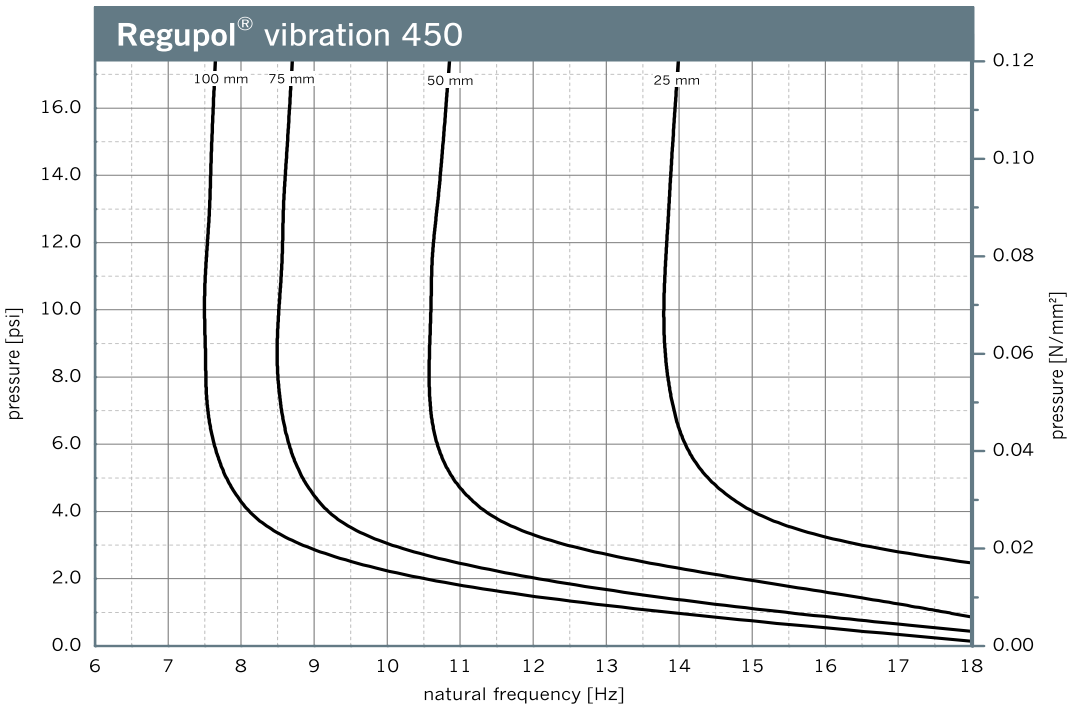


Illustration of the isolation efficiency of a single-degree-of-freedom system (SDOF system) on a rigid base with **Regupol® vibration 450**. Parameter: power transmission (insertion loss) in dB, isolation factor in %.

Natural Frequency



Natural frequency of a single-degree-of-freedom system (SDOF system) considering the dynamic stiffness of **Regupol® vibration 450** on a rigid base. Dimensions of test specimens 300 mm x 300 mm.

Modulus of Elasticity

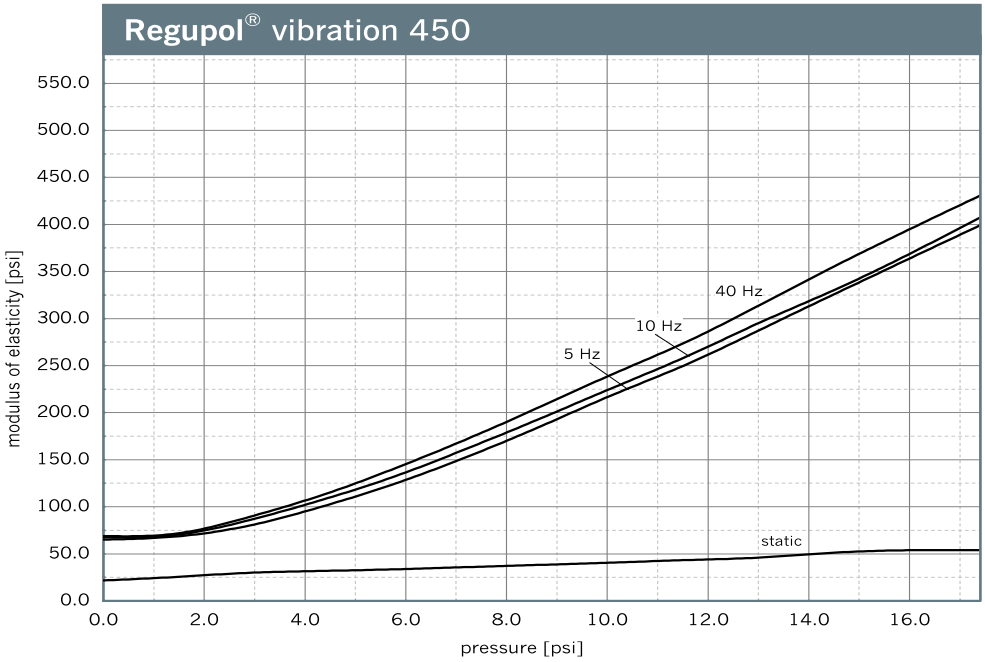


Illustration of the dynamic modulus of elasticity for sinusoidal excitation at a constant mean load and an amplitude of +/- 0.25 mm. Dimensions of specimens 300 mm x 300 mm x 50 mm; static modulus of elasticity as a result of the tangent modulus of the spring characteristic. Tested in accordance to DIN 53513.

Dynamic Stiffness

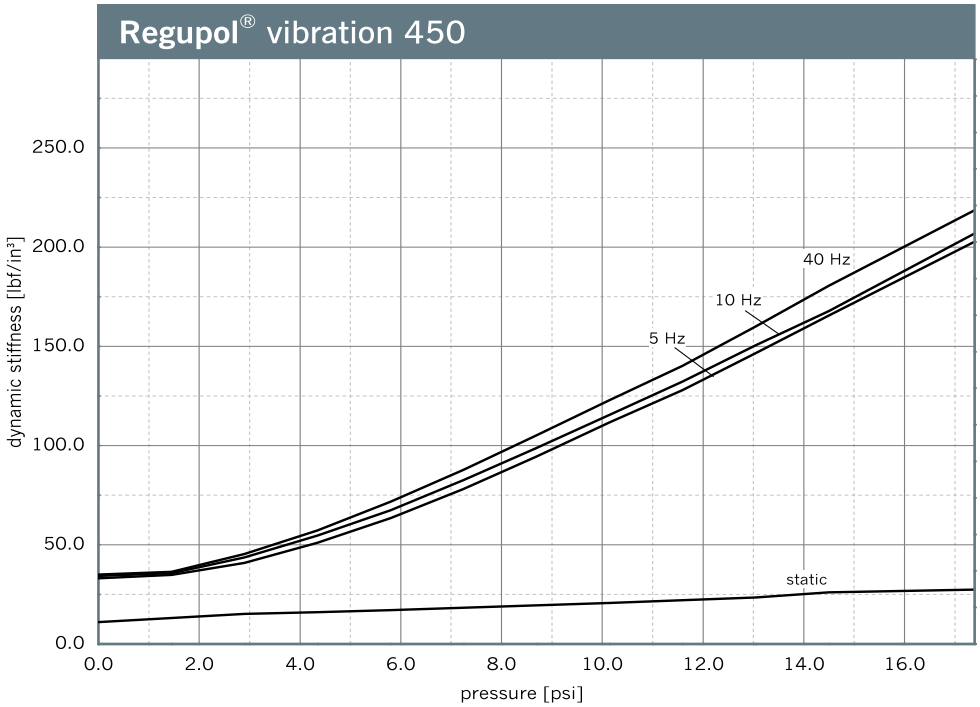
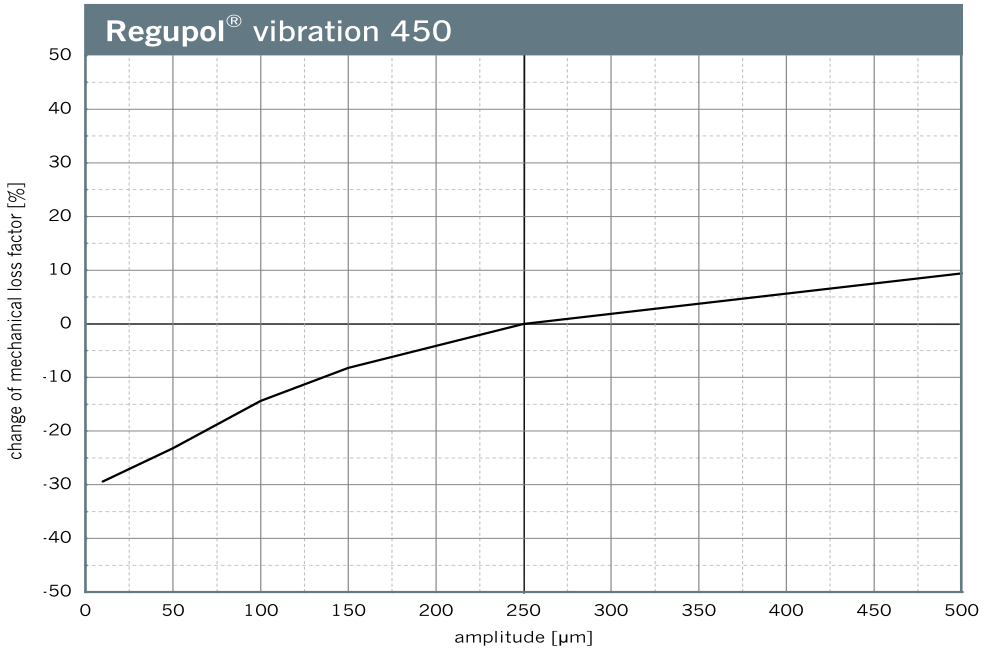
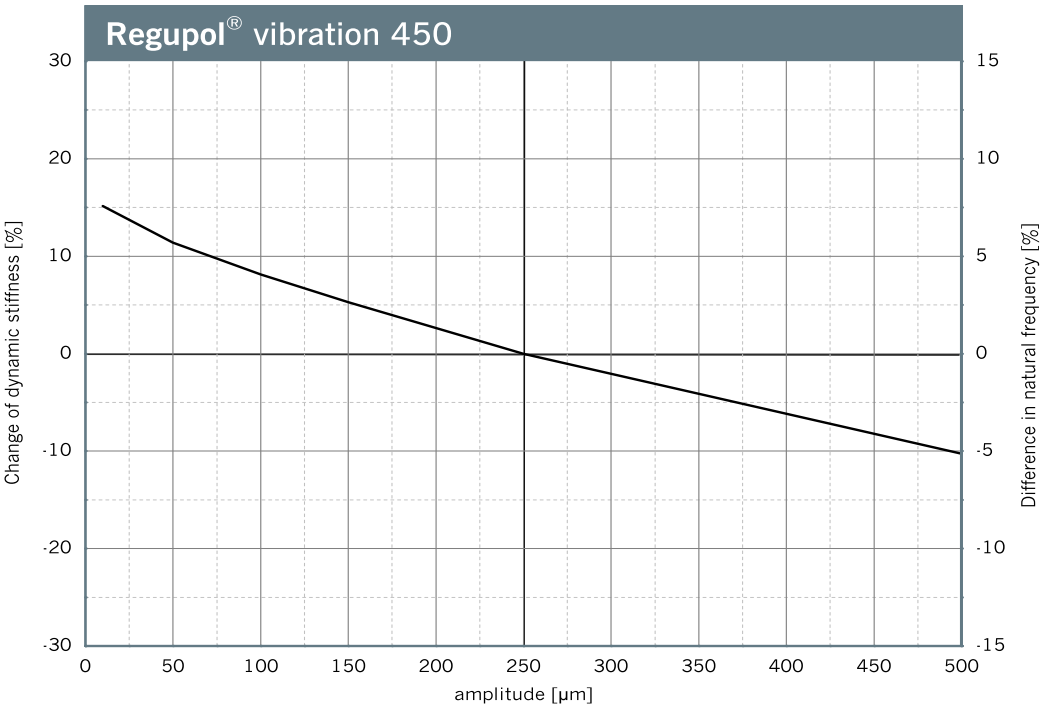


Illustration of the dynamic stiffness for sinusoidal excitation at a constant mean load and an amplitude of ± 0.25 mm. Dimension of specimens 300 x 300 x 50 mm; static stiffness as a result of the tangent modulus of the spring characteristic. Tested in accordance with DIN 53513.

Influence of Amplitude

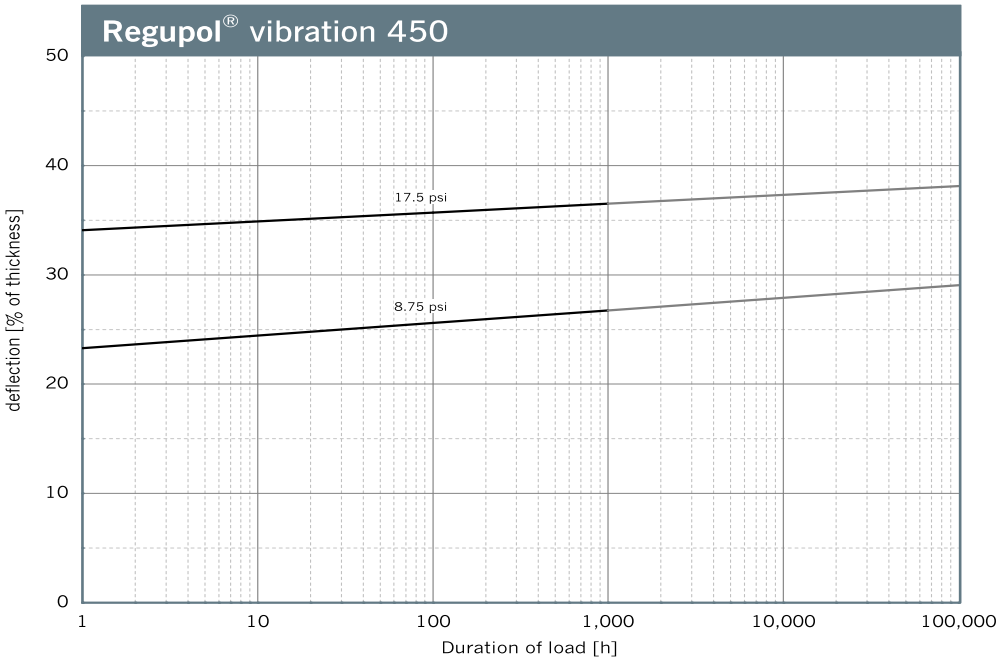


Change of the mechanical loss factor due to changes in amplitudes.
Sinusoidal excitation at a constant mean load of 0.10 N/mm², dimensions of the specimens 300 x 300 x 50 mm.



Change of the dynamic stiffness due to changes in amplitudes. Average for 5 Hz, 10 Hz and 40 Hz excitation.
Sinusoidal excitation at a constant mean load of 0.10 N/mm², dimensions of the specimens 300 x 300 x 50 mm.
Natural frequency of a single-degree-of-freedom system (SDOF system) on a rigid base.

Long-Term Creep Test



Dimension of specimens 300 x 300 x 50 mm

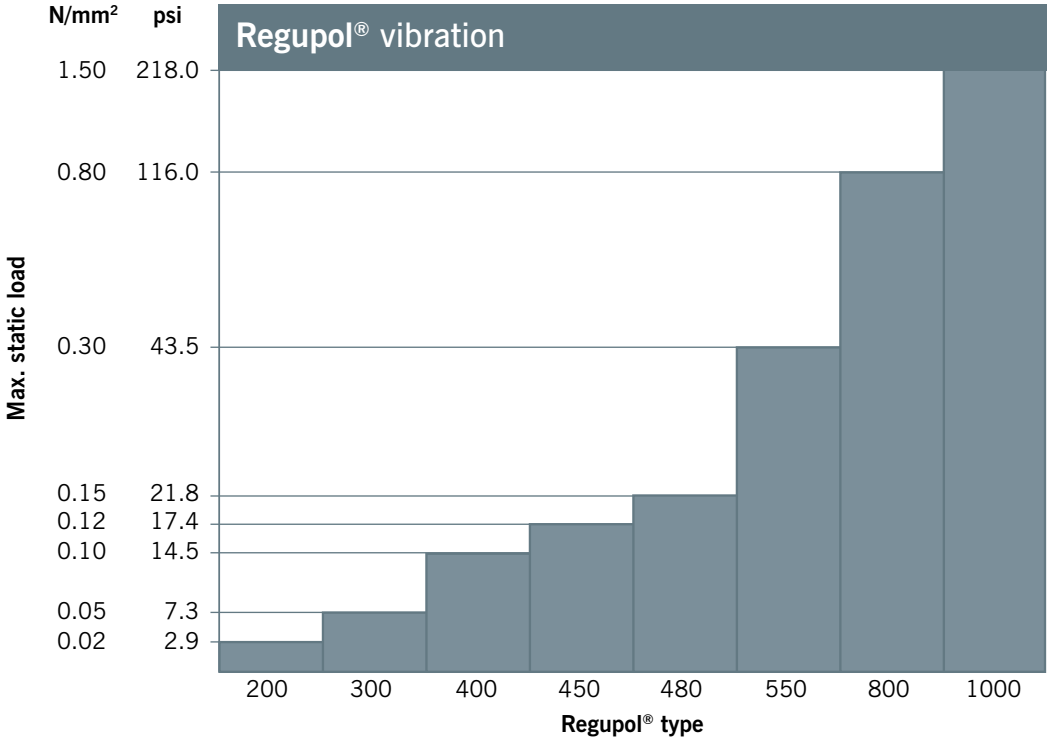
Standard forms of delivery, ex Lebanon, PA

Rolls
Thickness: 15 mm
Length: 30' (9,144 mm)
Width: 48" (1,219 mm)

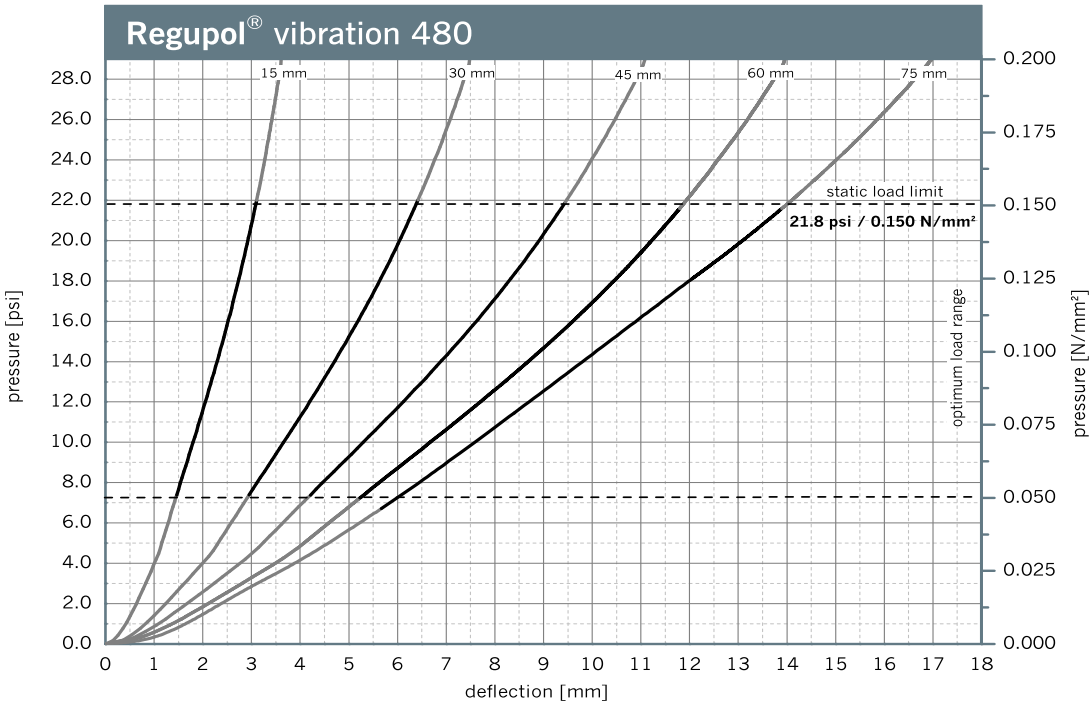
Max. static load
21.8 psi
Peak loads (rare, short-term loads)
36.3 psi

Static modulus of elasticity	Based on EN 826	36.3 - 116.0 0.25 - 0.80	psi N/mm²	Tangential modulus, see figure "Modulus of elasticity"
Dynamic modulus of elasticity	Based on DIN 53513	174.0 - 479.0 1.2 - 3.3	psi N/mm²	Depending on frequency, load and thickness, see figure "dynamic stiffness"
Mechanical loss factor	DIN 53513	0.17	[-]	Load-, amplitude- and frequency-dependent
Compression set	Based on DIN EN ISO 1856	3.0	%	Measured 30 minutes after decompression with 50% deformation / 23 °C after 72 hrs
Tensile strength	Based on DIN EN ISO 1798	52.2 0.36	psi N/mm²	
Elongation at break	Based on DIN EN ISO 1798	55	%	
Tear resistance	Based on DIN ISO 34-1	25.7	lbs/in	
Fire behavior	DIN 4102 DIN EN 13501	B2 E	[-] [-]	Normal flammability
Sliding friction	in-house laboratory in-house laboratory	0.7 0.8	[-] [-]	Steel (dry) Concrete (dry)
Compression hardness	Based on DIN EN ISO 3386-2	220	kPa	Compressive stress at 25 % deformation Test specimen h = 60 mm
Rebound elasticity	Based on DIN EN ISO 8307	31	%	Depending on thickness, Test specimen h = 60 mm
Force reduction	DIN EN 14904	72	%	Depending on thickness, Test specimen h = 60 mm
Ozone resistance	DIN EN ISO 17025	Cracking stage 0	[-]	

Load Ranges



Load Deflection



Examination of deflection in accordance to DIN EN 826, between two stiff panels. Illustration based on the third loading.
Velocity of loading and unloading 20 seconds. Tested at room temperature. Dimensions of test specimens 300 mm x 300 mm.

Vibration Isolation

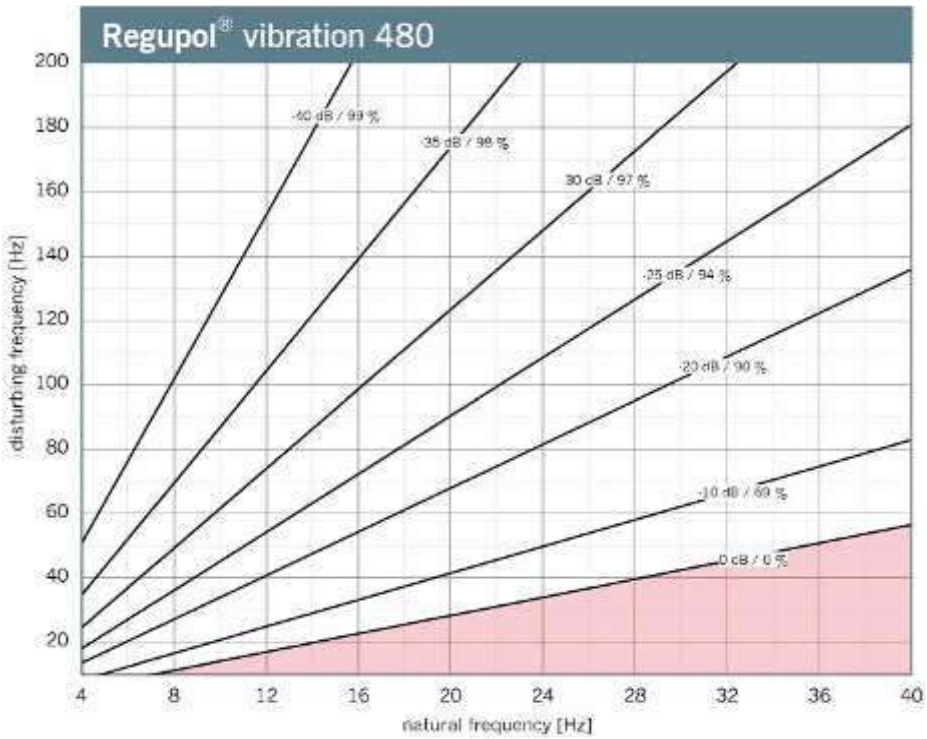
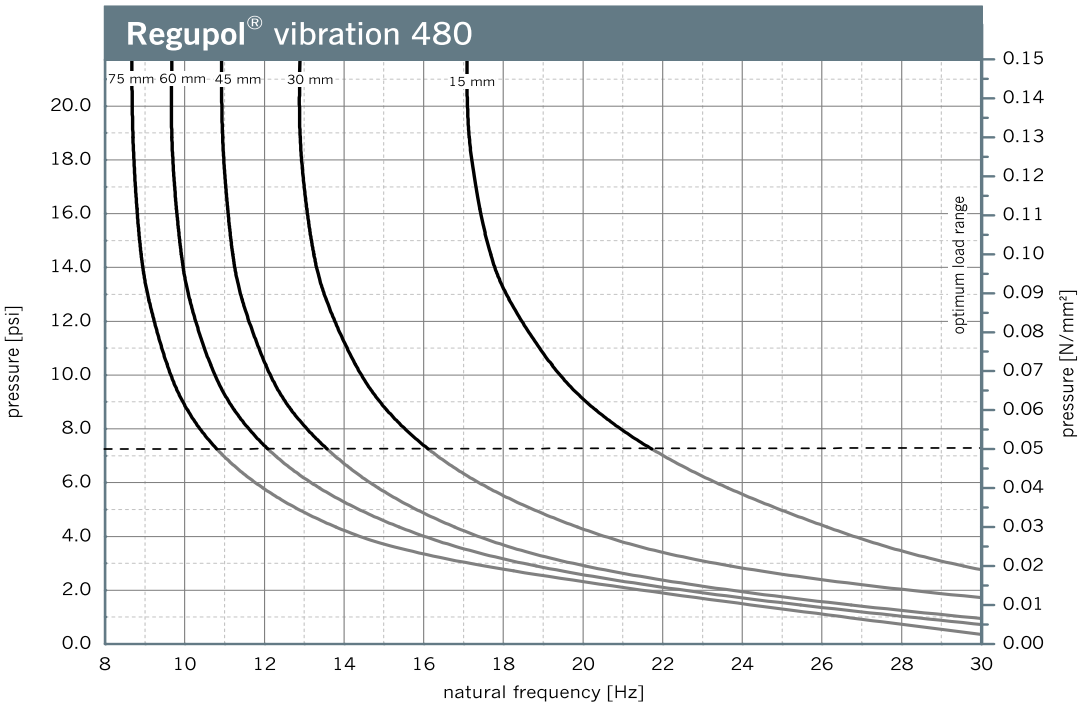


Illustration of the isolation efficiency of a single-degree-of-freedom system (SDOF system) on a rigid base with **Regupol® vibration 480**. Parameter: power transmission (insertion loss) in dB, isolation factor in %.

Natural Frequency



Natural frequency of a single-degree-of-freedom system (SDOF system) considering the dynamic stiffness of **Regupol® vibration 480** on a rigid base. Dimensions of test specimens 300 mm x 300 mm.

Modulus of Elasticity

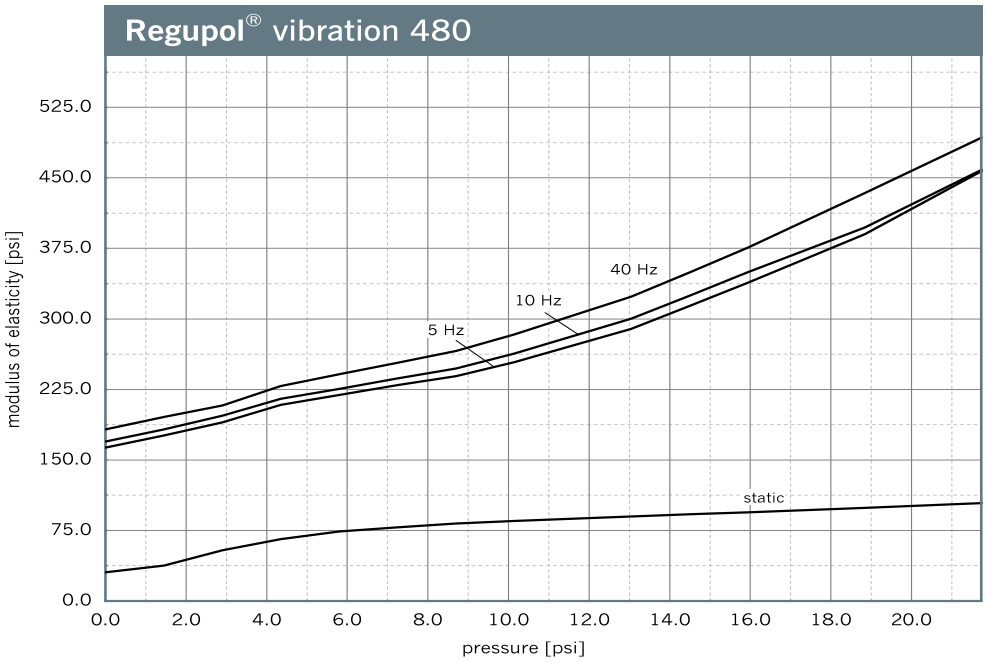


Illustration of the dynamic modulus of elasticity for sinusoidal excitation at a constant mean load and an amplitude of +/- 0.25 mm. Dimensions of specimens 300 mm x 300 mm x 45 mm; static modulus of elasticity as a result of the tangent modulus of the spring characteristic. Tested in accordance to DIN 53513.

Dynamic Stiffness

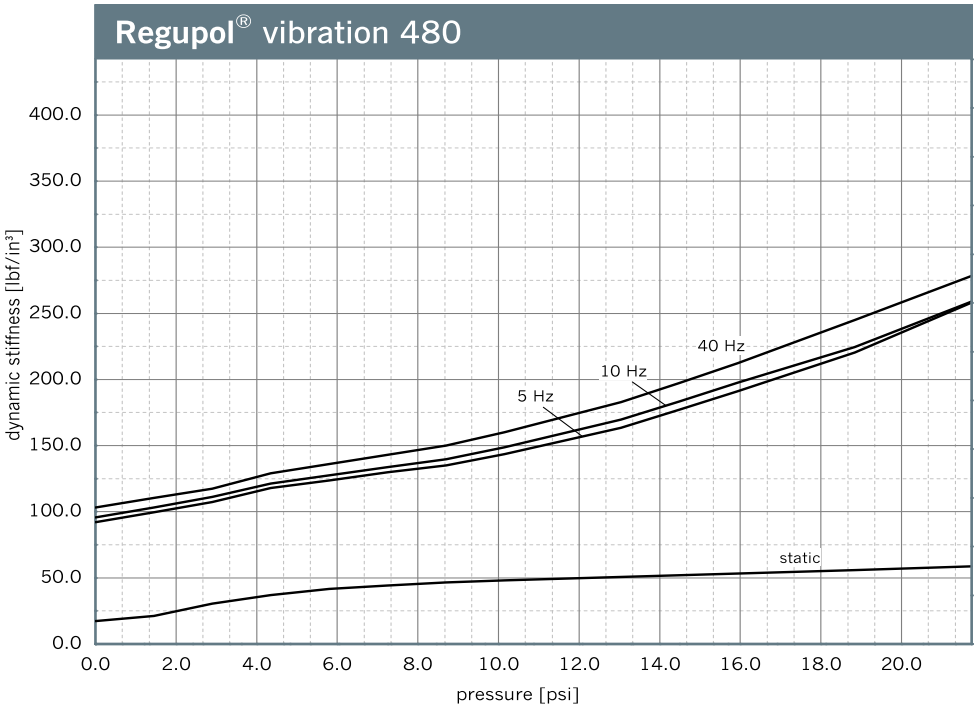
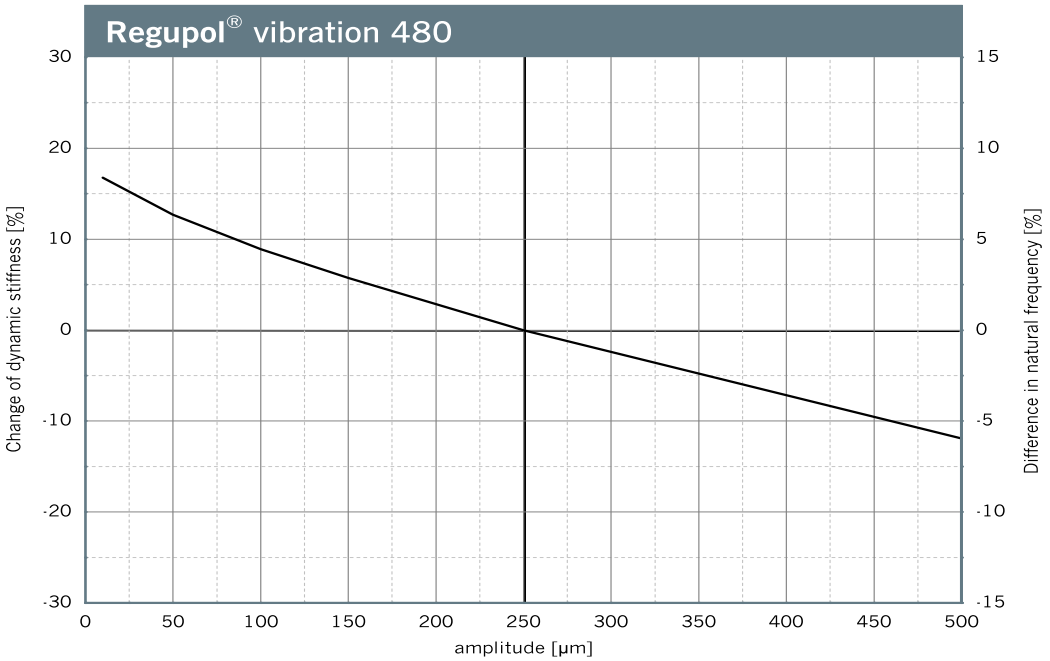
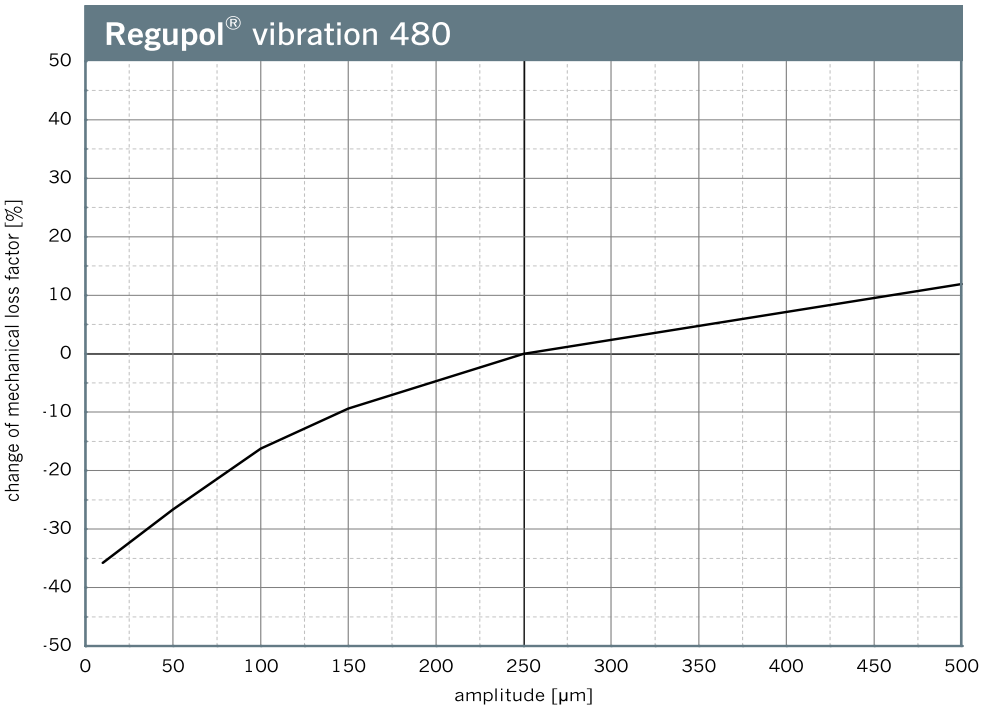


Illustration of the dynamic stiffness for sinusoidal excitation at a constant mean load and an amplitude of ± 0.25 mm. Dimension of specimens 300 x 300 x 45 mm; static stiffness as a result of the tangent modulus of the spring characteristic. Tested in accordance with DIN 53513.

Influence of Amplitude

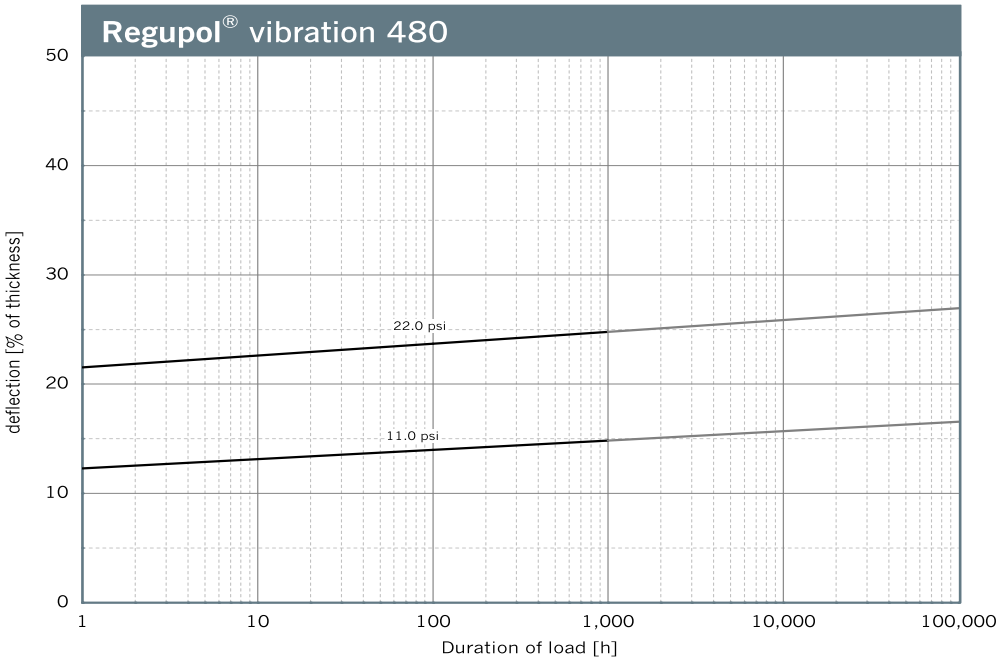


Change of the dynamic stiffness due to changes in amplitudes. Average for 5 Hz, 10 Hz and 40 Hz excitation.
Sinusoidal excitation at a constant mean load of 0.10 N/mm², dimensions of the specimens 300 x 300 x 60 mm.
Natural frequency of a single-degree-of-freedom system (SDOF system) on a rigid base.



Change of the mechanical loss factor due to changes in amplitudes.
Sinusoidal excitation at a constant mean load of 0.10 N/mm², dimensions of the specimens 300 x 300 x 60 mm.

Long-Term Creep Test



Dimension of specimens 300 x 300 x 60 mm

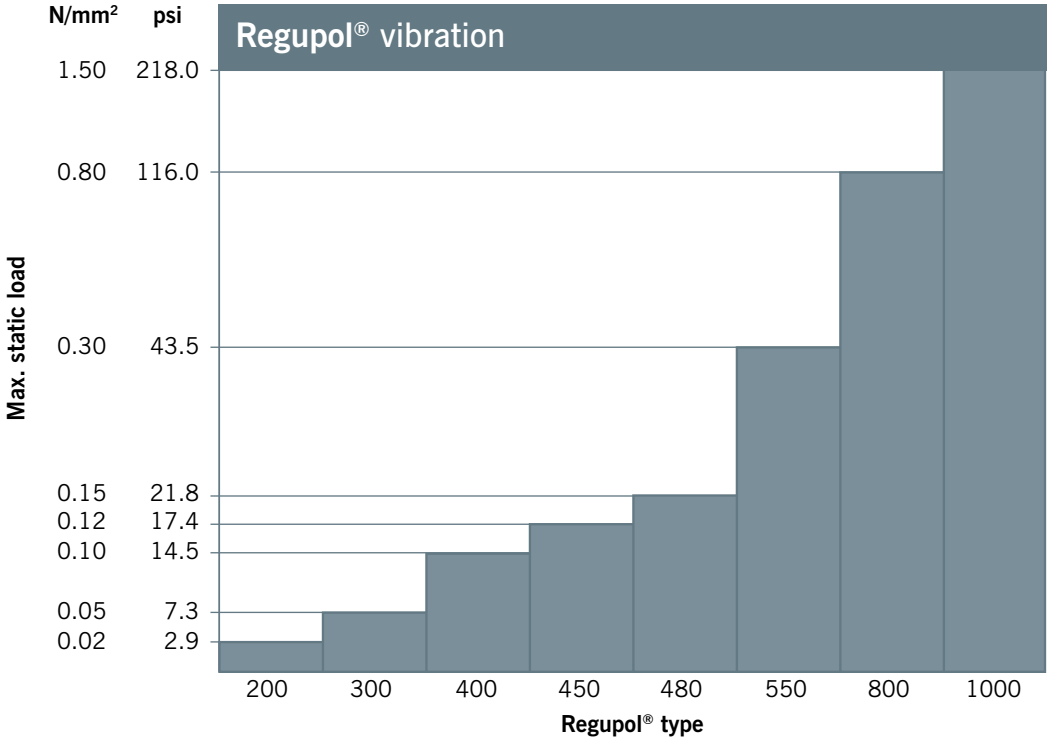
Standard forms of delivery, ex Lebanon, PA

Rolls
Thickness: 15 mm
Length: 30' (9,144 mm)
Width: 48" (1,219 mm)

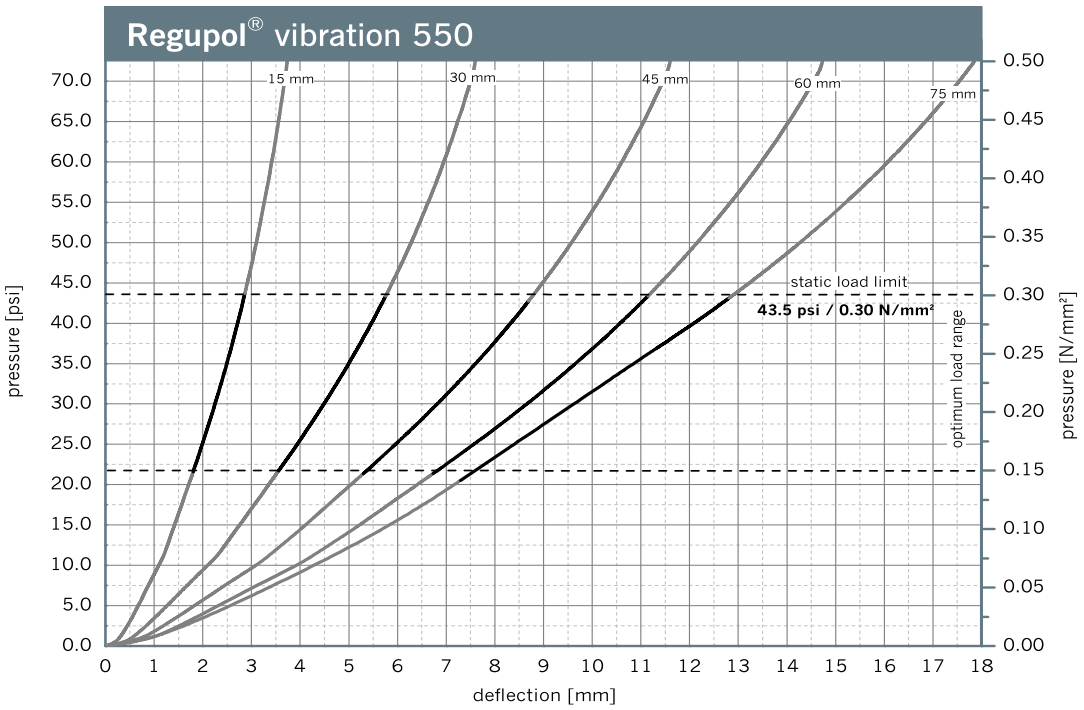
Max. static load
43.5 psi
Peak loads (rare, short-term loads)
58.0 psi

Static modulus of elasticity	Based on EN 826	72.5 - 247.0 0.5 - 1.7	psi N/mm²	Tangential modulus, see figure "Modulus of elasticity"
Dynamic modulus of elasticity	Based on DIN 53513	363.0 - 1,015 2.5 - 7.0	psi N/mm²	Depending on frequency, load and thickness, see figure "dynamic stiffness"
Mechanical loss factor	DIN 53513	0.16	[-]	Load-, amplitude- and frequency-dependent
Compression set	Based on DIN EN ISO 1856	3.4	%	Measured 30 minutes after decompression with 50% deformation / 23 °C after 72 hrs
Tensile strength	Based on DIN EN ISO 1798	87.0 0.6	psi N/mm²	
Elongation at break	Based on DIN EN ISO 1798	65	%	
Tear resistance	Based on DIN ISO 34-1	28.6	lbs/in	
Fire behavior	DIN 4102 DIN EN 13501	B2 E	[-] [-]	Normal flammability
Sliding friction	in-house laboratory in-house laboratory	0.7 0.8	[-] [-]	Steel (dry) Concrete (dry)
Compression hardness	Based on DIN EN ISO 3386-2	415	kPa	Compressive stress at 25 % deformation Test specimen h = 60 mm
Rebound elasticity	Based on DIN EN ISO 8307	36	%	Depending on thickness, Test specimen h = 60 mm
Force reduction	DIN EN 14904	65	%	Depending on thickness, Test specimen h = 60 mm
Ozone resistance	DIN EN ISO 17025	Cracking stage 0	[-]	

Load Ranges



Load Deflection



Examination of deflection in accordance to DIN EN 826, between two stiff panels. Illustration based on the third loading. Velocity of loading and unloading 20 seconds. Tested at room temperature. Dimensions of test specimens 300 mm x 300 mm.

Vibration Isolation

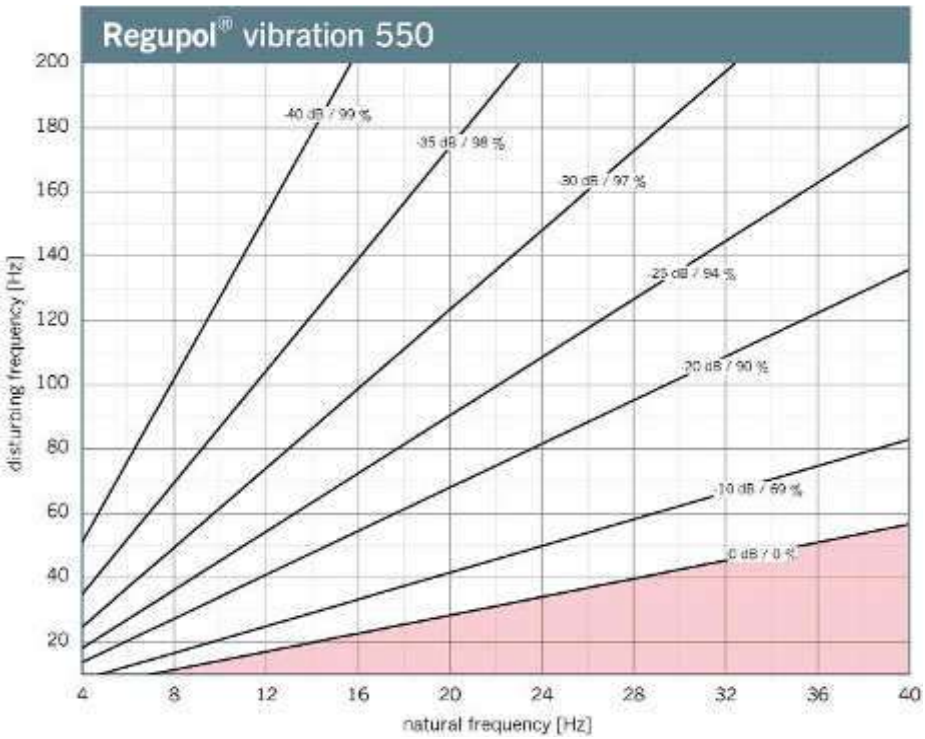
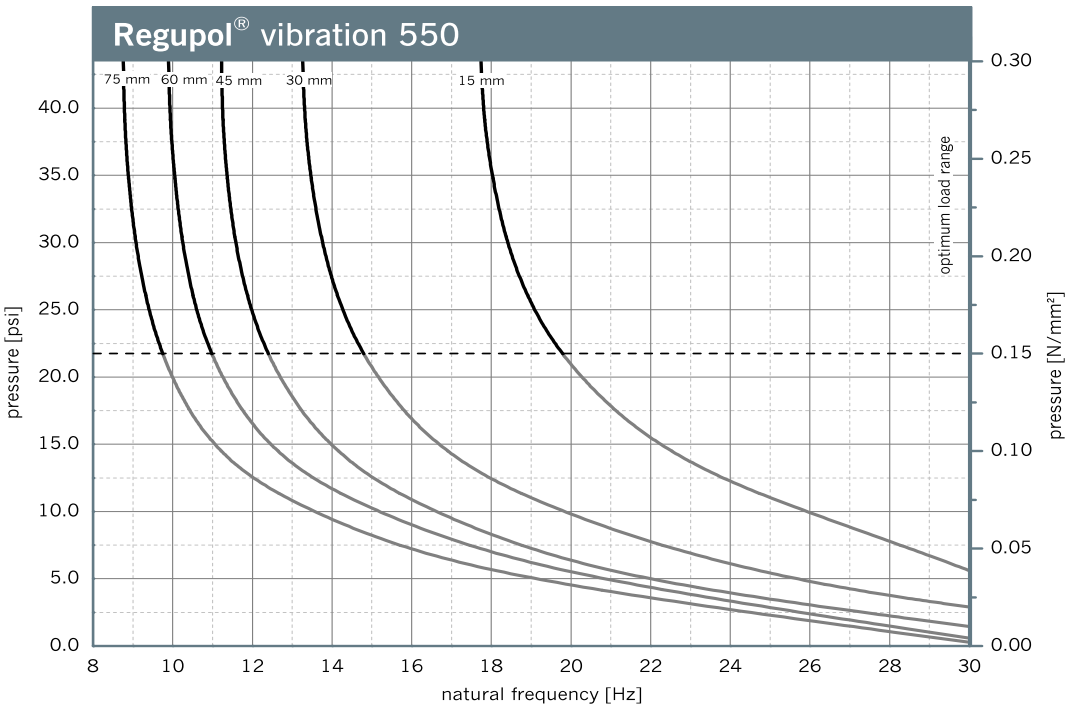


Illustration of the isolation efficiency of a single-degree-of-freedom system (SDOF system) on a rigid base with **Regupol® vibration 550**. Parameter: power transmission (insertion loss) in dB, isolation factor in %.

Natural Frequency



Natural frequency of a single-degree-of-freedom system (SDOF system) considering the dynamic stiffness of **Regupol® vibration 550** on a rigid base. Dimensions of test specimens 300 mm x 300 mm.

Modulus of Elasticity

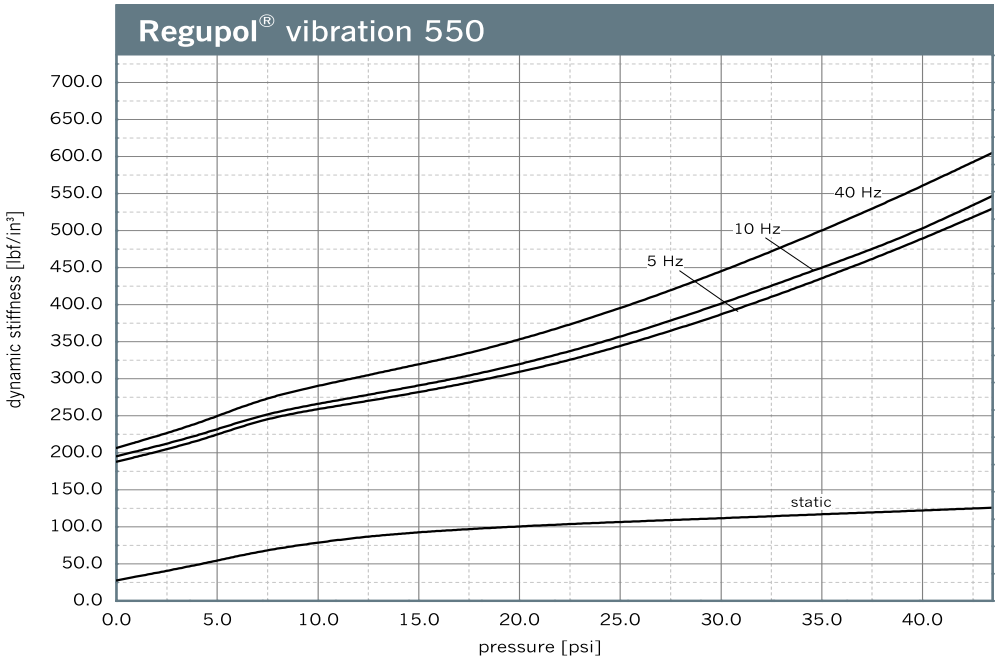


Illustration of the dynamic stiffness for sinusoidal excitation at a constant mean load and an amplitude of ± 0.25 mm. Dimension of specimens 300 x 300 x 45 mm; static stiffness as a result of the tangent modulus of the spring characteristic. Tested in accordance with DIN 53513.

Dynamic Stiffness

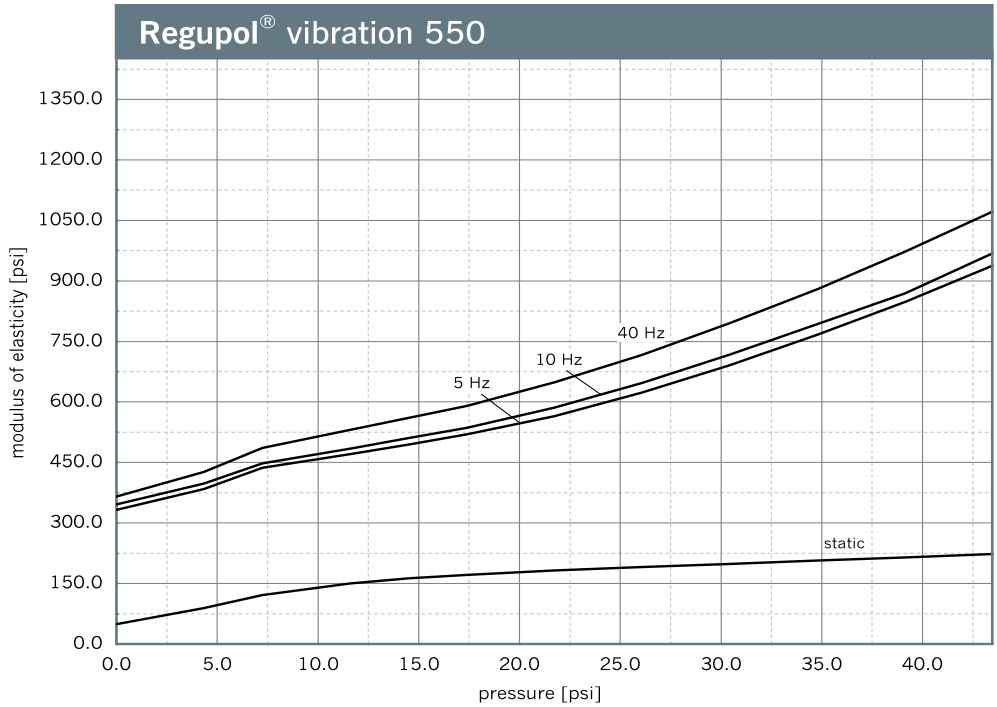
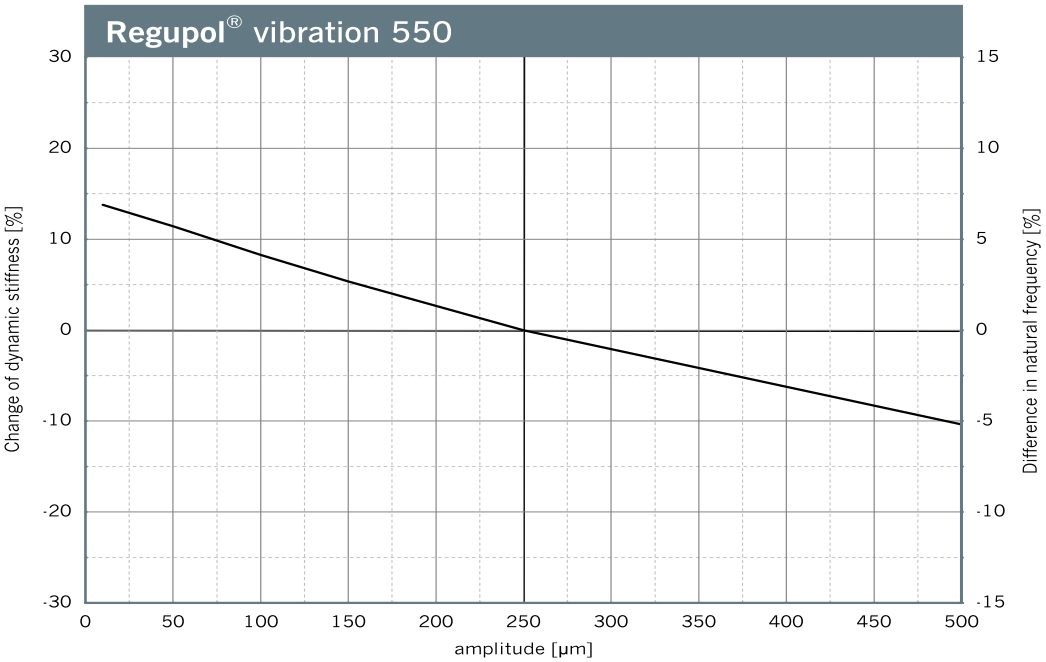
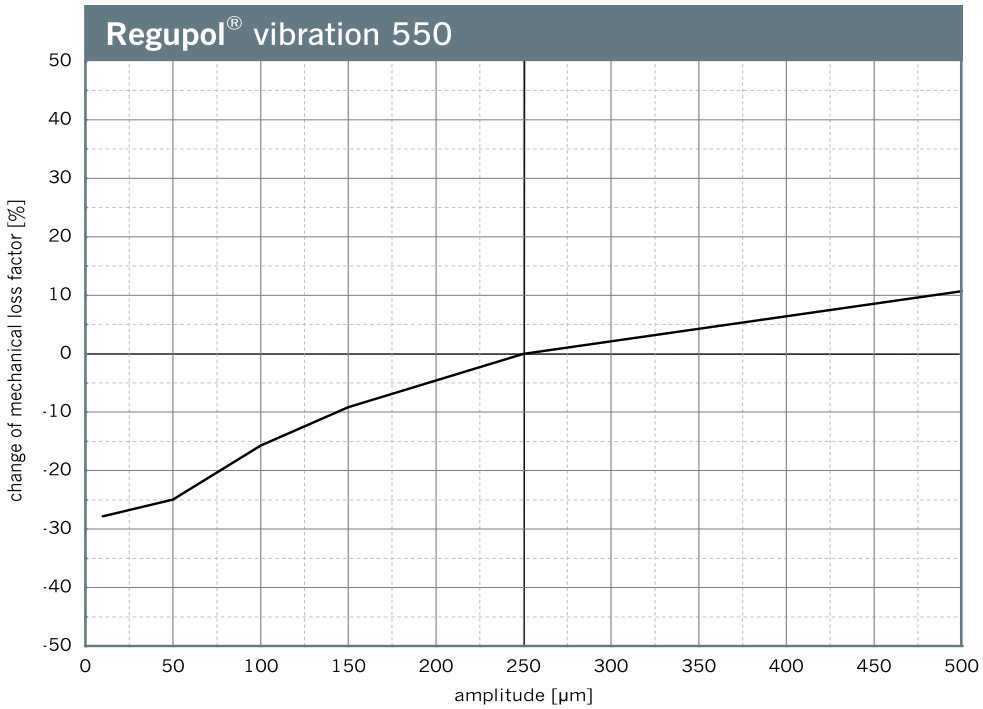


Illustration of the dynamic modulus of elasticity for sinusoidal excitation at a constant mean load and an amplitude of +/- 0.25 mm. Dimensions of specimens 300 mm x 300 mm x 45 mm; static modulus of elasticity as a result of the tangent modulus of the spring characteristic. Tested in accordance to DIN 53513.

Influence of Amplitude

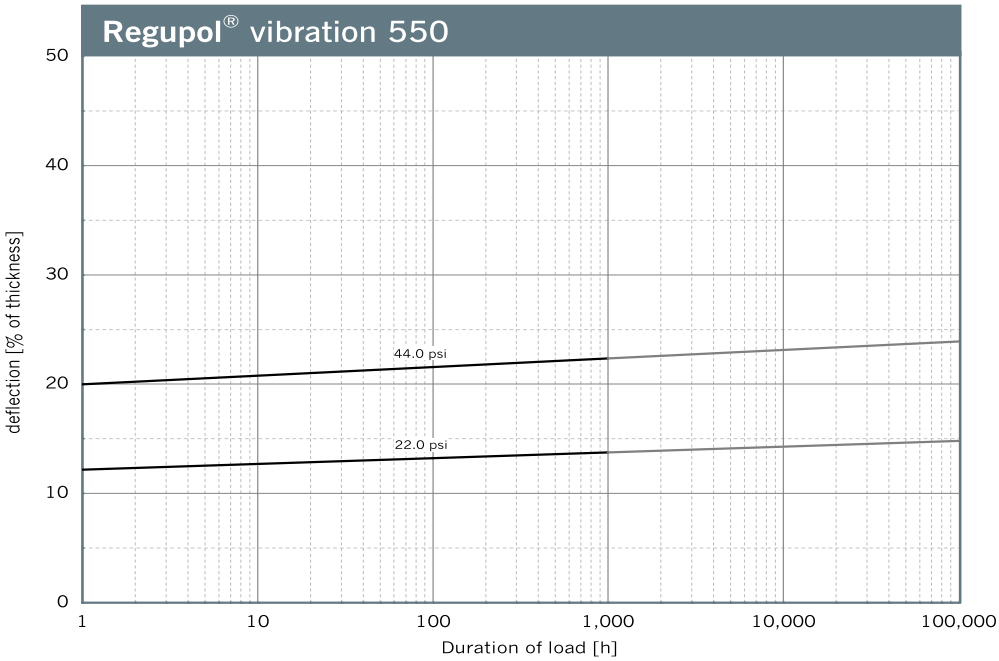


Change of the dynamic stiffness due to changes in amplitudes. Average for 5 Hz, 10 Hz and 40 Hz excitation.
Sinusoidal excitation at a constant mean load of 0.25 N/mm², dimensions of the specimens 300 x 300 x 60 mm.
Natural frequency of a single-degree-of-freedom system (SDOF system) on a rigid base.



Change of the mechanical loss factor due to changes in amplitudes.
Sinusoidal excitation at a constant mean load of 0.25 N/mm², dimensions of the specimens 300 x 300 x 60 mm.

Long-Term Creep Test



Dimension of specimens 300 x 300 x 60 mm

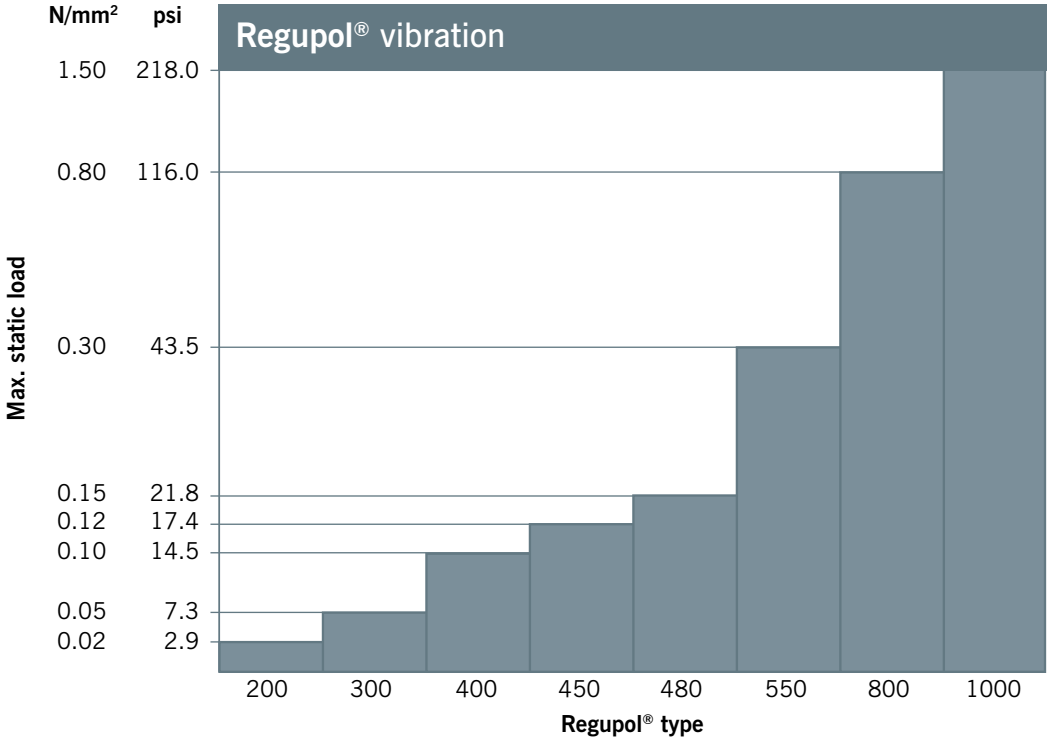
Standard forms of delivery, ex Lebanon, PA

Rolls
Thickness: 10 mm
Length: 30' (9,144 mm)
Width: 48" (1,219 mm)

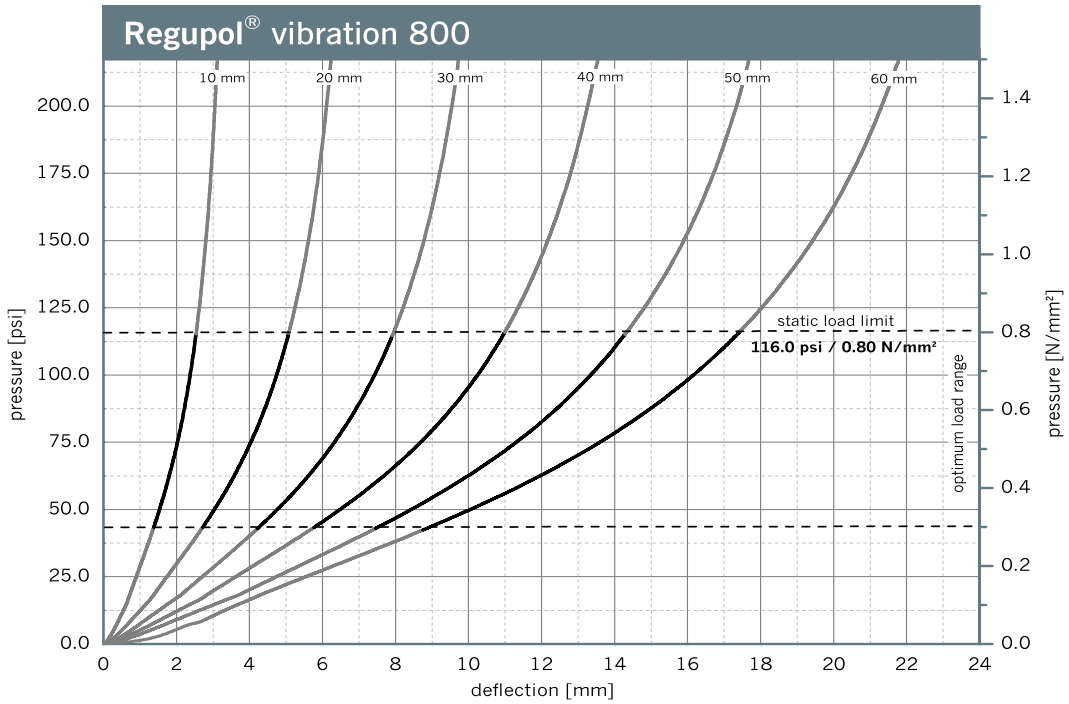
Max. static load
116.0 psi
Peak loads (rare, short-term loads)
145.0 psi

Static modulus of elasticity	Based on EN 826	174.0 - 421.0 1.2 - 2.9	psi N/mm²	Tangential modulus, see figure "Modulus of elasticity"
Dynamic modulus of elasticity	Based on DIN 53513	522.0 - 2,640 3.6 - 18.2	psi N/mm²	Depending on frequency, load and thickness, see figure "dynamic stiffness"
Mechanical loss factor	DIN 53513	0.18	[-]	Load-, amplitude- and frequency-dependent
Compression set	Based on DIN EN ISO 1856	3.7	%	Measured 30 minutes after decompression with 50% deformation / 23 °C after 72 hrs
Tensile strength	Based on DIN EN ISO 1798	130.5 0.9	psi N/mm²	
Elongation at break	Based on DIN EN ISO 1798	70	%	
Tear resistance	Based on DIN ISO 34-1	45.7	lbs/in	
Fire behavior	DIN 4102 DIN EN 13501	B2 E	[-] [-]	Normal flammability
Sliding friction	in-house laboratory in-house laboratory	0.7 0.8	[-] [-]	Steel (dry) Concrete (dry)
Compression hardness	Based on DIN EN ISO 3386-2	545	kPa	Compressive stress at 25 % deformation Test specimen h = 60 mm
Rebound elasticity	Based on DIN EN ISO 8307	30	%	Depending on thickness, Test specimen h = 60 mm
Force reduction	DIN EN 14904	61	%	Depending on thickness, Test specimen h = 60 mm
Ozone resistance	DIN EN ISO 17025	Cracking stage 0	[-]	

Load Ranges



Load Deflection



Examination of deflection in accordance to DIN EN 826, between two stiff panels. Illustration based on the third loading.
Velocity of loading and unloading 20 seconds. Tested at room temperature. Dimensions of test specimens 250 mm x 250 mm.

Vibration Isolation

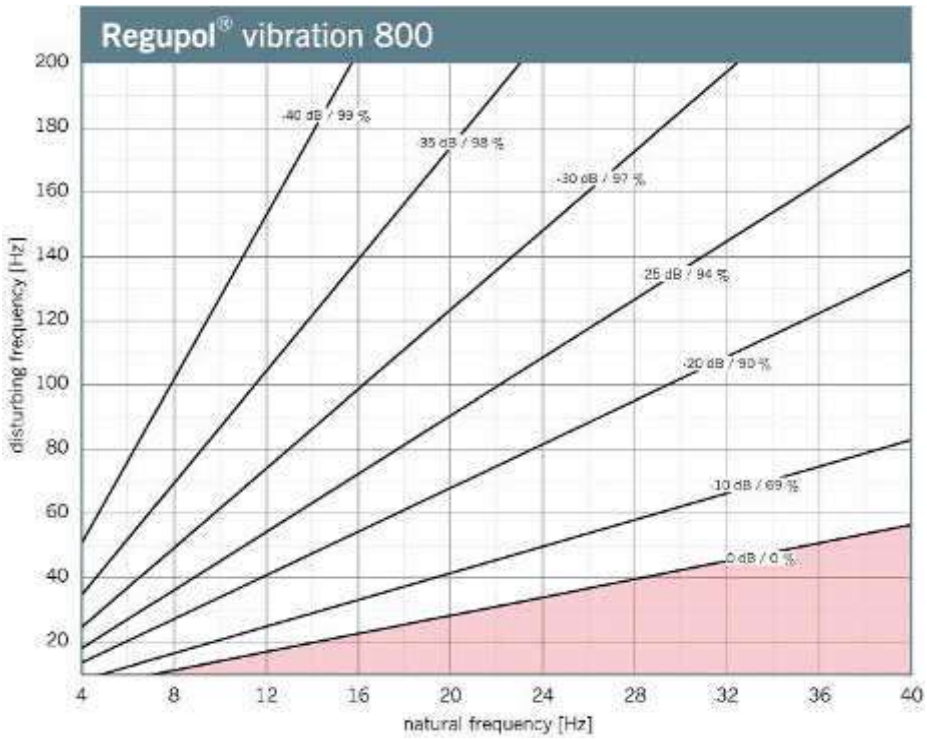
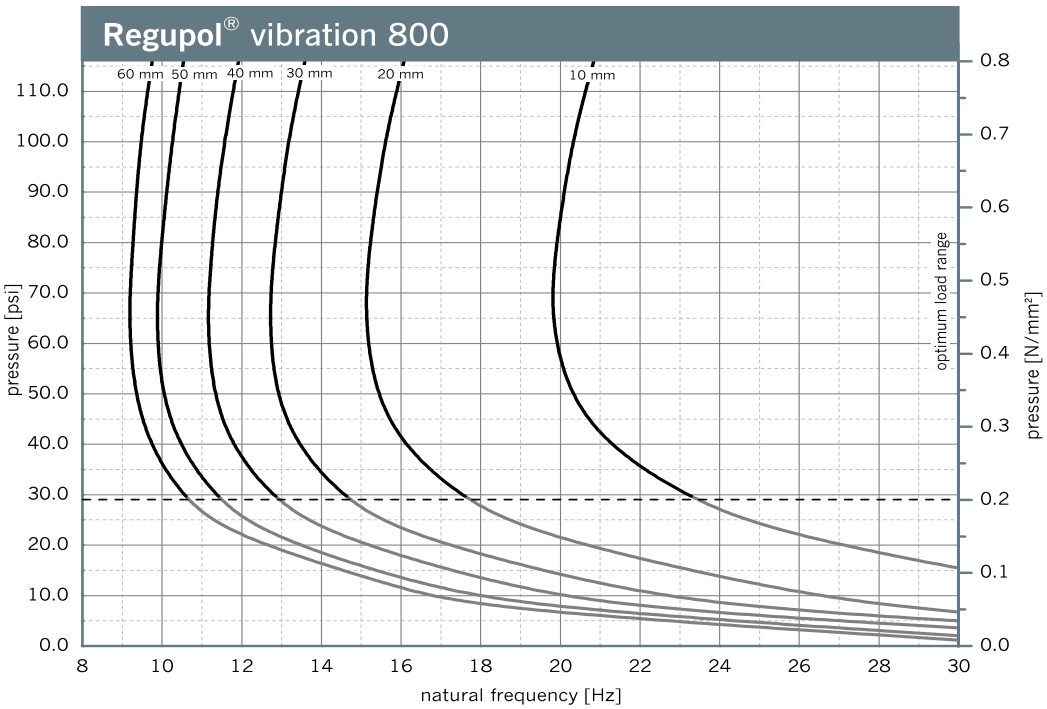


Illustration of the isolation efficiency of a single-degree-of-freedom system (SDOF system) on a rigid base with **Regupol® vibration 800**. Parameter: power transmission (insertion loss) in dB, isolation factor in %.

Natural Frequency



Natural frequency of a single-degree-of-freedom system (SDOF system) considering the dynamic stiffness of **Regupol® vibration 800** on a rigid base. Dimensions of test specimens 250 mm x 250 mm.

Modulus of Elasticity

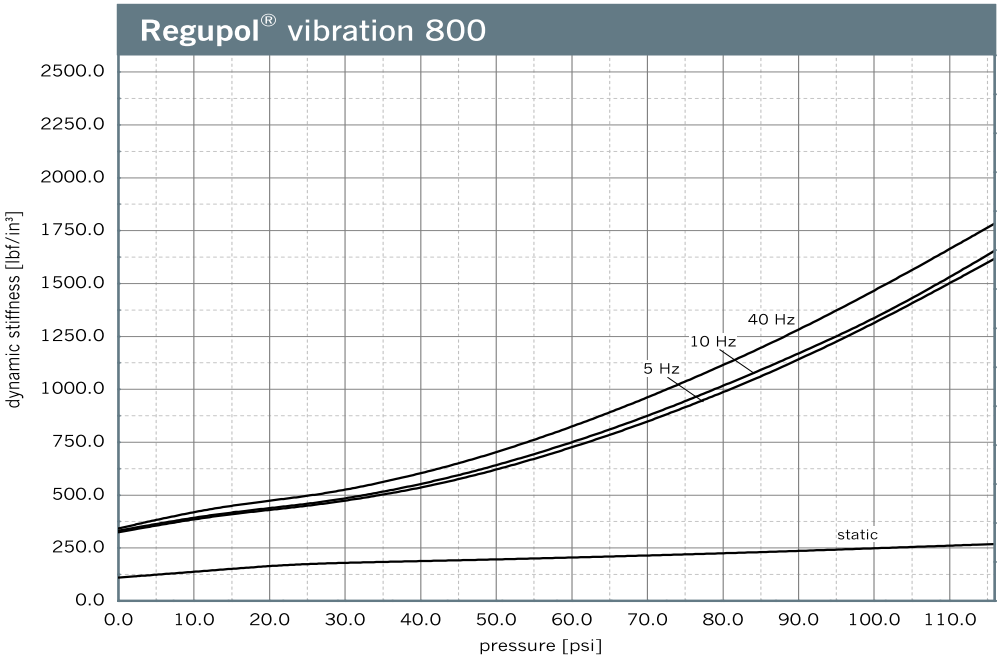


Illustration of the dynamic stiffness for sinusoidal excitation at a constant mean load and an amplitude of ± 0.25 mm. Dimension of specimens 250 x 250 x 40 mm; static stiffness as a result of the tangent modulus of the spring characteristic. Tested in accordance with DIN 53513.

Dynamic Stiffness

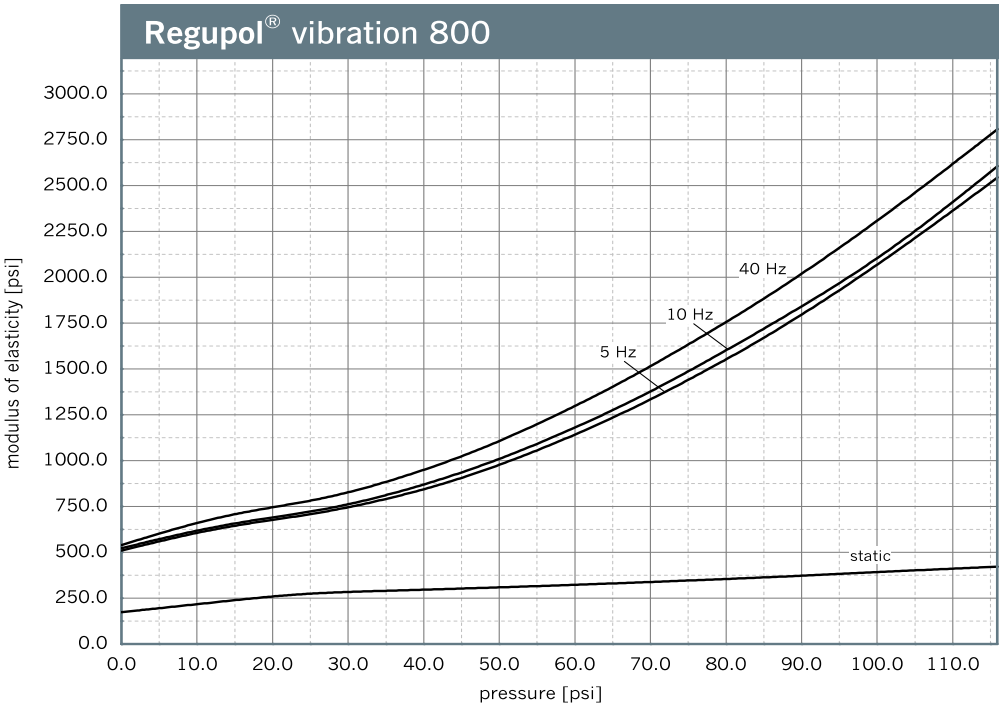
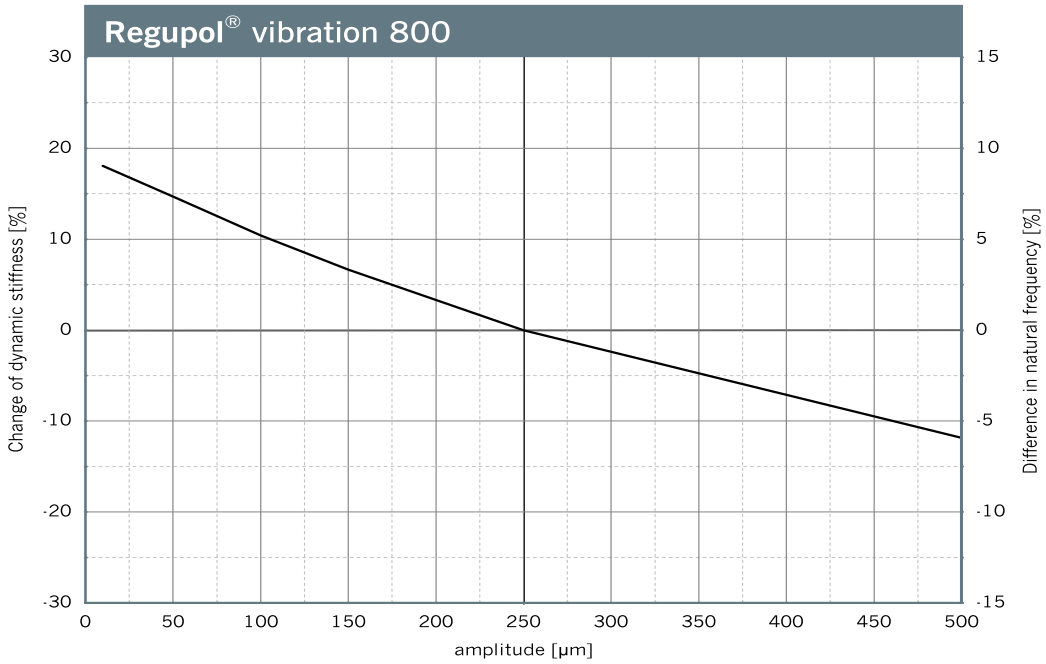
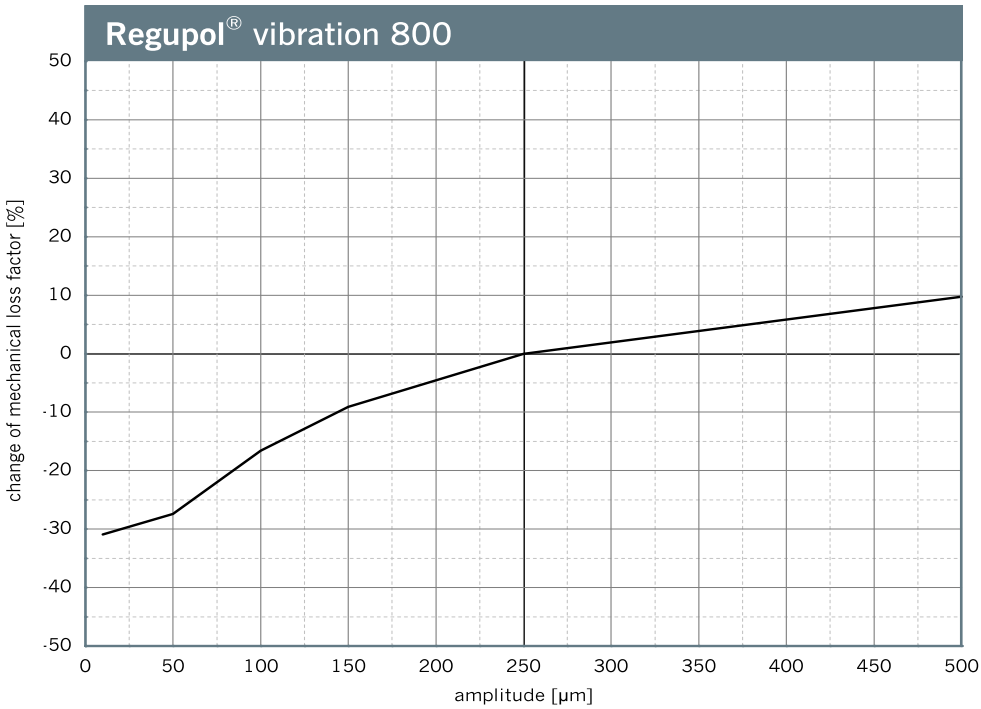


Illustration of the dynamic modulus of elasticity for sinusoidal excitation at a constant mean load and an amplitude of +/- 0.25 mm. Dimensions of specimens 250 mm x 250 mm x 40 mm; static modulus of elasticity as a result of the tangent modulus of the spring characteristic. Tested in accordance to DIN 53513.

Influence of Amplitude

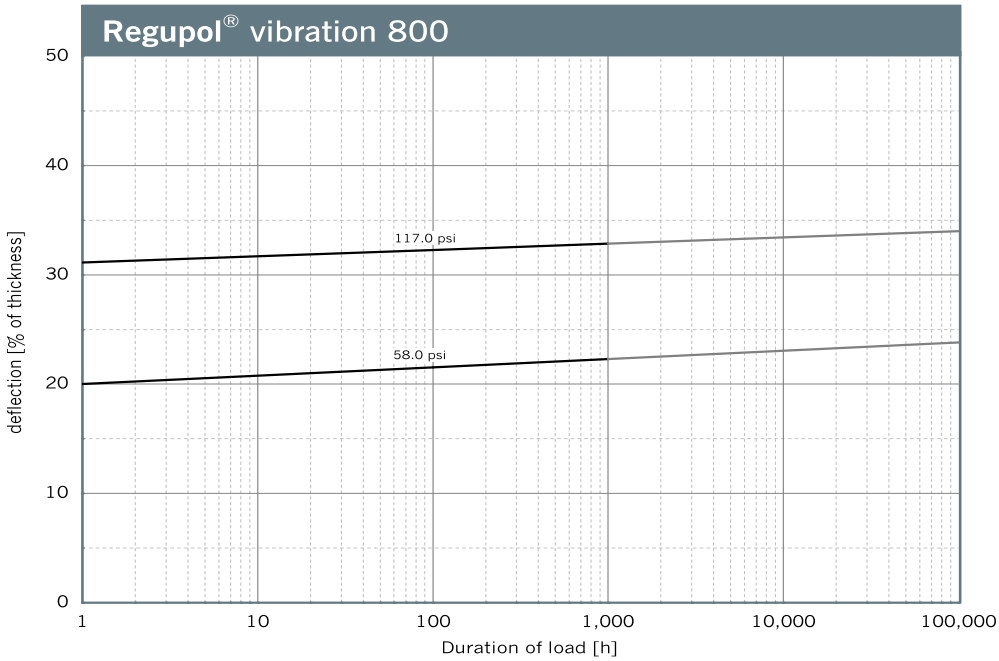


Change of the dynamic stiffness due to changes in amplitudes. Average for 5 Hz, 10 Hz and 40 Hz excitation.
Sinusoidal excitation at a constant mean load of 0.80 N/mm², dimensions of the specimens 250 x 250 x 60 mm.
Natural frequency of a single-degree-of-freedom system (SDOF system) on a rigid base.



Change of the mechanical loss factor due to changes in amplitudes.
Sinusoidal excitation at a constant mean load of 0.80 N/mm², dimensions of the specimens 250 x 250 x 60 mm.

Long-Term Creep Test



Dimension of specimens 250 x 250 x 60 mm

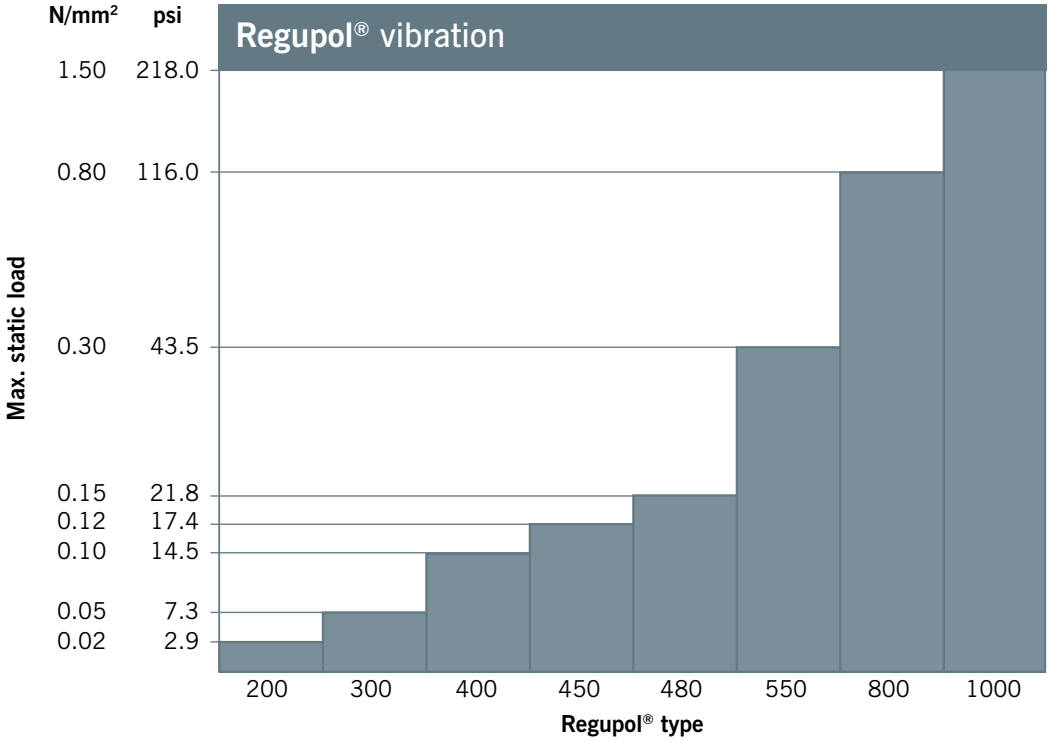
Standard forms of delivery, ex Lebanon, PA

Rolls
Thickness: 10 mm
Length: 30' (9,144 mm)
Width: 48" (1,219 mm)

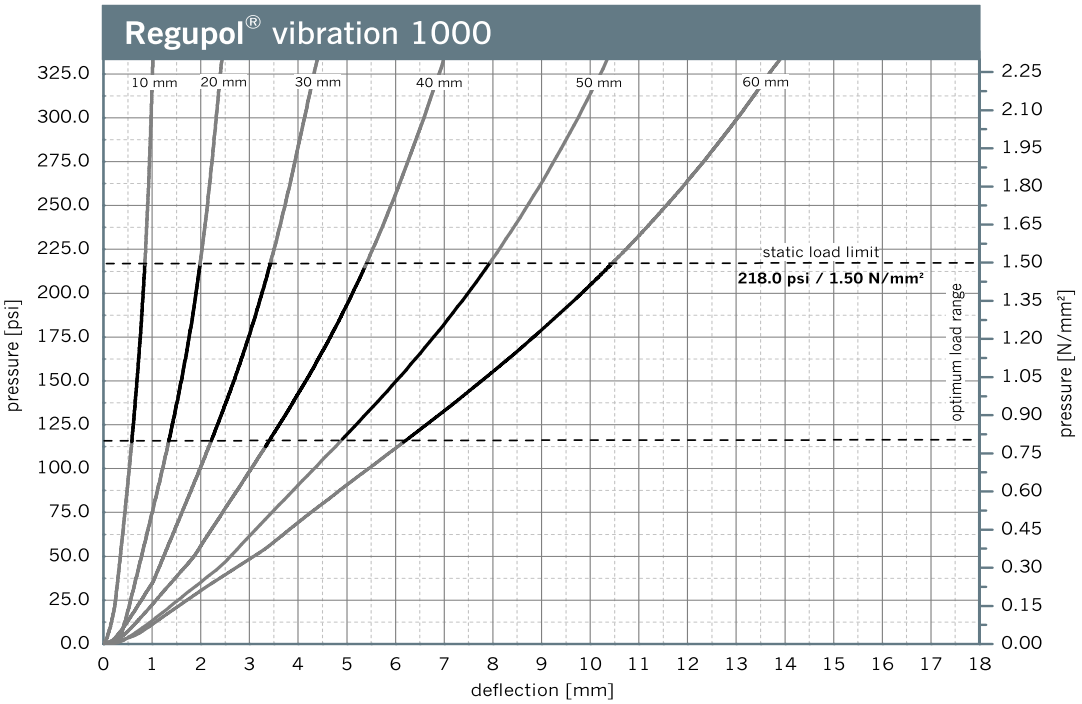
Max. static load
218.0 psi
Peak loads (rare, short-term loads)
254.0 psi

Static modulus of elasticity	Based on EN 826	580 - 1,595 4.0 - 11.0	psi N/mm²	Tangential modulus, see figure "Modulus of elasticity"
Dynamic modulus of elasticity	Based on DIN 53513	2,176 - 6,527 15.0 - 45.0	psi N/mm²	Depending on frequency, load and thickness, see figure "dynamic stiffness"
Mechanical loss factor	DIN 53513	0.16	[-]	Load-, amplitude- and frequency-dependent
Compression set	Based on DIN EN ISO 1856	4.9	%	Measured 30 minutes after decompression with 50% deformation / 23 °C after 72 hrs
Tensile strength	Based on DIN EN ISO 1798	336.6 2.3	psi N/mm²	
Elongation at break	Based on DIN EN ISO 1798	110	%	
Tear resistance	Based on DIN ISO 34-1	85.7	lbs/in	
Fire behavior	DIN 4102 DIN EN 13501	B2 E	[-] [-]	Normal flammability
Sliding friction	in-house laboratory in-house laboratory	0.6 0.7	[-] [-]	Steel (dry) Concrete (dry)
Compression hardness	Based on DIN EN ISO 3386-2	1650	kPa	Compressive stress at 25 % deformation Test specimen h = 60 mm
Rebound elasticity	Based on DIN EN ISO 8307	37	%	Depending on thickness, Test specimen h = 60 mm
Force reduction	DIN EN 14904	45	%	Depending on thickness, Test specimen h = 60 mm
Ozone resistance	DIN EN ISO 17025	Cracking stage 0	[-]	

Load Ranges



Load Deflection



Examination of deflection in accordance to DIN EN 826, between two stiff panels. Illustration based on the third loading. Velocity of loading and unloading 20 seconds. Tested at room temperature. Dimensions of test specimens 200 mm x 200 mm.

Vibration Isolation

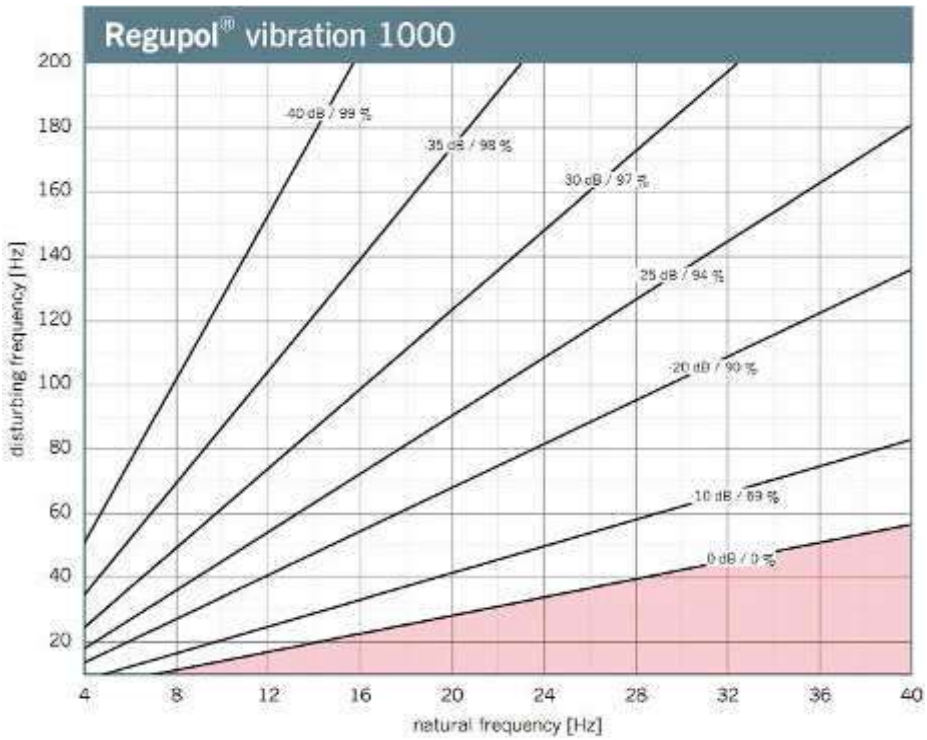
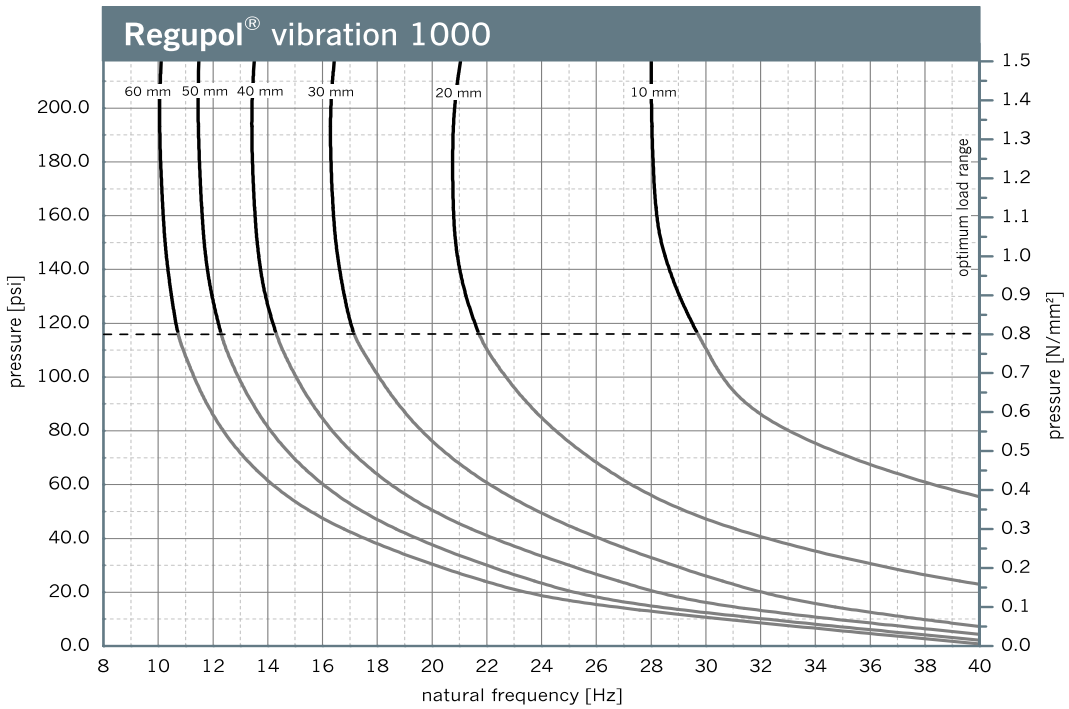


Illustration of the isolation efficiency of a single-degree-of-freedom system (SDOF system) on a rigid base with **Regupol® vibration 1000**. Parameter: power transmission (insertion loss) in dB, isolation factor in %.

Natural Frequency



Natural frequency of a single-degree-of-freedom system (SDOF system) considering the dynamic stiffness of **Regupol® vibration 1000** on a rigid base. Dimensions of test specimens 200 mm x 200 mm.

Modulus of Elasticity

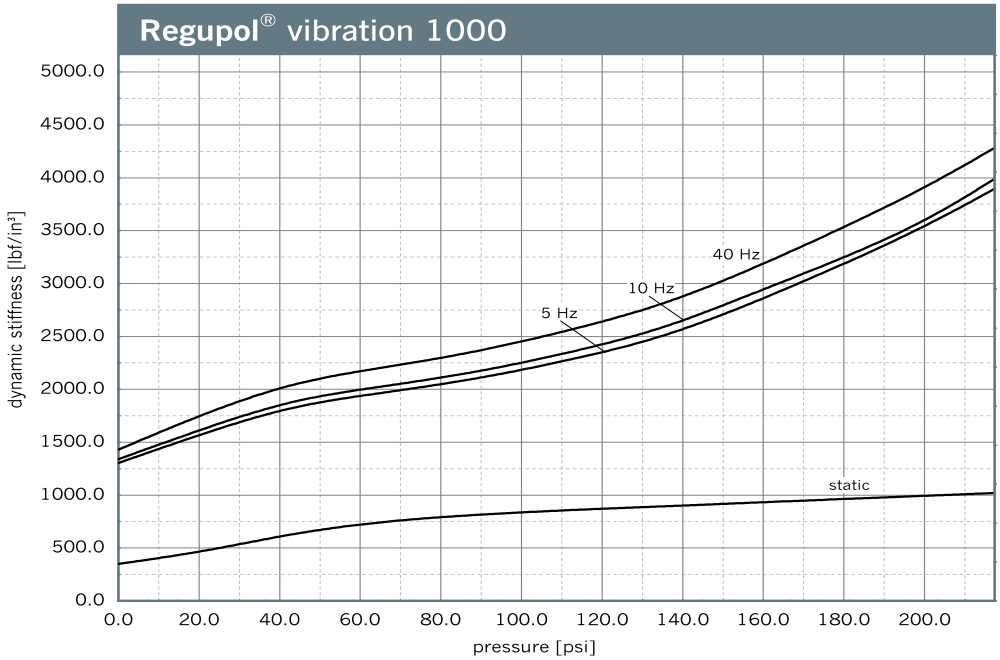


Illustration of the dynamic stiffness for sinusoidal excitation at a constant mean load and an amplitude of ± 0.25 mm. Dimension of specimens 200 x 200 x 40 mm; static stiffness as a result of the tangent modulus of the spring characteristic. Tested in accordance with DIN 53513.

Dynamic Stiffness

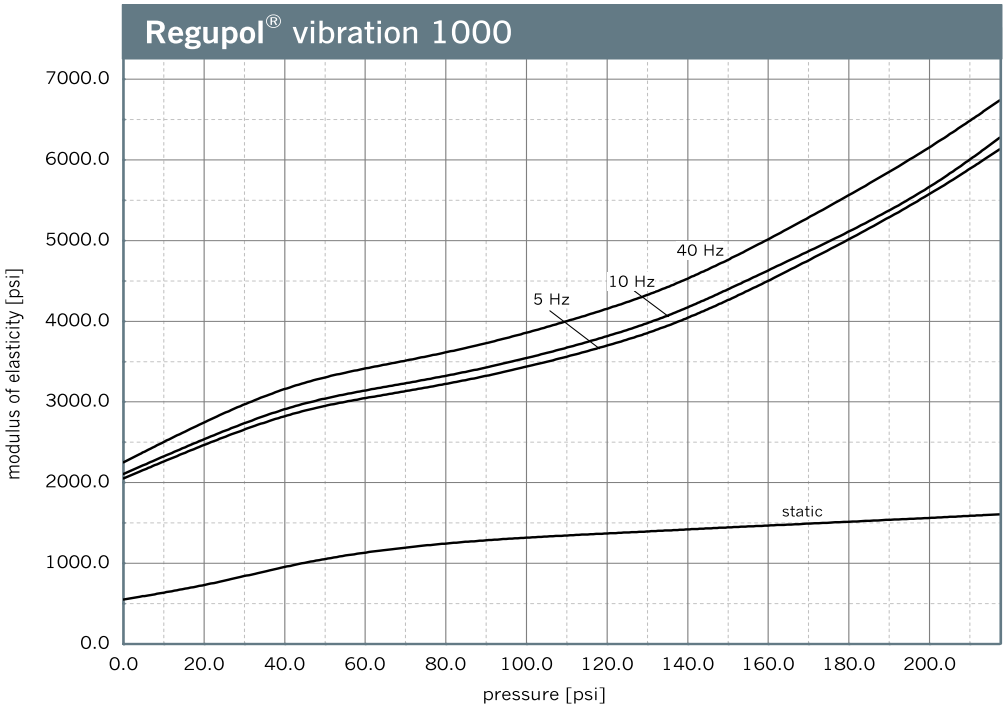
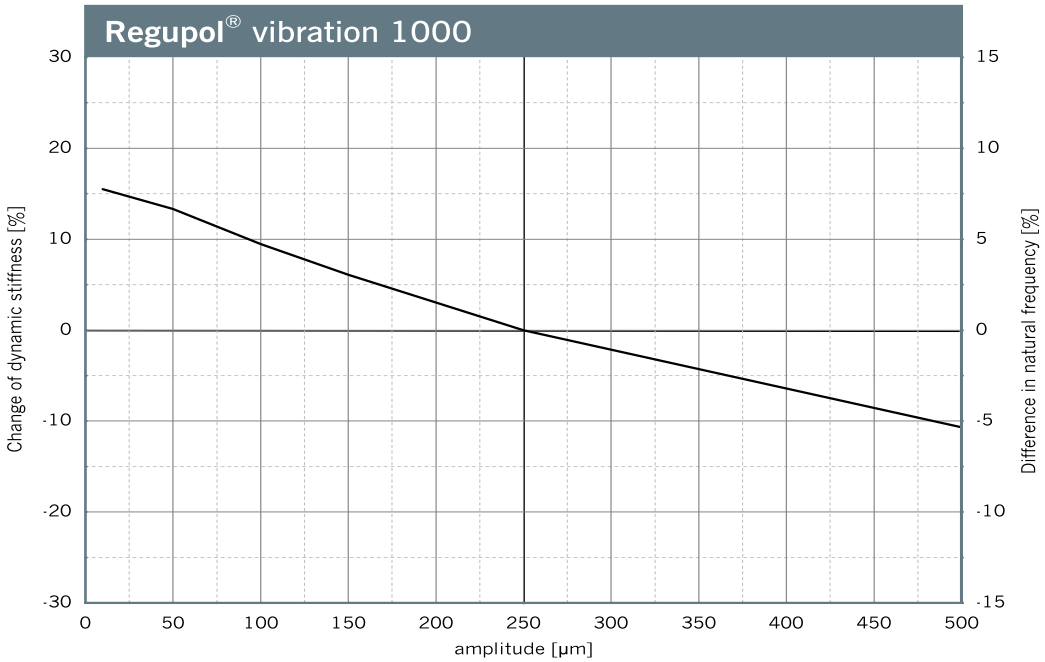
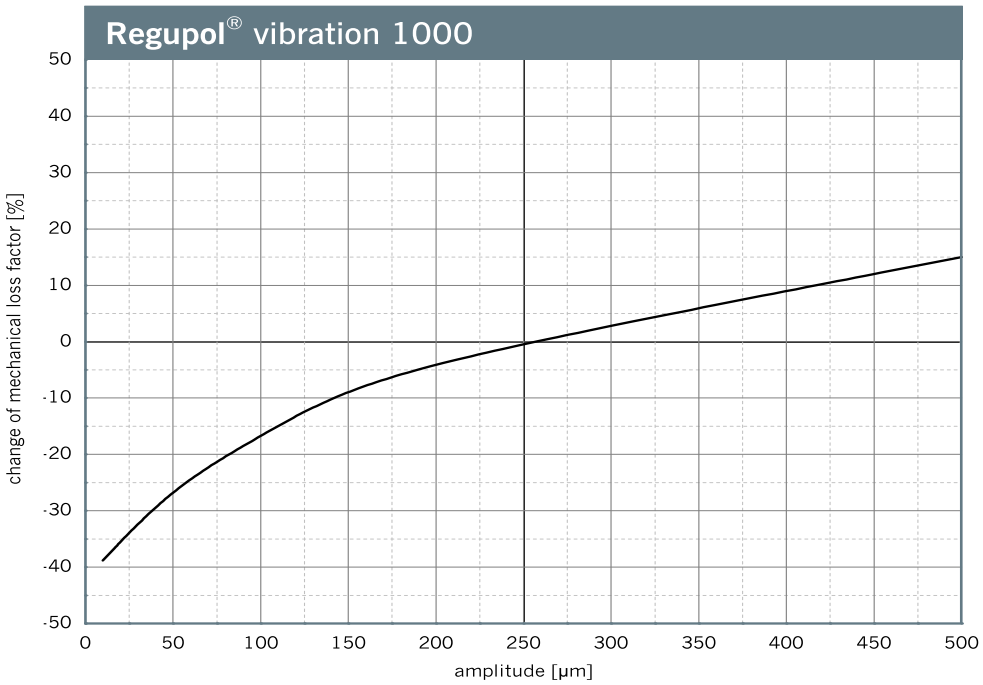


Illustration of the dynamic modulus of elasticity for sinusoidal excitation at a constant mean load and an amplitude of +/- 0.25 mm. Dimensions of specimens 200 mm x 200 mm x 40 mm; static modulus of elasticity as a result of the tangent modulus of the spring characteristic. Tested in accordance to DIN 53513.

Influence of Amplitude

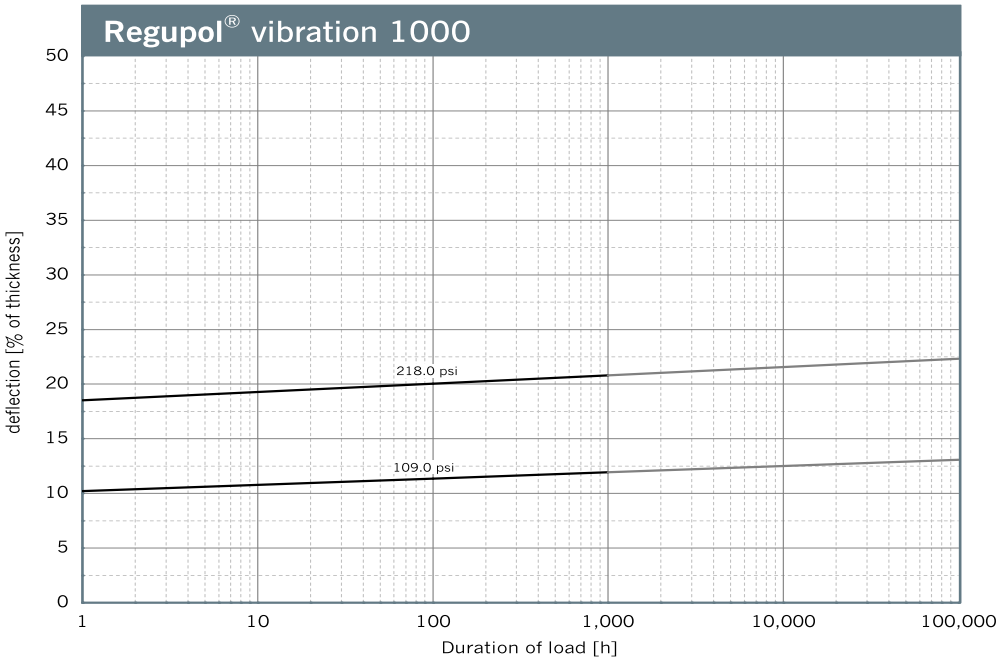


Change of the dynamic stiffness due to changes in amplitudes. Average for 5 Hz, 10 Hz and 40 Hz excitation.
Sinusoidal excitation at a constant mean load of 1.50 N/mm², dimensions of the specimens 200 x 200 x 60 mm.
Natural frequency of a single-degree-of-freedom system (SDOF system) on a rigid base.



Change of the mechanical loss factor due to changes in amplitudes.
Sinusoidal excitation at a constant mean load of 1.50 N/mm², dimensions of the specimens 200 x 200 x 60 mm.

Long-Term Creep Test



Dimension of specimens 200 x 200 x 60 mm

Regufoam®

Technical Data

Regufoam in:
Railway Station Sternschanze Hamburg, Wisseloord Studios Hilversum, Machine Foundations

REGUPOL AMERICA

Standard forms of delivery, ex Lebanon, PA

Sheets

Thickness:	25 mm and 12.5 mm Custom thicknesses available on request
Length:	16.4' (5,000 mm)
Width:	59" (1,500 mm)

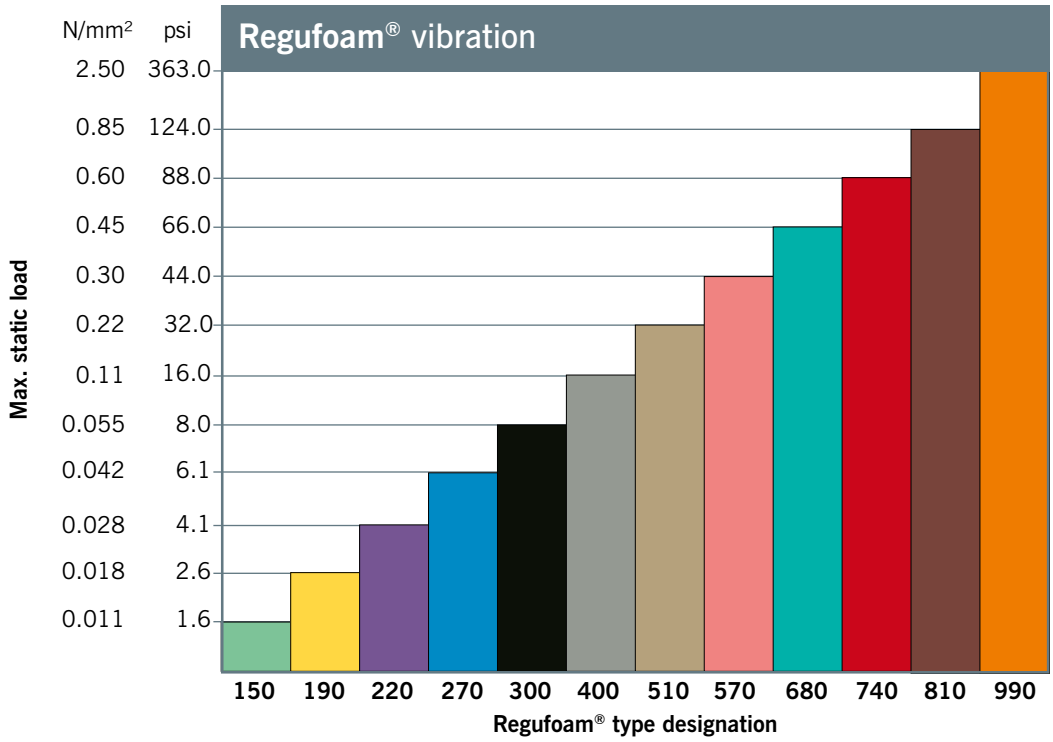
Max. static load
1.6 psi

Peak loads (rare, short-term loads)
up to 72.5 psi

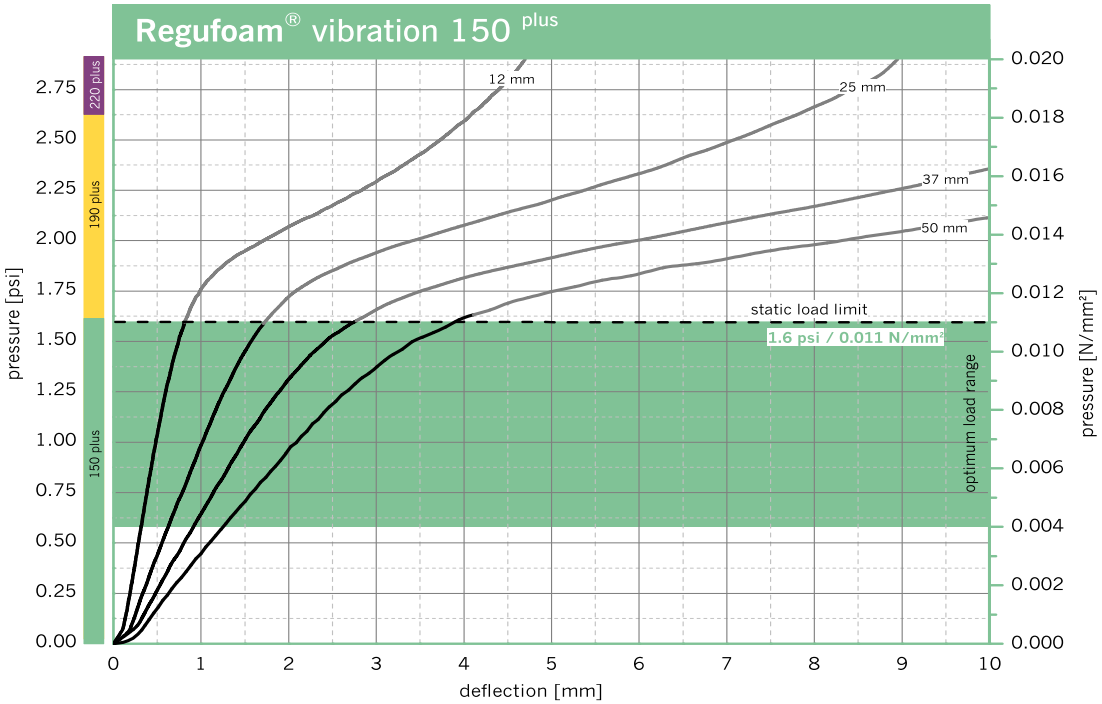
Color: Green

Static modulus of elasticity	Based on EN 826	8.7 - 23.2 0.06 - 0.16	psi N/mm²	Tangential modulus, see figure "Modulus of elasticity"
Dynamic modulus of elasticity	Based on DIN 53513	21.8 - 55.1 0.15 - 0.38	psi N/mm²	Depending on frequency, load and thickness, see figure "dynamic stiffness"
Mechanical loss factor	DIN 53513	0.28	[-]	Load-, amplitude- and frequency-dependent
Compression set	Based on DIN EN ISO 1856	1.6	%	Measured 30 minutes after decompression with 50% deformation / 23 °C after 72 hrs
Tensile strength	Based on DIN EN ISO 1798	45.0 0.31	psi N/mm²	
Elongation at break	Based on DIN EN ISO 1798	220	%	
Tear resistance	Based on DIN ISO 34-1	6.9	lbs/in	
Fire behavior	DIN 4102 DIN EN 13501	B2 E	[-] [-]	Normal flammability
Sliding friction	BSW-laboratory BSW-laboratory	0.7 0.8	[-] [-]	Steel (dry) Concrete (dry)
Compression hardness	Based on DIN EN ISO 3386-2	14	kPa	Compressive stress at 25 % deformation Test specimen h = 25 mm
Rebound elasticity	Based on DIN EN ISO 8307	34	%	Depending on thickness, Test specimen h = 25 mm
Force reduction	DIN EN 14904	49	%	Depending on thickness, Test specimen h = 25 mm

Load Ranges



Load Deflection



Examination of deflection in accordance to DIN EN 826, between two stiff panels. Illustration based on the third loading. Velocity of loading and unloading 20 seconds. Tested at room temperature. Dimensions of test specimens 300 mm x 300 mm.

Vibration Isolation

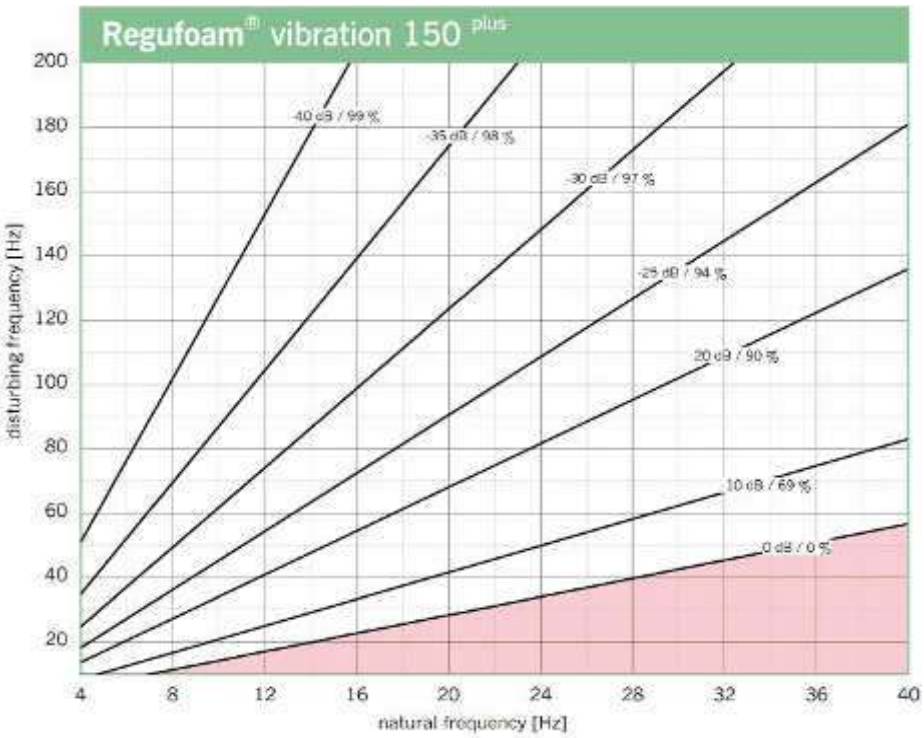
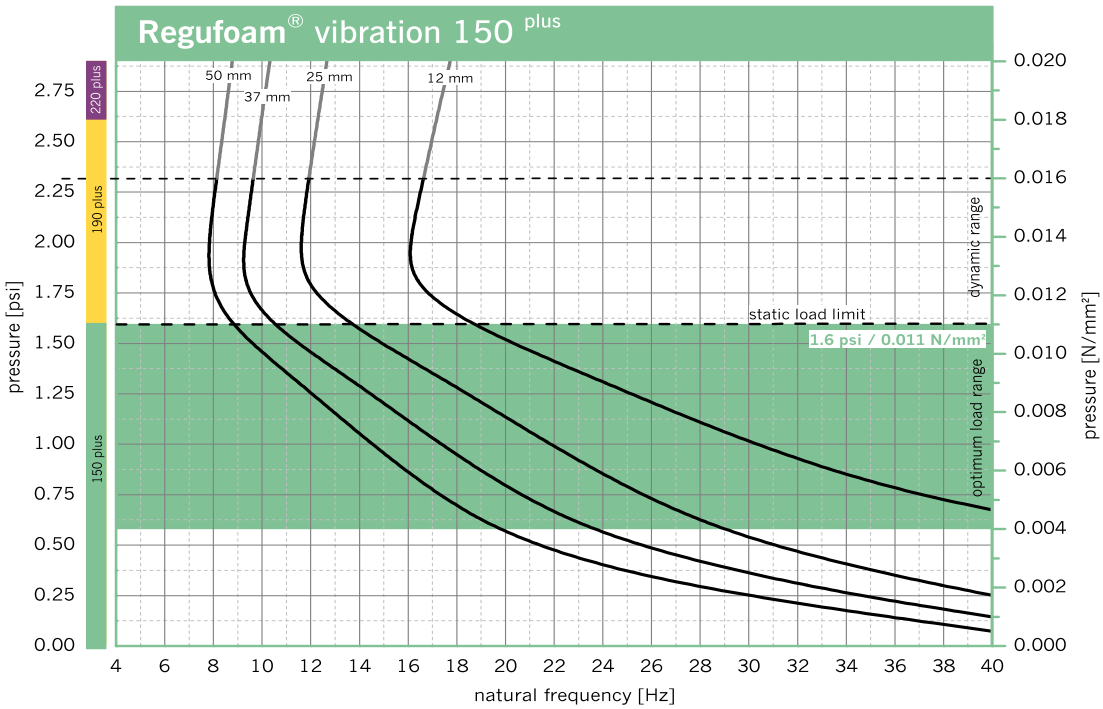


Illustration of the isolation efficiency of a single-degree-of-freedom system (SDOF system) on a rigid base with **Regufoam® vibration 150 plus**. Parameter: power transmission (insertion loss) in dB, isolation factor in %.

Natural Frequency



Natural frequency of a single-degree-of-freedom system (SDOF system) considering the dynamic stiffness of **Regufoam® vibration 150 plus** on a rigid base. Dimensions of test specimens 300 mm x 300 mm.

Modulus of Elasticity

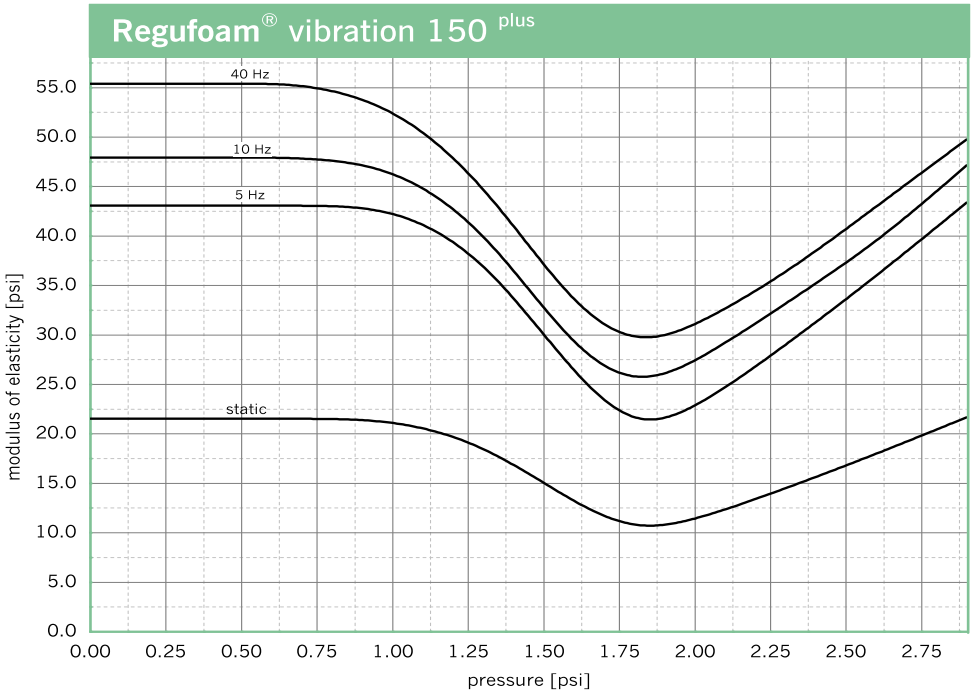


Illustration of the dynamic modulus of elasticity for sinusoidal excitation at a constant mean load and an amplitude of +/- 0.25 mm. Dimensions of specimens 300 mm x 300 mm x 25 mm; static modulus of elasticity as a result of the tangent modulus of the spring characteristic. Tested in accordance with DIN 53513.

Dynamic Stiffness

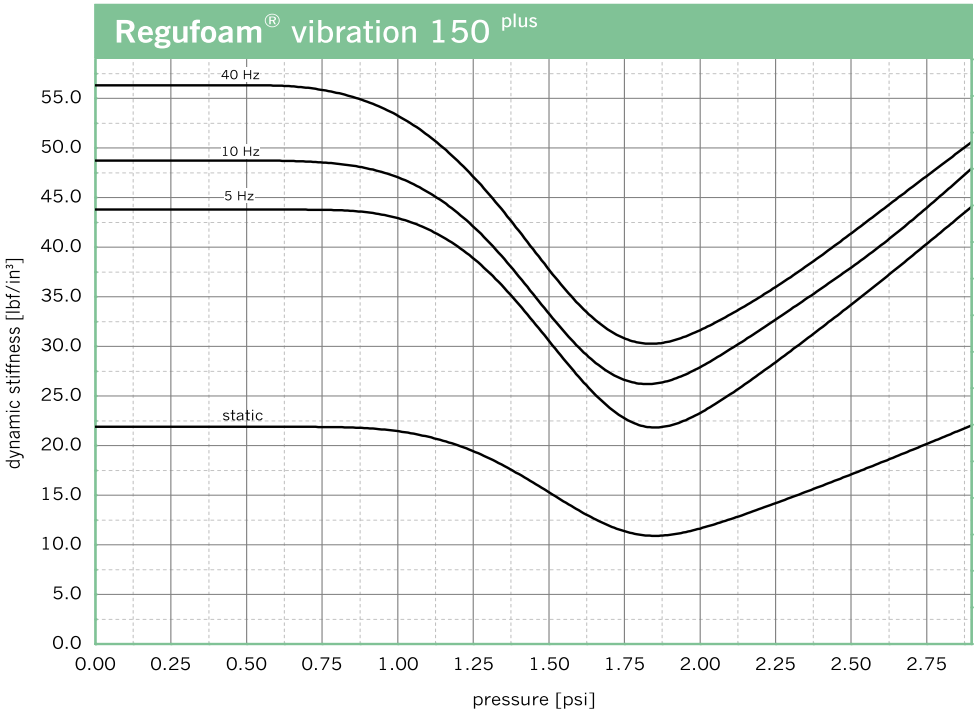
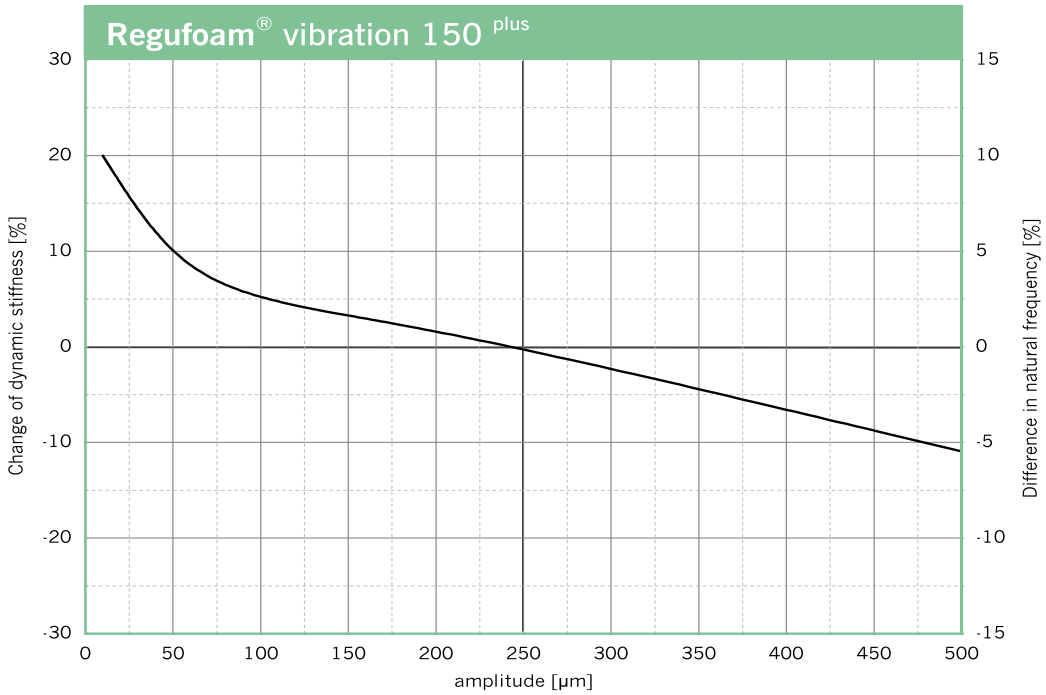
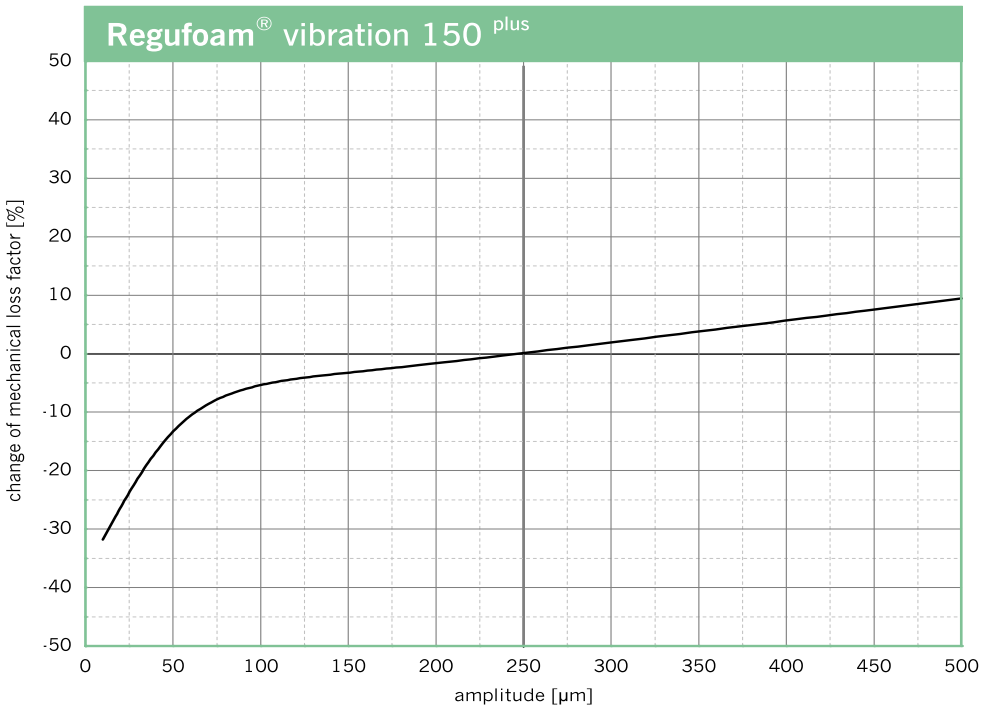


Illustration of the dynamic stiffness for sinusoidal excitation at a constant mean load and an amplitude of +/- 0.25 mm. Dimension of specimens 300 x 300 x 25 mm; static stiffness as a result of the tangent modulus of the spring characteristic. Tested in accordance with DIN 53513.

Influence of Amplitude

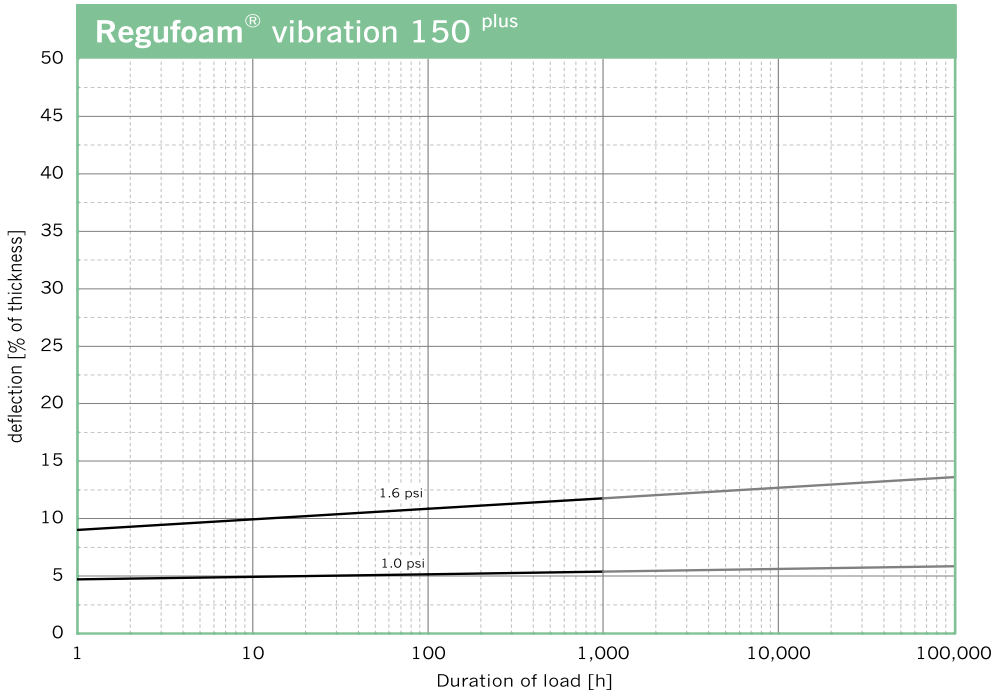


Change of the dynamic stiffness due to changes in amplitudes. Average for 5 Hz, 10 Hz and 40 Hz excitation.
Sinusoidal excitation at a constant mean load of 0.011 N/mm², dimensions of the specimens 300 x 300 x 25 mm.
Natural frequency of a single-degree-of-freedom system (SDOF system) on a rigid base.



Change of the mechanical loss factor due to changes in amplitudes.
Sinusoidal excitation at a constant mean load of 0.011 N/mm², dimensions of the specimens 300 x 300 x 25 mm.

Long-Term Creep Test



Dimension of specimens 300 x 300 x 50 mm.

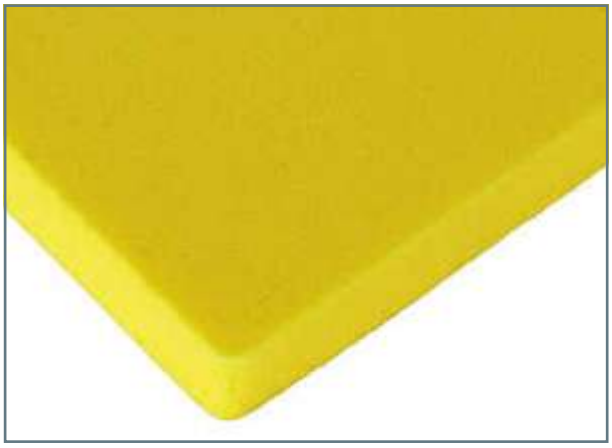
Standard forms of delivery, ex Lebanon, PA

Sheets

Thickness:	25 mm and 12.5 mm Custom thicknesses available on request
Length:	16.4' (5,000 mm)
Width:	59" (1,500 mm)

Max. static load
2.6 psi

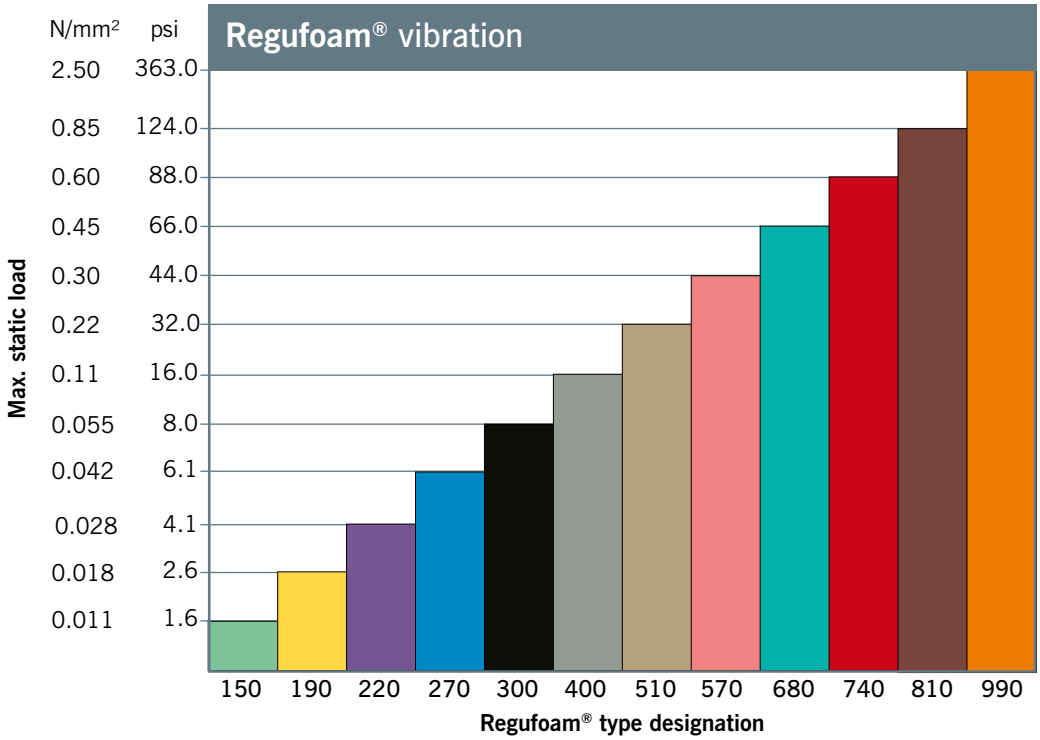
Peak loads (rare, short-term loads)
up to 116.0 psi



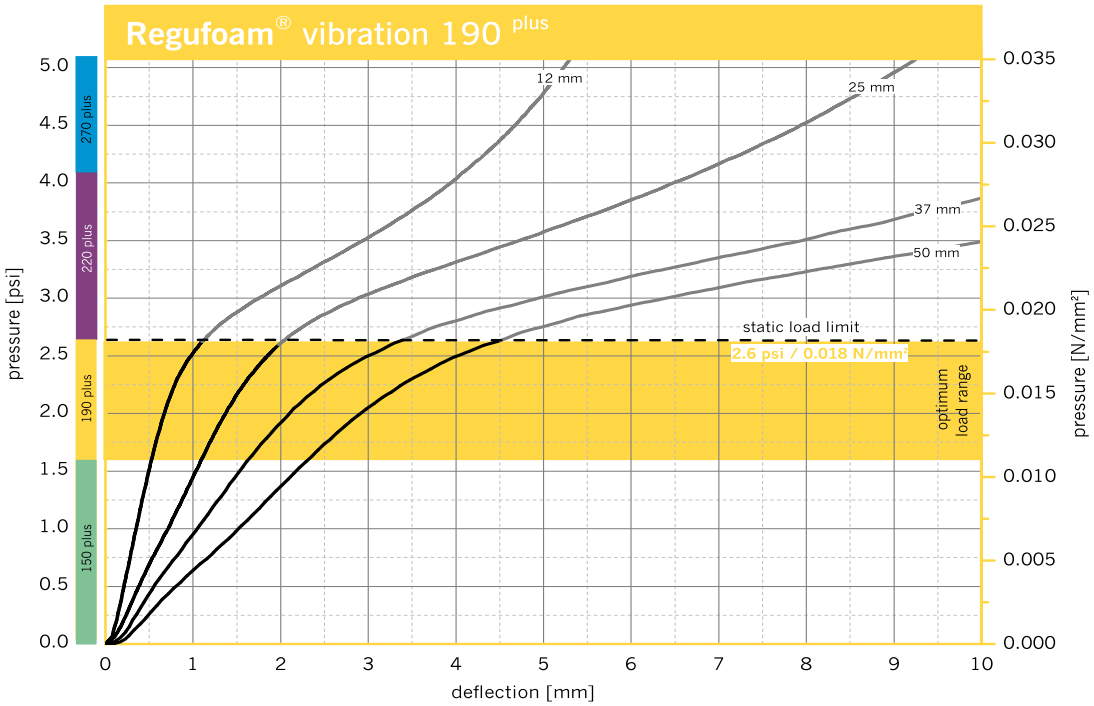
Color: Yellow

Static modulus of elasticity	Based on EN 826	14.5 - 36.3 0.10 - 0.25	psi N/mm²	Tangential modulus, see figure "Modulus of elasticity"
Dynamic modulus of elasticity	Based on DIN 53513	36.3 - 79.8 0.25 - 0.55	psi N/mm²	Depending on frequency, load and thickness, see figure "dynamic stiffness"
Mechanical loss factor	DIN 53513	0.25	[-]	Load-, amplitude- and frequency-dependent
Compression set	Based on DIN EN ISO 1856	2.0	%	Measured 30 minutes after decompression with 50% deformation / 23 °C after 72 hrs
Tensile strength	Based on DIN EN ISO 1798	58.0 0.4	psi N/mm²	
Elongation at break	Based on DIN EN ISO 1798	220	%	
Tear resistance	Based on DIN ISO 34-1	11.4	lbs/in	
Fire behavior	DIN 4102 DIN EN 13501	B2 E	[-] [-]	Normal flammability
Sliding friction	BSW-laboratory BSW-laboratory	0.7 0.8	[-] [-]	Steel (dry) Concrete (dry)
Compression hardness	Based on DIN EN ISO 3386-2	22	kPa	Compressive stress at 25 % deformation Test specimen h = 25 mm
Rebound elasticity	Based on DIN EN ISO 8307	35	%	Depending on thickness, Test specimen h = 25 mm
Force reduction	DIN EN 14904	61	%	Depending on thickness, Test specimen h = 25 mm

Load Ranges



Load Deflection



Examination of deflection in accordance to DIN EN 826, between two stiff panels. Illustration based on the third loading. Velocity of loading and unloading 20 seconds. Tested at room temperature. Dimensions of test specimens 300 mm x 300 mm.

Vibration Isolation

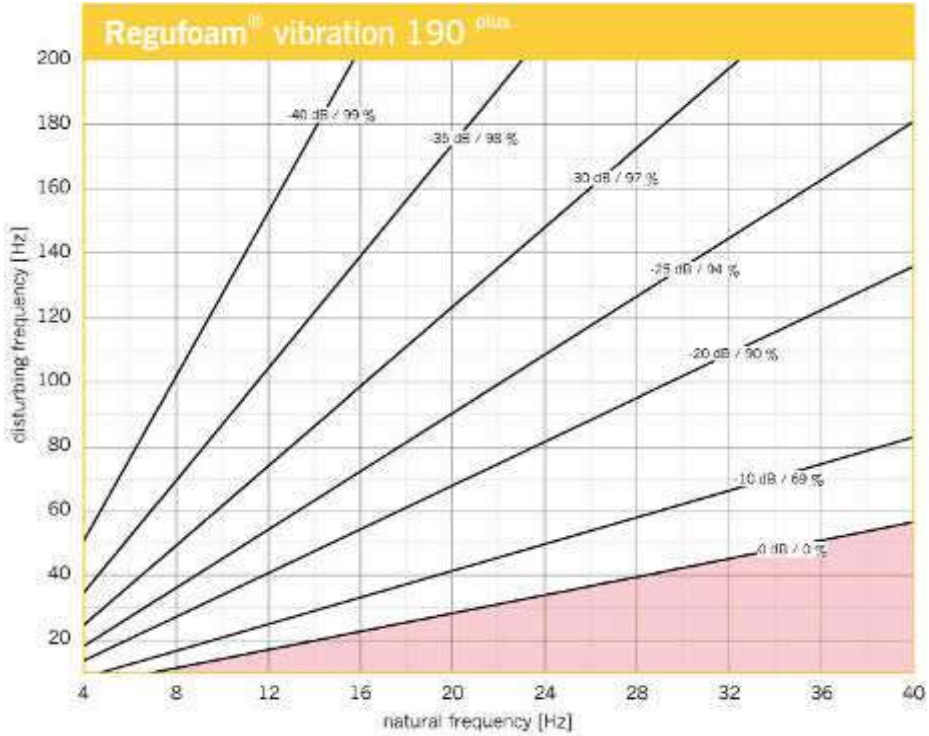
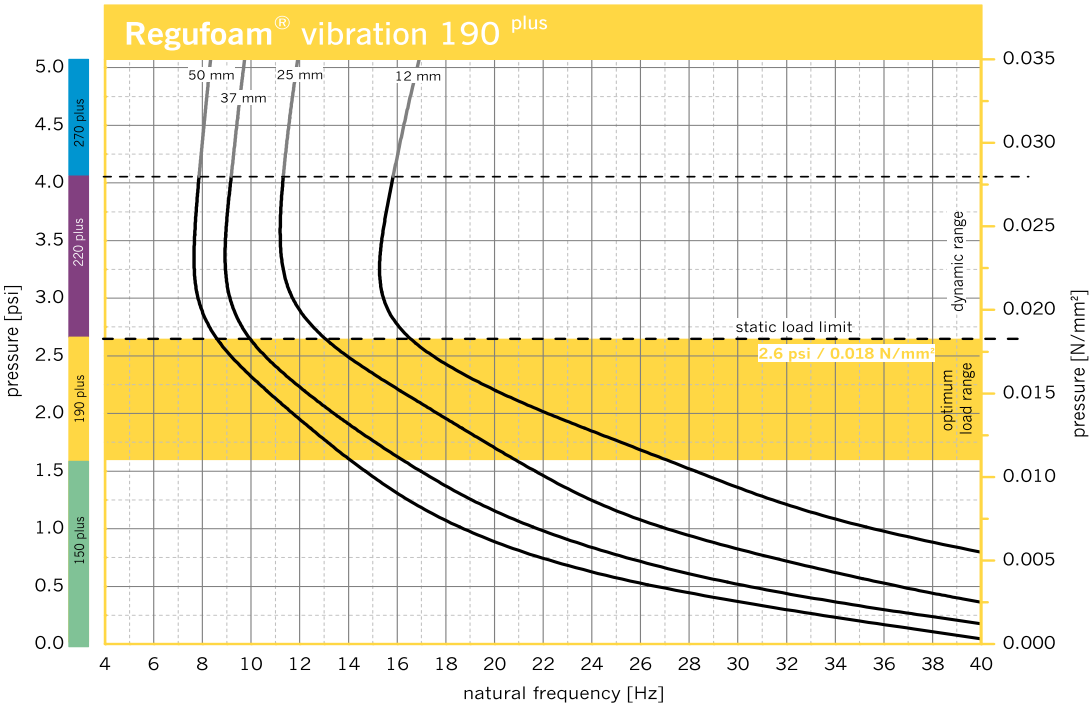


Illustration of the isolation efficiency of a single-degree-of-freedom system (SDOF system) on a rigid base with **Regufoam® vibration 190 plus**. Parameter: power transmission (insertion loss) in dB, isolation factor in %.

Natural Frequency



Natural frequency of a single-degree-of-freedom system (SDOF system) considering the dynamic stiffness of **Regufoam® vibration 190 plus** on a rigid base. Dimensions of test specimens 300 mm x 300 mm.

Modulus of Elasticity

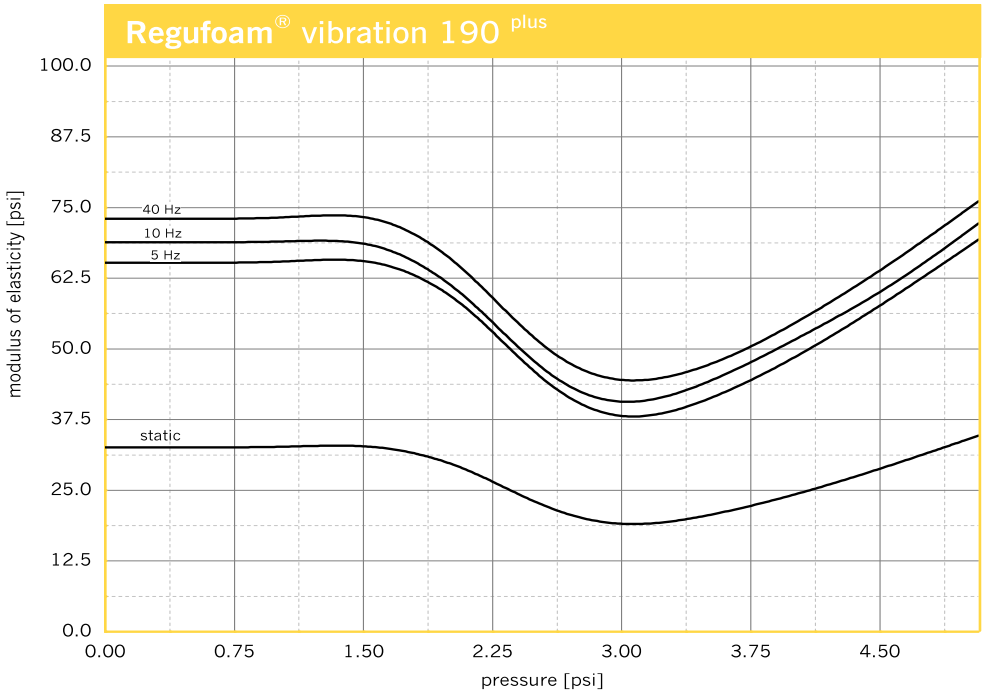


Illustration of the dynamic modulus of elasticity for sinusoidal excitation at a constant mean load and an amplitude of +/- 0.25 mm. Dimensions of specimens 300 mm x 300 mm x 25 mm; static modulus of elasticity as a result of the tangent modulus of the spring characteristic. Tested in accordance with DIN 53513.

Dynamic Stiffness

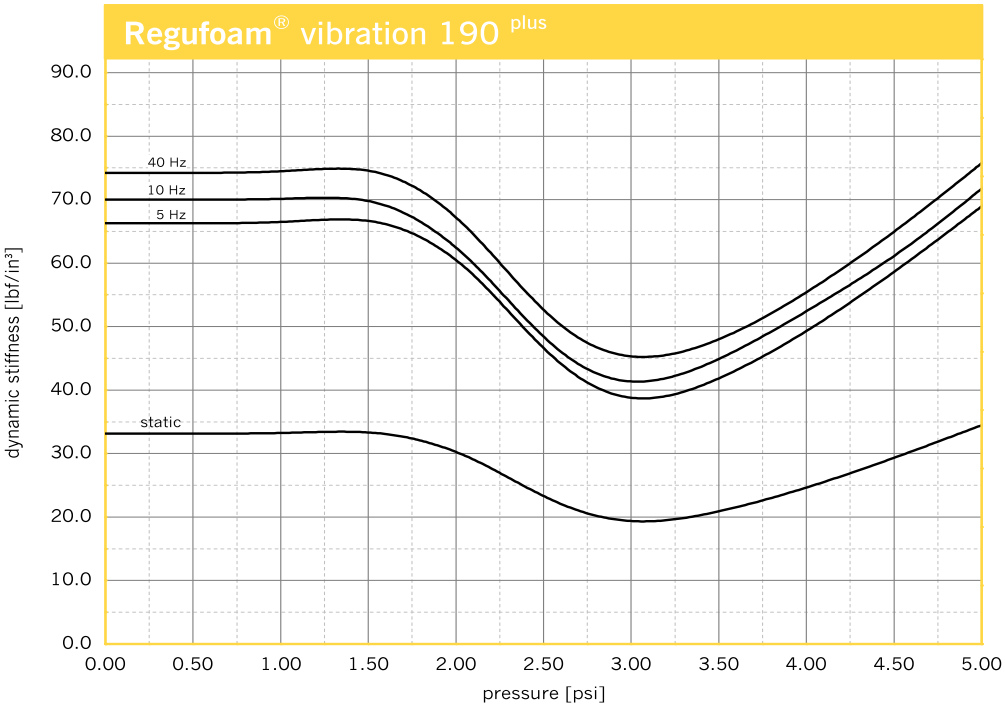
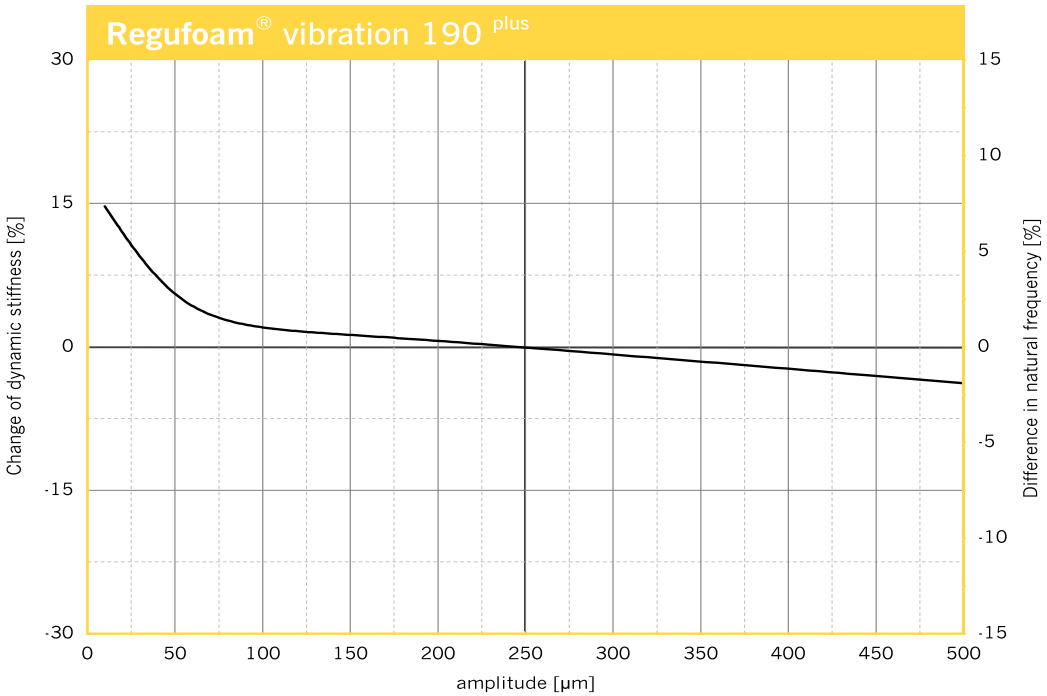
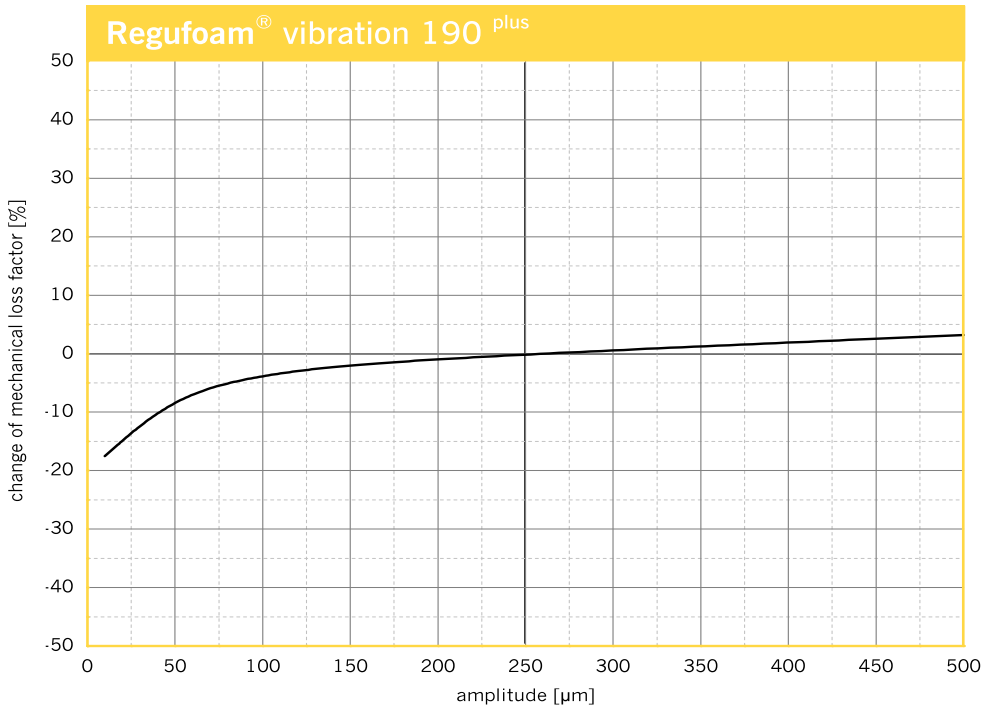


Illustration of the dynamic stiffness for sinusoidal excitation at a constant mean load and an amplitude of +/- 0.25 mm. Dimension of specimens 300 x 300 x 25 mm; static stiffness as a result of the tangent modulus of the spring characteristic. Tested in accordance with DIN 53513.

Influence of Amplitude

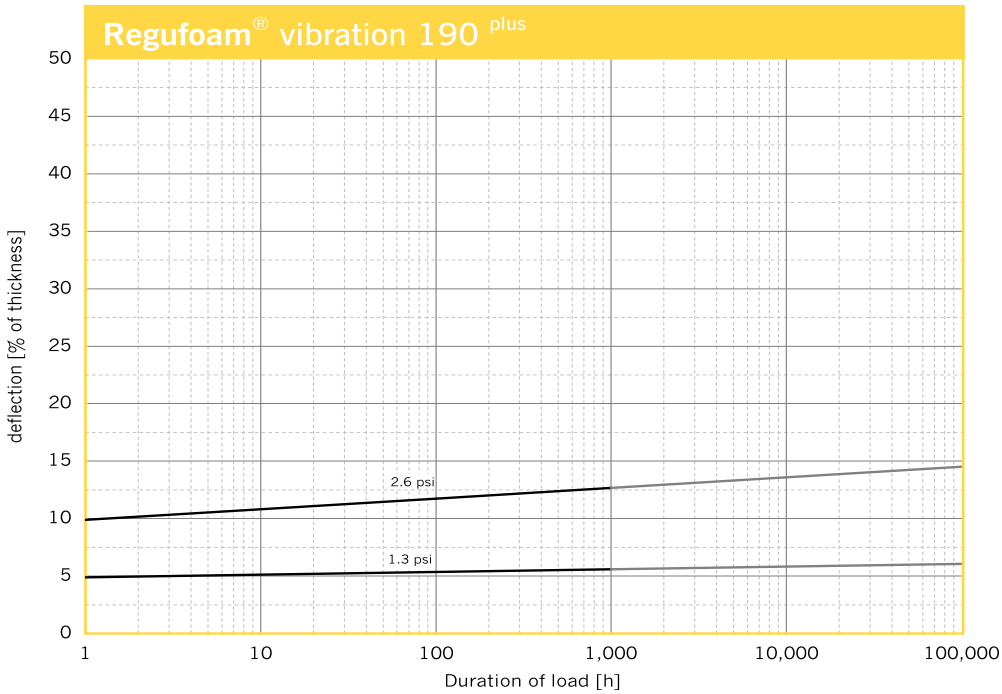


Change of the dynamic stiffness due to changes in amplitudes. Average for 5 Hz, 10 Hz and 40 Hz excitation.
Sinusoidal excitation at a constant mean load of 0.018 N/mm², dimensions of the specimens 300 x 300 x 25 mm.
Natural frequency of a single-degree-of-freedom system (SDOF system) on a rigid base.



Change of the mechanical loss factor due to changes in amplitudes.
Sinusoidal excitation at a constant mean load of 0.018 N/mm², dimensions of the specimens 300 x 300 x 25 mm.

Long-Term Creep Test



Dimension of specimens 300 x 300 x 50 mm.

Standard forms of delivery, ex Lebanon, PA

Sheets

Thickness:	25 mm and 12.5 mm Custom thicknesses available on request
Length:	16.4' (5,000 mm)
Width:	59" (1,500 mm)

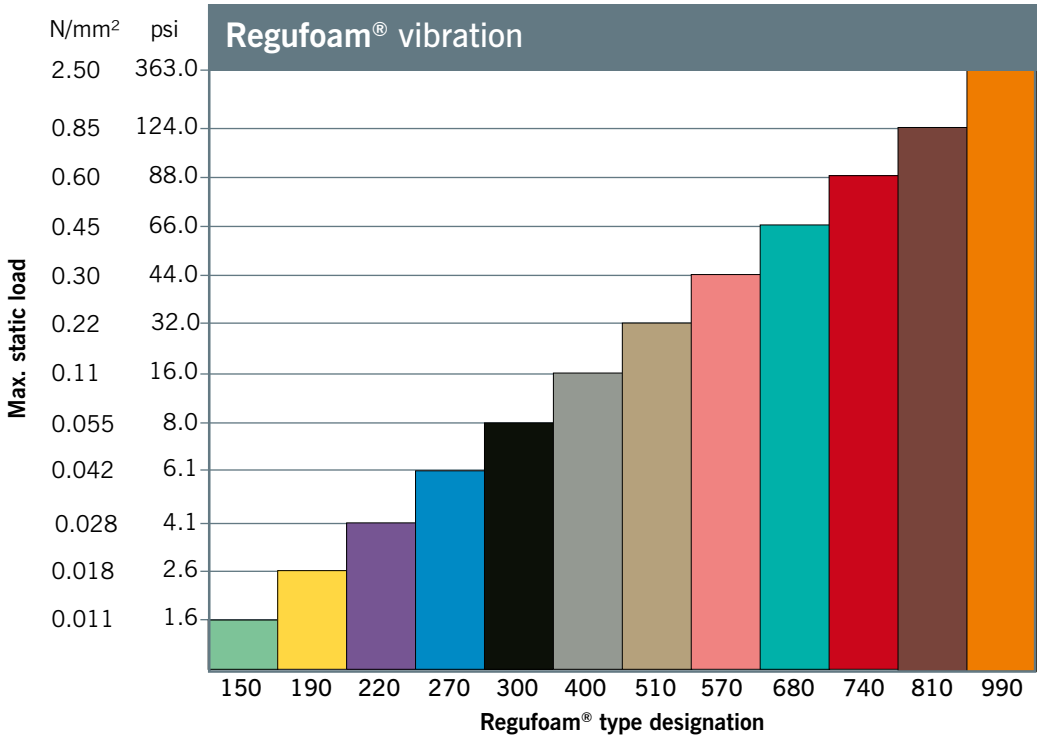
Max. static load
4.1 psi

Peak loads (rare, short-term loads)
up to 130.5 psi

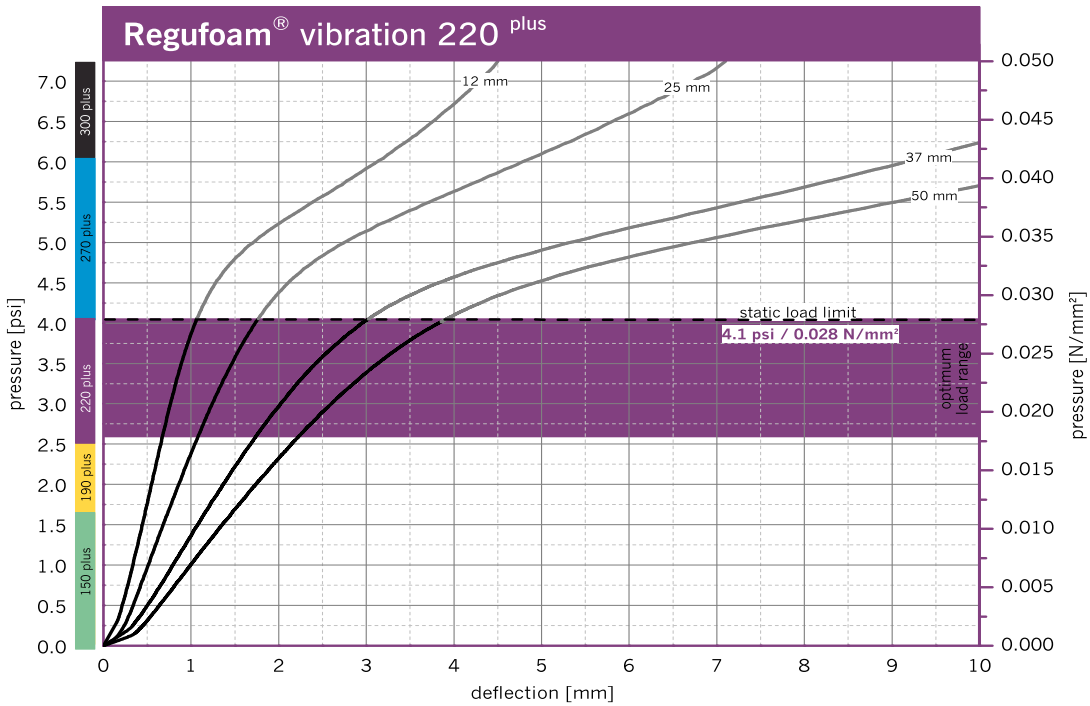
Color: Purple

Static modulus of elasticity	Based on EN 826	21.8 - 50.8 0.15 -0.35	psi N/mm²	Tangential modulus, see figure "Modulus of elasticity"
Dynamic modulus of elasticity	Based on DIN 53513	50.8 - 104.4 0.35 - 0.72	psi N/mm²	Depending on frequency, load and thickness, see figure "dynamic stiffness"
Mechanical loss factor	DIN 53513	0.22	[-]	Load-, amplitude- and frequency-dependent
Compression set	Based on DIN EN ISO 1856	2.3	%	Measured 30 minutes after decompression with 50% deformation / 23 °C after 72 hrs
Tensile strength	Based on DIN EN ISO 1798	72.5 0.5	psi N/mm²	
Elongation at break	Based on DIN EN ISO 1798	180	%	
Tear resistance	Based on DIN ISO 34-1	12.0	lbs/in	
Fire behavior	DIN 4102 DIN EN 13501	B2 E	[-] [-]	Normal flammability
Sliding friction	in-house laboratory in-house laboratory	0.7 0.8	[-] [-]	Steel (dry) Concrete (dry)
Compression hardness	Based on DIN EN ISO 3386-2	39	kPa	Compressive stress at 25 % deformation Test specimen h = 25 mm
Rebound elasticity	Based on DIN EN ISO 8307	47	%	Depending on thickness, Test specimen h = 25 mm
Force reduction	DIN EN 14904	69	%	Depending on thickness, Test specimen h = 25 mm

Load Ranges



Load Deflection



Examination of deflection in accordance to DIN EN 826, between two stiff panels. Illustration based on the third loading.
Velocity of loading and unloading 20 seconds. Tested at room temperature. Dimensions of test specimens 300 mm x 300 mm.

Vibration Isolation

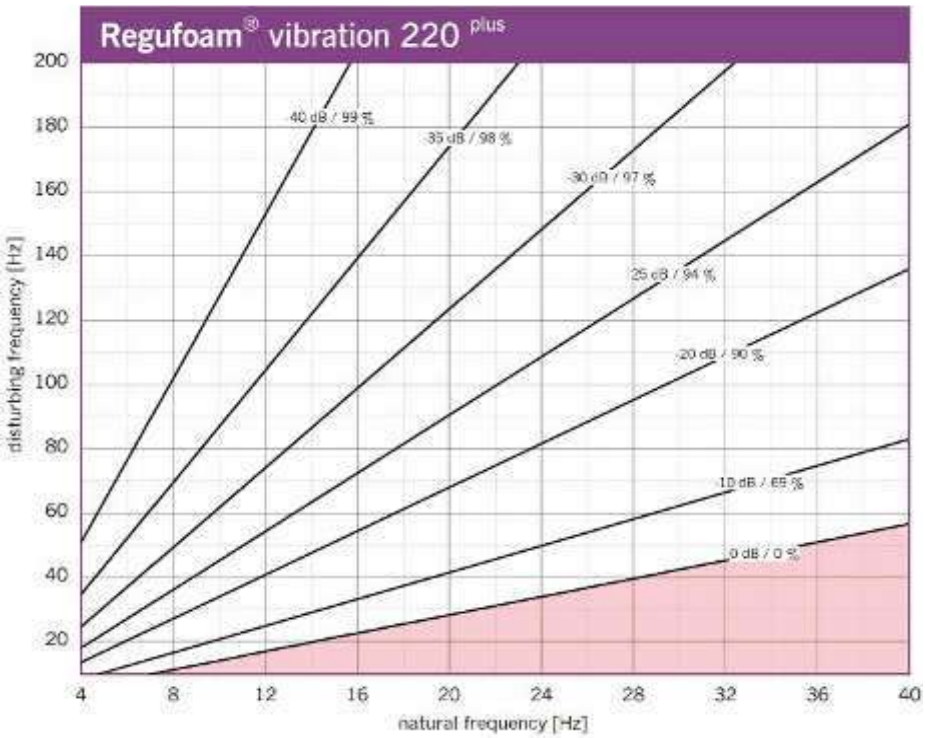
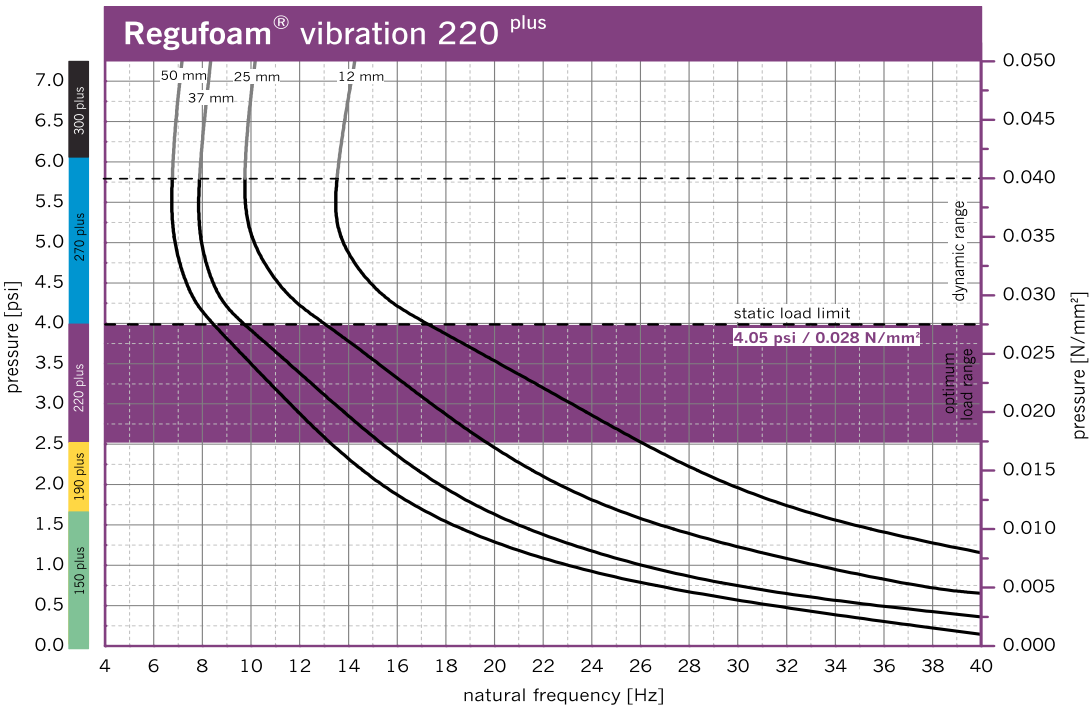


Illustration of the isolation efficiency of a single-degree-of-freedom system (SDOF system) on a rigid base with **Regufoam® vibration 220 plus**. Parameter: power transmission (insertion loss) in dB, isolation factor in %.

Natural Frequency



Natural frequency of a single-degree-of-freedom system (SDOF system) considering the dynamic stiffness of **Regufoam® vibration 220 plus** on a rigid base. Dimensions of test specimens 300 mm x 300 mm.

Modulus of Elasticity

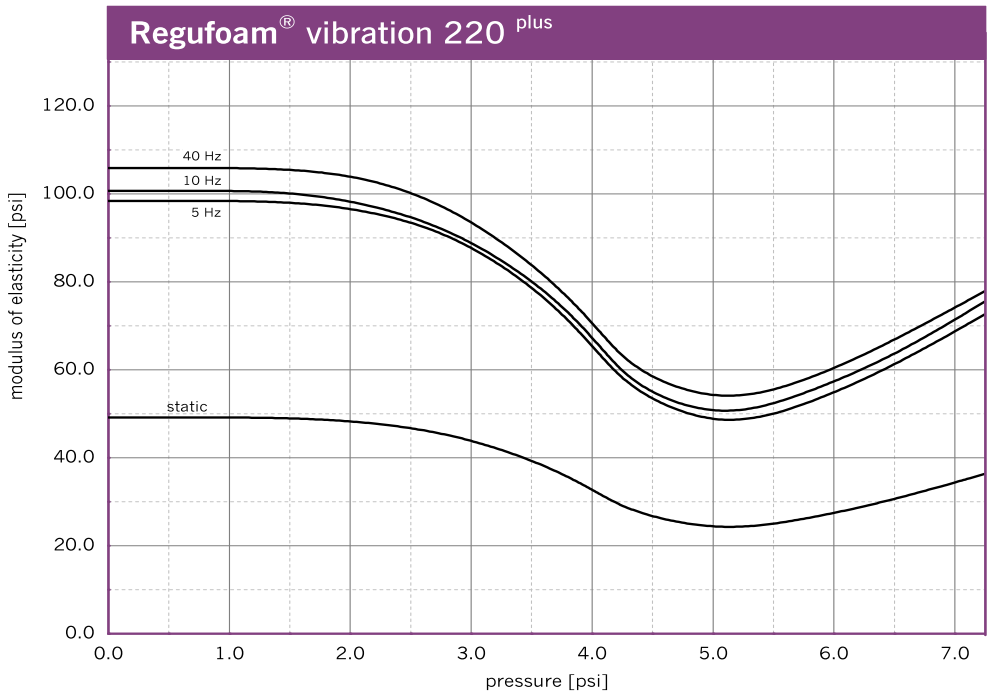


Illustration of the dynamic modulus of elasticity for sinusoidal excitation at a constant mean load and an amplitude of +/- 0.25 mm. Dimensions of specimens 300 mm x 300 mm x 25 mm; static modulus of elasticity as a result of the tangent modulus of the spring characteristic. Tested in accordance with DIN 53513.

Dynamic Stiffness

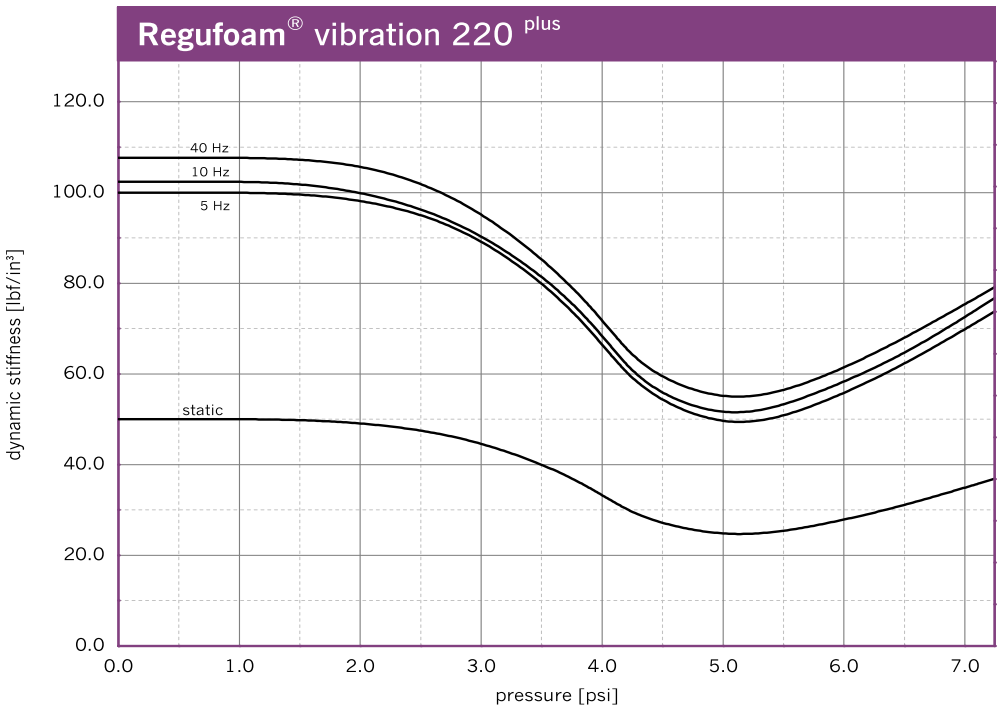
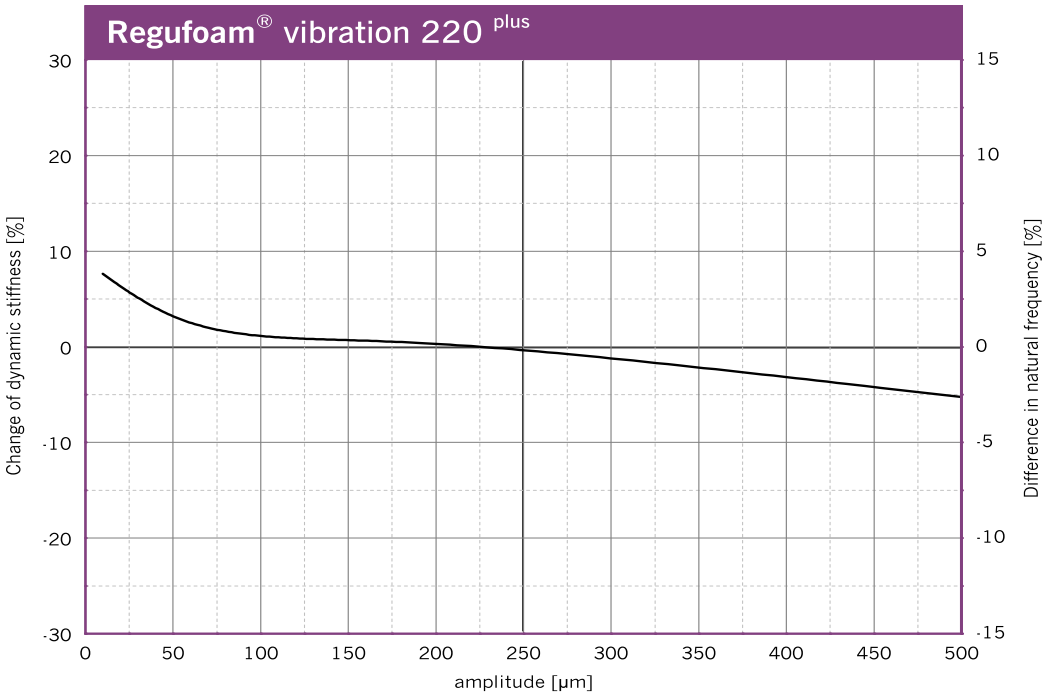
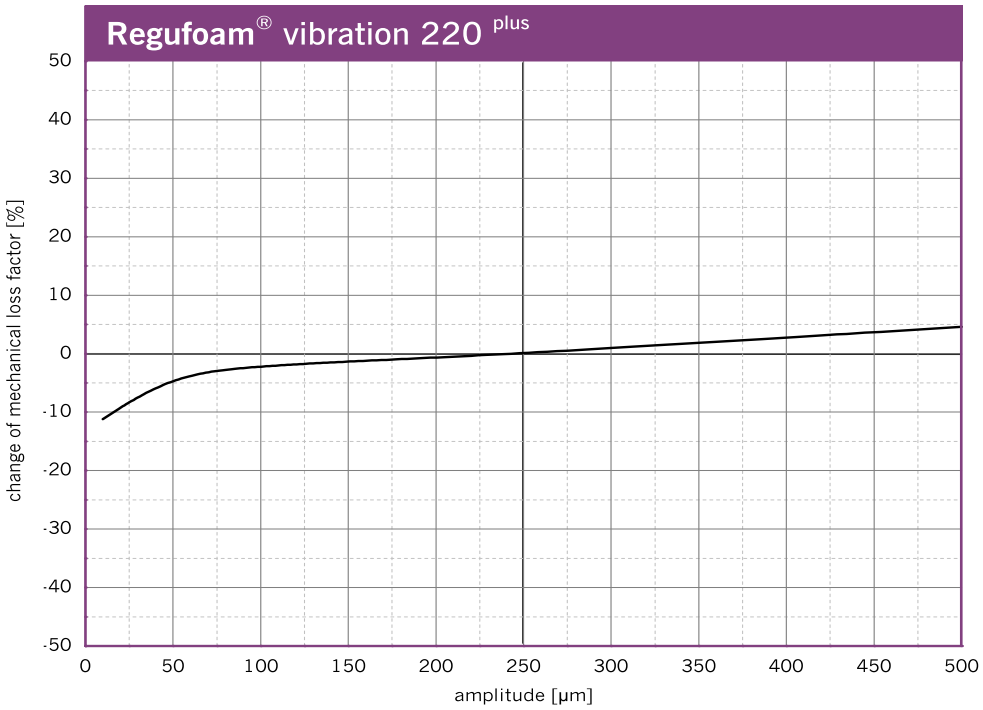


Illustration of the dynamic stiffness for sinusoidal excitation at a constant mean load and an amplitude of +/- 0.25 mm. Dimension of specimens 300 x 300 x 25 mm; static stiffness as a result of the tangent modulus of the spring characteristic. Tested in accordance with DIN 53513.

Influence of Amplitude

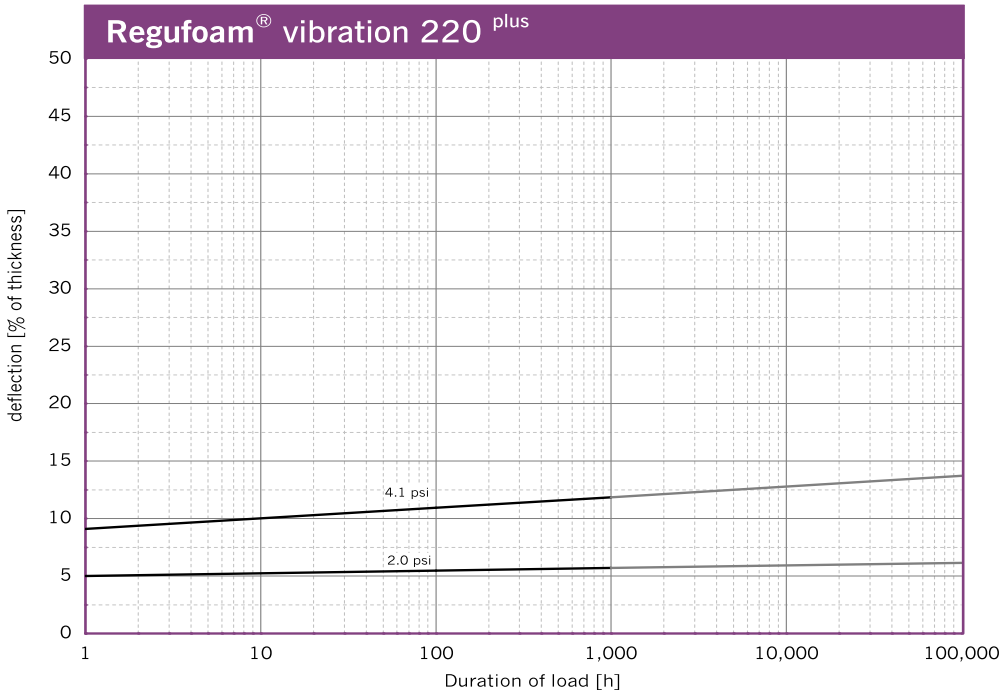


Change of the dynamic stiffness due to changes in amplitudes. Average for 5 Hz, 10 Hz and 40 Hz excitation.
Sinusoidal excitation at a constant mean load of 0.028 N/mm², dimensions of the specimens 300 x 300 x 25 mm.
Natural frequency of a single-degree-of-freedom system (SDOF system) on a rigid base.



Change of the mechanical loss factor due to changes in amplitudes.
Sinusoidal excitation at a constant mean load of 0.028 N/mm², dimensions of the specimens 300 x 300 x 25 mm.

Long-Term Creep Test



Dimension of specimens 300 x 300 x 50 mm.

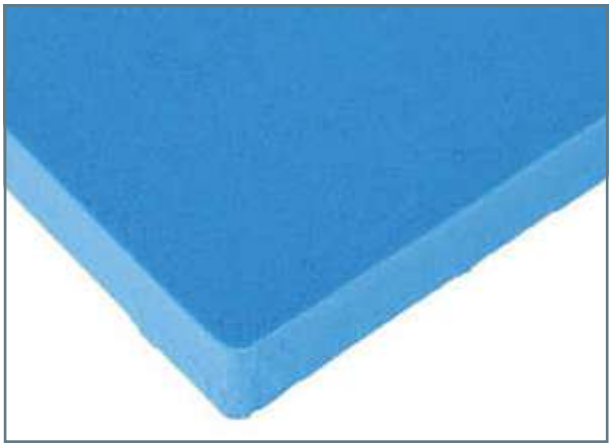
Standard forms of delivery, ex Lebanon, PA

Sheets

Thickness:	25 mm and 12.5 mm Custom thicknesses available on request
Length:	16.4' (5,000 mm)
Width:	59" (1,500 mm)

Max. static load
6.1 psi

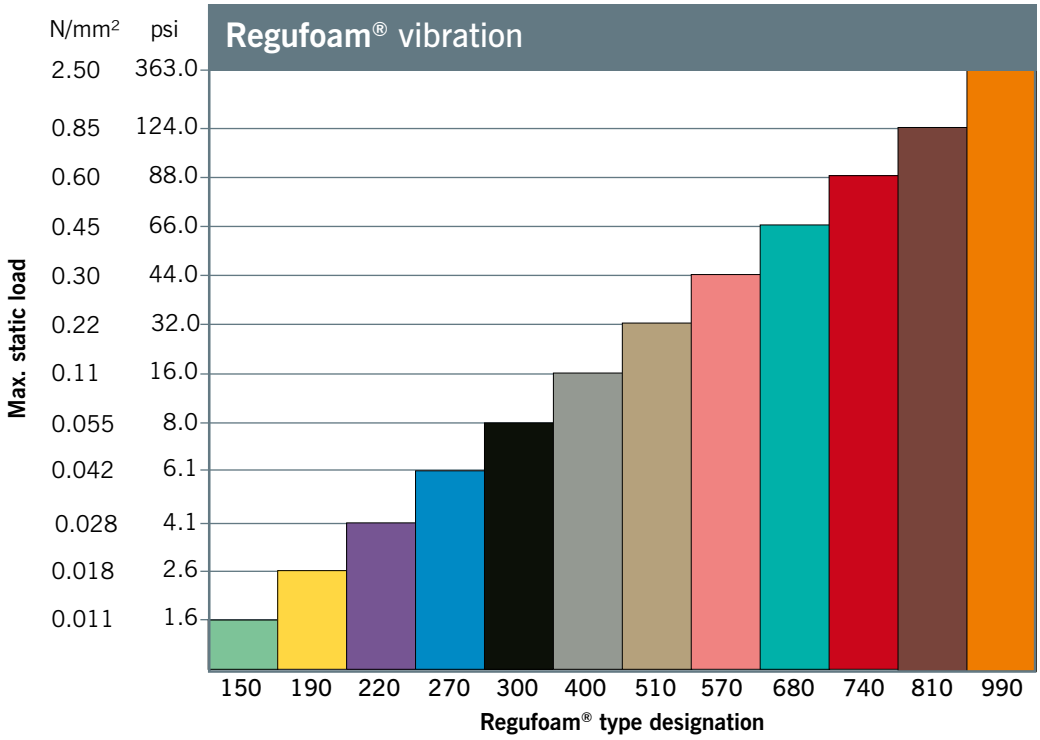
Peak loads (rare, short-term loads)
up to 174.0 psi



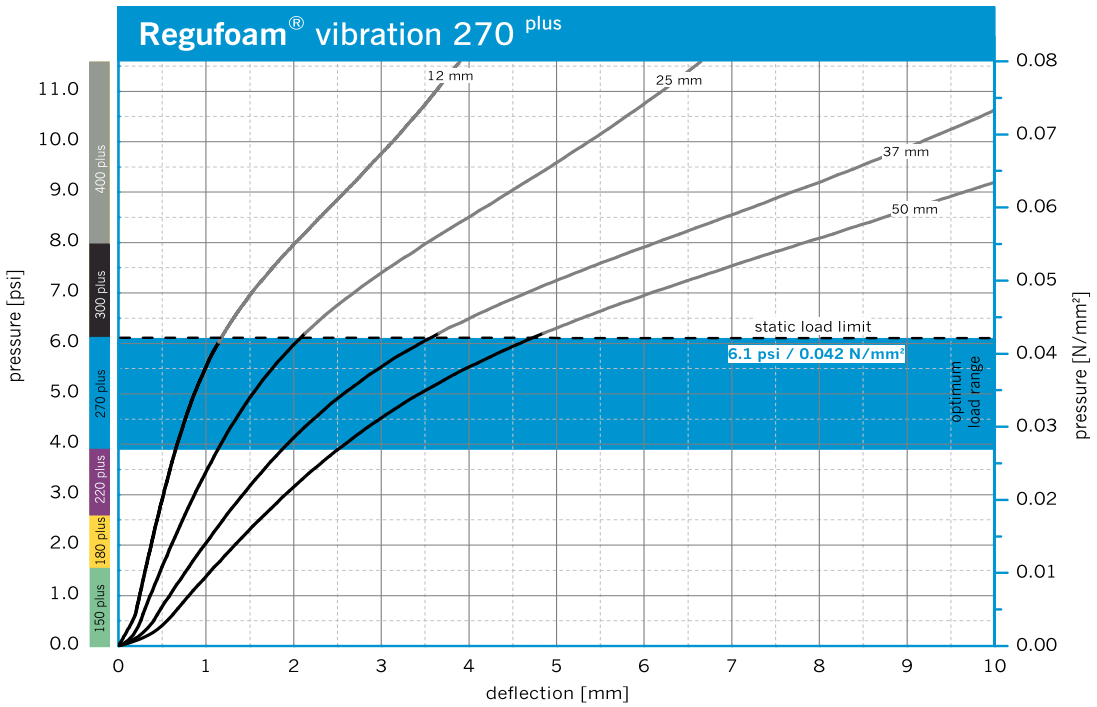
Color: Blue

Static modulus of elasticity	Based on EN 826	36.3 - 65.3 0.25 - 0.45	psi N/mm²	Tangential modulus, see figure "Modulus of elasticity"
Dynamic modulus of elasticity	Based on DIN 53513	87.0 - 152.3 0.60 - 1.05	psi N/mm²	Depending on frequency, load and thickness, see figure "dynamic stiffness"
Mechanical loss factor	DIN 53513	0.2	[-]	Load-, amplitude- and frequency-dependent
Compression set	Based on DIN EN ISO 1856	3.2	%	Measured 30 minutes after decompression with 50% deformation / 23 °C after 72 hrs
Tensile strength	Based on DIN EN ISO 1798	130.5 0.9	psi N/mm²	
Elongation at break	Based on DIN EN ISO 1798	210	%	
Tear resistance	Based on DIN ISO 34-1	25.7	lbs/in	
Fire behavior	DIN 4102 DIN EN 13501	B2 E	[-] [-]	Normal flammability
Sliding friction	in-house laboratory in-house laboratory	0.7 0.8	[-] [-]	Steel (dry) Concrete (dry)
Compression hardness	Based on DIN EN ISO 3386-2	63	kPa	Compressive stress at 25 % deformation Test specimen h = 25 mm
Rebound elasticity	Based on DIN EN ISO 8307	38	%	Depending on thickness, Test specimen h = 25 mm
Force reduction	DIN EN 14904	70	%	Depending on thickness, Test specimen h = 25 mm

Load Ranges



Load Deflection



Examination of deflection in accordance to DIN EN 826, between two stiff panels. Illustration based on the third loading. Velocity of loading and unloading 20 seconds. Tested at room temperature. Dimensions of test specimens 300 mm x 300 mm.

Vibration Isolation

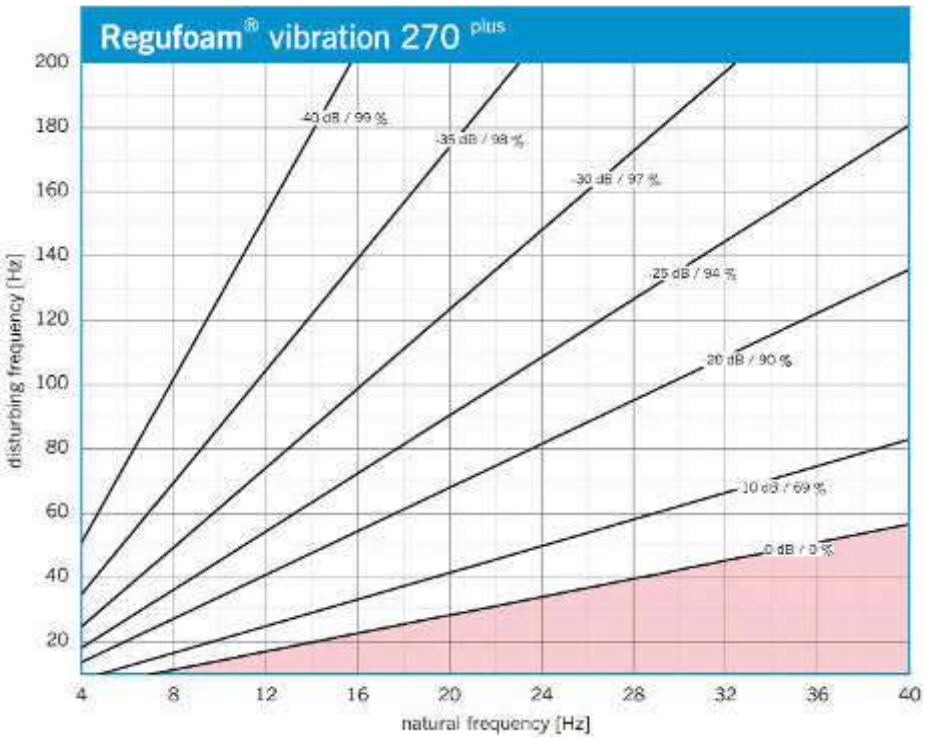
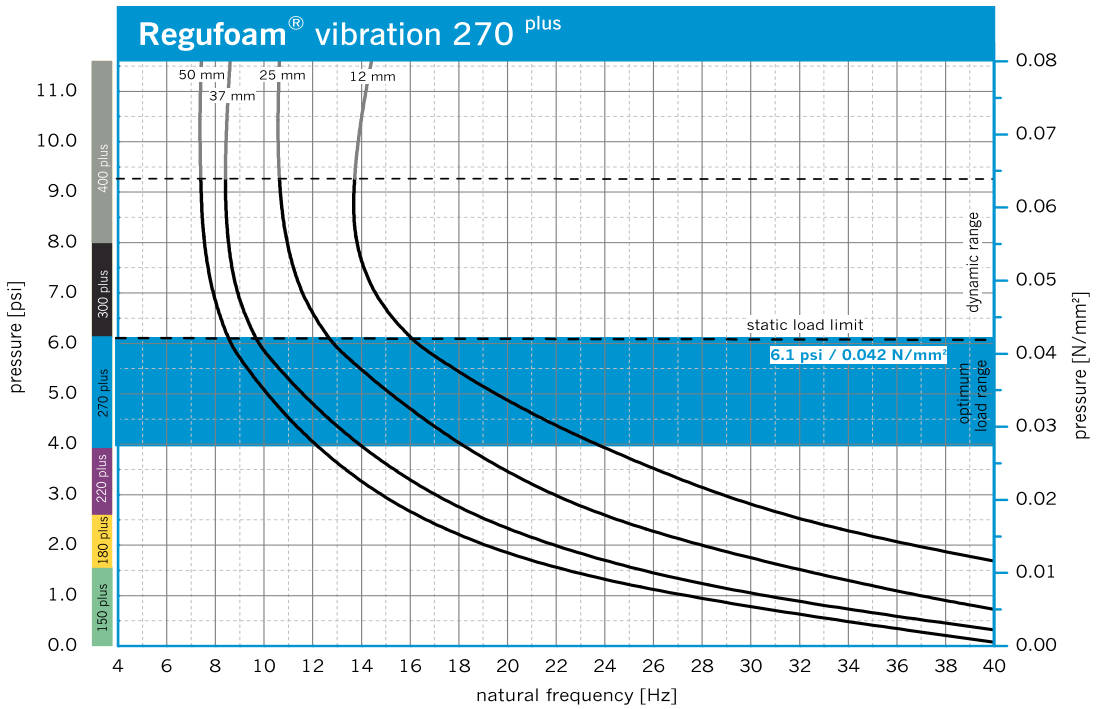


Illustration of the isolation efficiency of a single-degree-of-freedom system (SDOF system) on a rigid base with **Regufoam® vibration 270 plus**. Parameter: power transmission (insertion loss) in dB, isolation factor in %.

Natural Frequency



Natural frequency of a single-degree-of-freedom system (SDOF system) considering the dynamic stiffness of **Regufoam® vibration 270 plus** on a rigid base. Dimensions of test specimens 300 mm x 300 mm.

Modulus of Elasticity

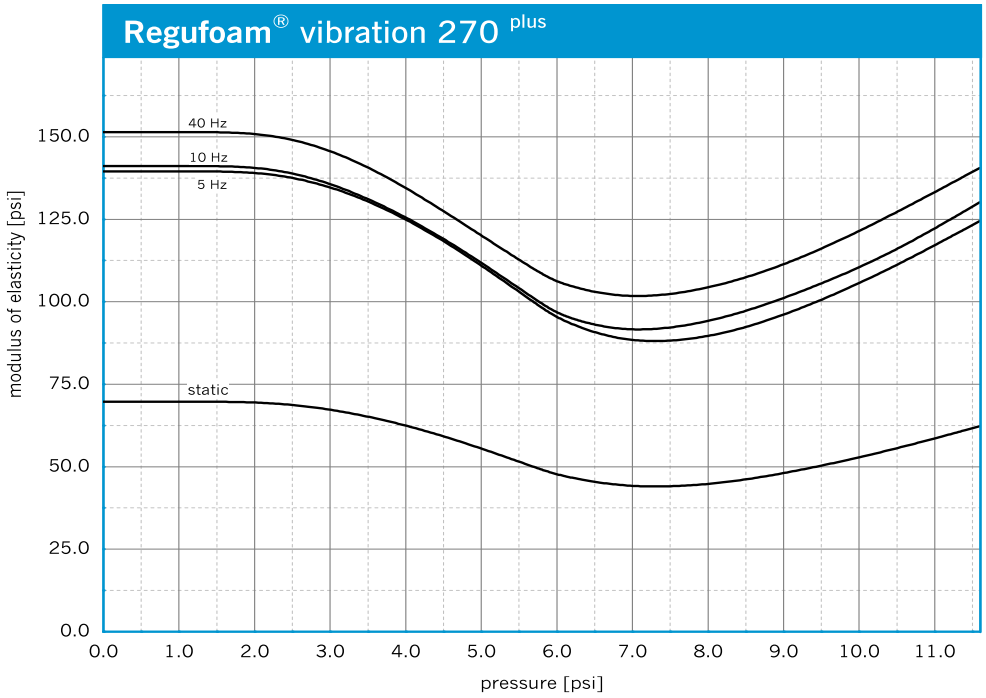


Illustration of the dynamic modulus of elasticity for sinusoidal excitation at a constant mean load and an amplitude of +/- 0.25 mm. Dimensions of specimens 300 mm x 300 mm x 25 mm; static modulus of elasticity as a result of the tangent modulus of the spring characteristic. Tested in accordance with DIN 53513.

Dynamic Stiffness

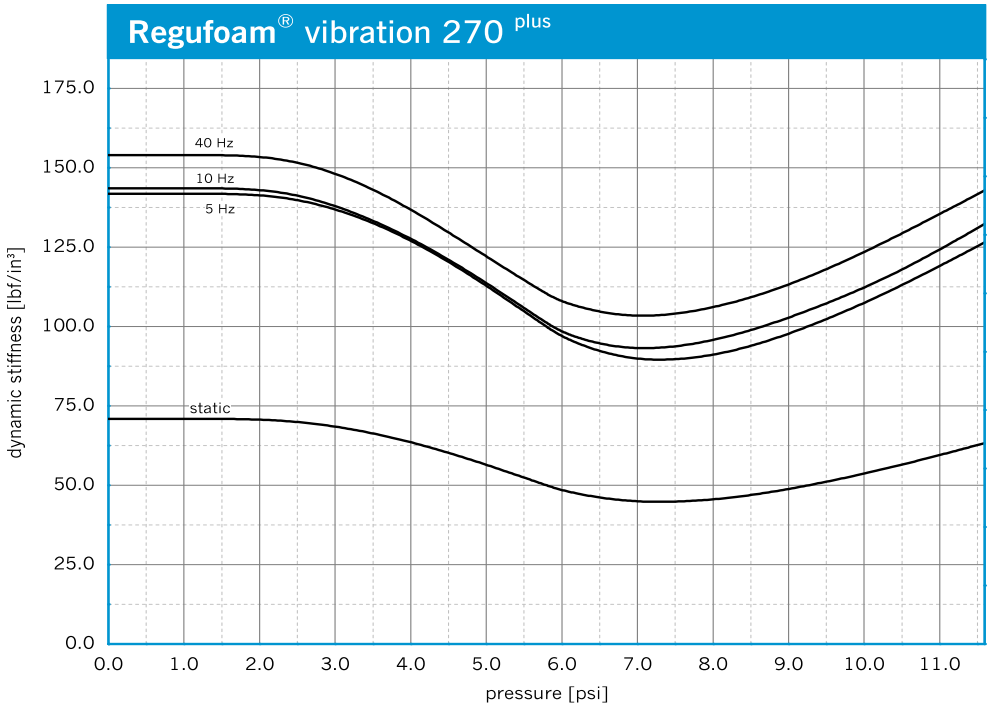
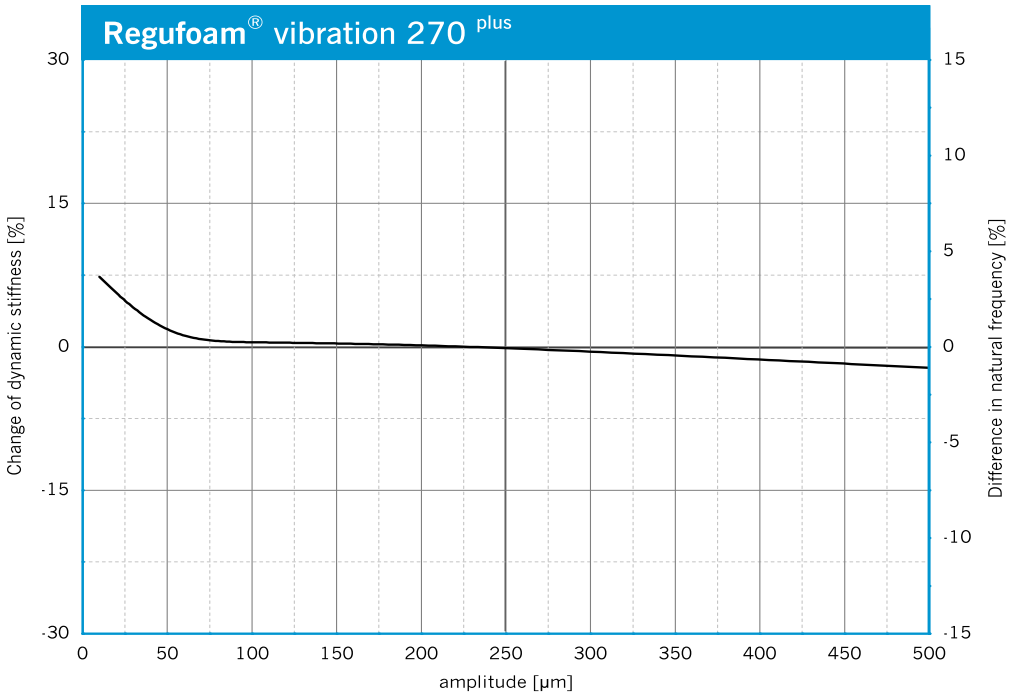
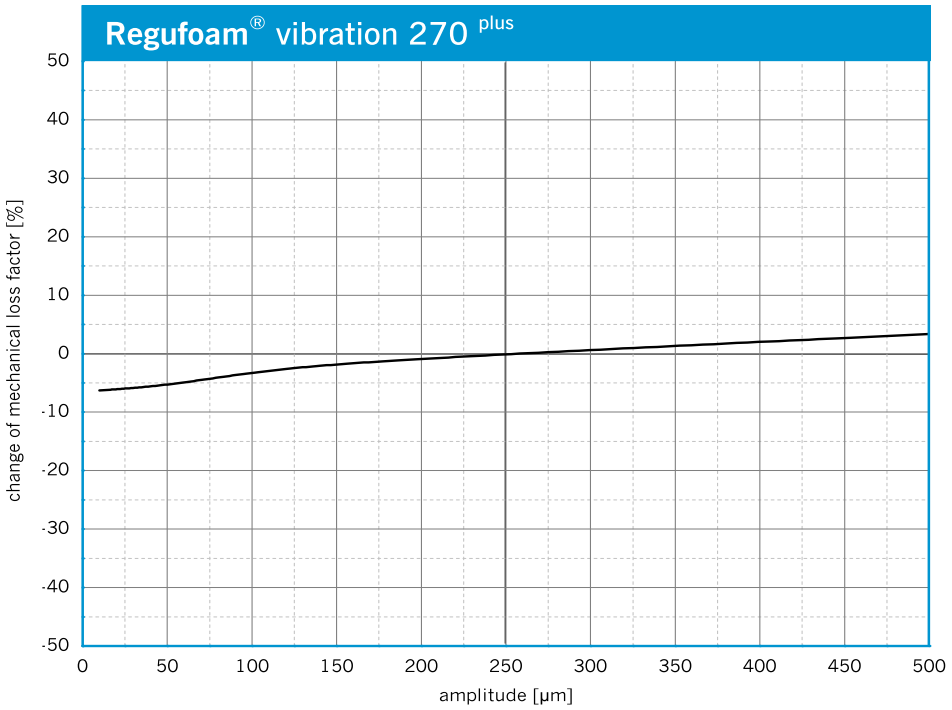


Illustration of the dynamic stiffness for sinusoidal excitation at a constant mean load and an amplitude of +/- 0.25 mm. Dimension of specimens 300 x 300 x 25 mm; static stiffness as a result of the tangent modulus of the spring characteristic. Tested in accordance with DIN 53513.

Influence of Amplitude

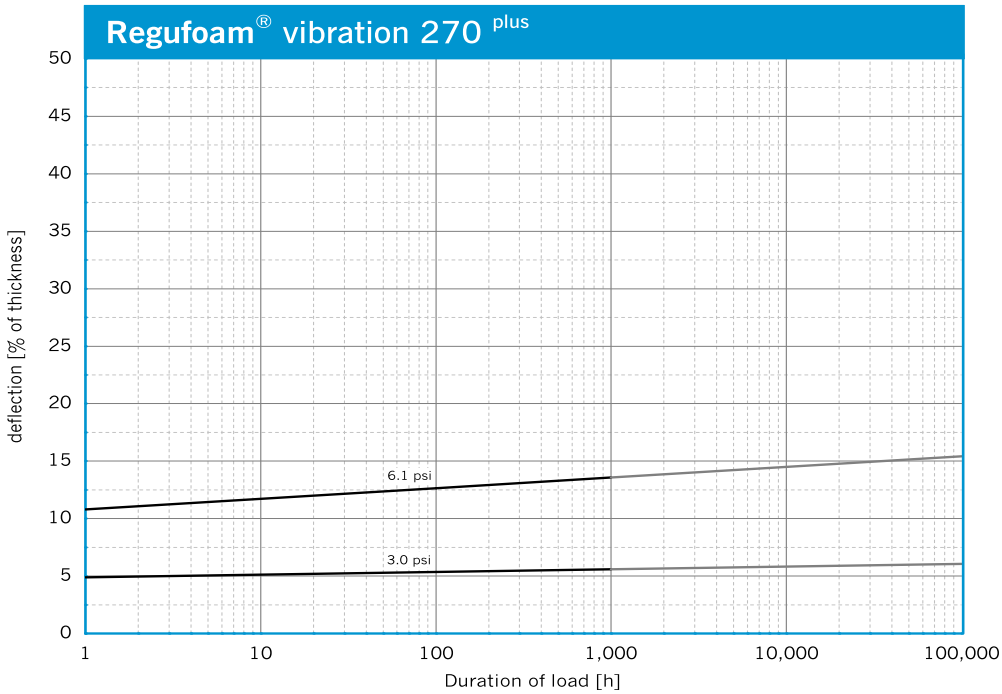


Change of the dynamic stiffness due to changes in amplitudes. Average for 5 Hz, 10 Hz and 40 Hz excitation.
Sinusoidal excitation at a constant mean load of 0.042 N/mm², dimensions of the specimens 300 x 300 x 25 mm.
Natural frequency of a single-degree-of-freedom system (SDOF system) on a rigid base.



Change of the mechanical loss factor due to changes in amplitudes.
Sinusoidal excitation at a constant mean load of 0.042 N/mm², dimensions of the specimens 300 x 300 x 25 mm.

Long-Term Creep Test



Dimension of specimens 300 x 300 x 50 mm.

Standard forms of delivery, ex Lebanon, PA

Sheets

Thickness:	25 mm and 12.5 mm Custom thicknesses available on request
Length:	16.4' (5,000 mm)
Width:	59" (1,500 mm)

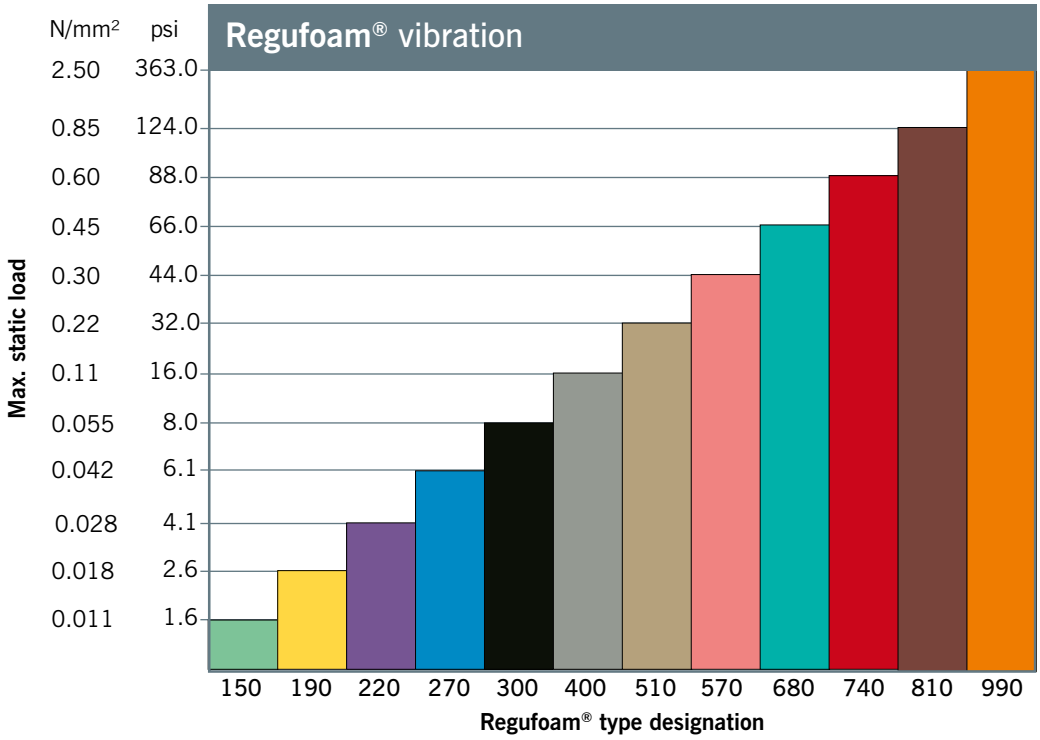
Max. static load
8.0 psi

Peak loads (rare, short-term loads)
up to 290.1 psi

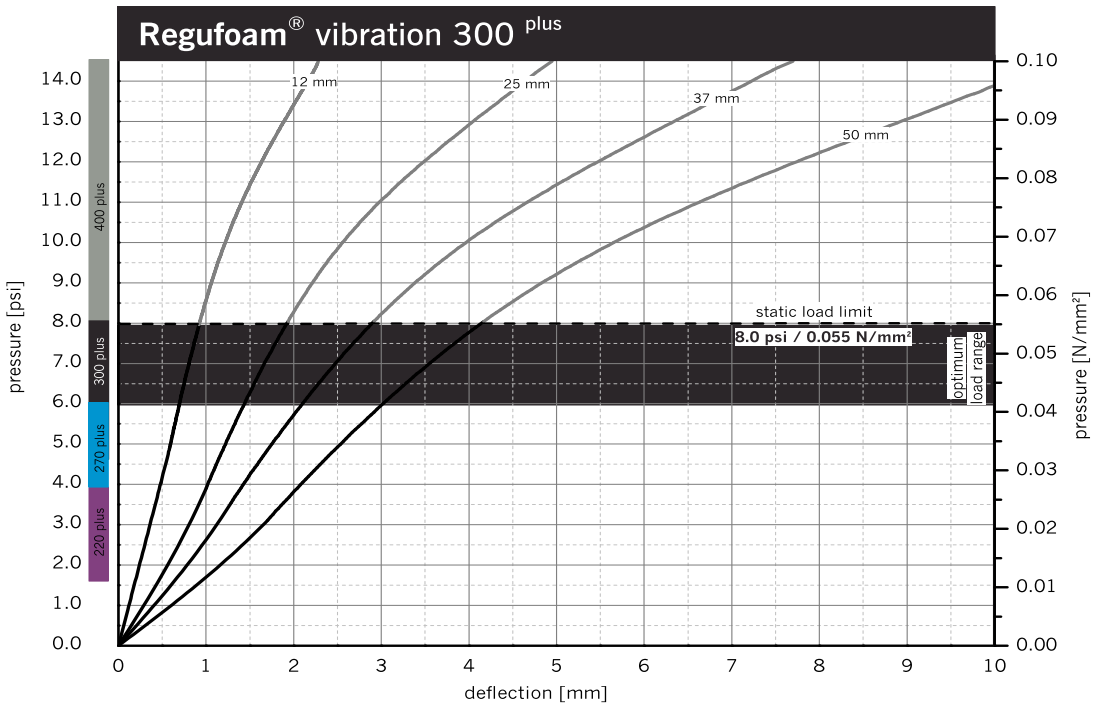
Color: Black

Static modulus of elasticity	Based on EN 826	50.8 - 84.1 0.35 - 0.58	psi N/mm²	Tangential modulus, see figure "Modulus of elasticity"
Dynamic modulus of elasticity	Based on DIN 53513	98.6 - 181.3 0.68 - 1.25	psi N/mm²	Depending on frequency, load and thickness, see figure "dynamic stiffness"
Mechanical loss factor	DIN 53513	0.18	[-]	Load-, amplitude- and frequency-dependent
Compression set	Based on DIN EN ISO 1856	3.4	%	Measured 30 minutes after decompression with 50% deformation / 23 °C after 72 hrs
Tensile strength	Based on DIN EN ISO 1798	174.0 1.2	psi N/mm²	
Elongation at break	Based on DIN EN ISO 1798	240	%	
Tear resistance	Based on DIN ISO 34-1	27.4	lbs/in	
Fire behavior	DIN 4102 DIN EN 13501	B2 E	[-] [-]	Normal flammability
Sliding friction	in-house laboratory in-house laboratory	0.6 0.75	[-] [-]	Steel (dry) Concrete (dry)
Compression hardness	Based on DIN EN ISO 3386-2	82	kPa	Compressive stress at 25 % deformation Test specimen h = 25 mm
Rebound elasticity	Based on DIN EN ISO 8307	44	%	Depending on thickness, Test specimen h = 25 mm
Force reduction	DIN EN 14904	72	%	Depending on thickness, Test specimen h = 25 mm

Load Ranges



Load Deflection



Examination of deflection in accordance to DIN EN 826, between two stiff panels. Illustration based on the third loading.
Velocity of loading and unloading 20 seconds. Tested at room temperature. Dimensions of test specimens 300 mm x 300 mm.

Vibration Isolation

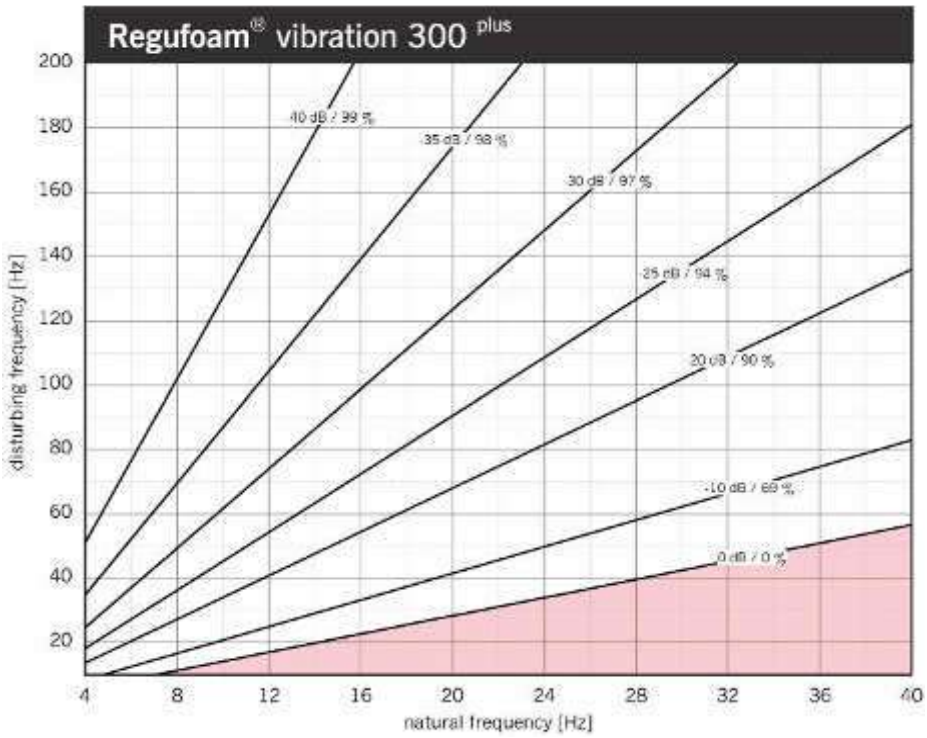
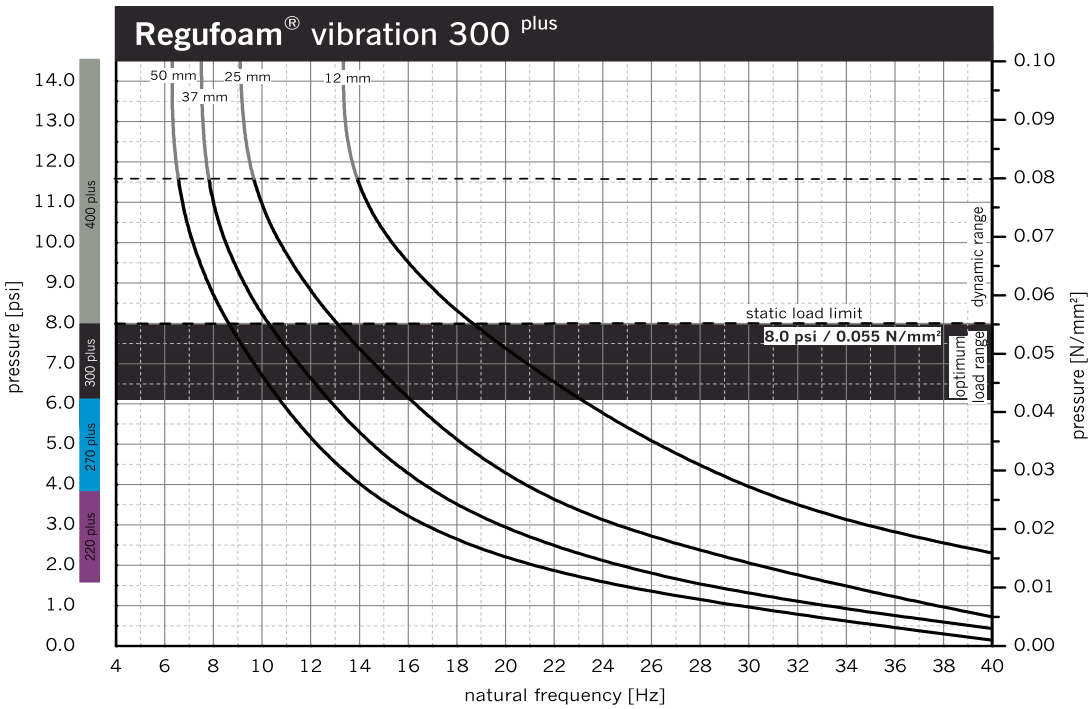


Illustration of the isolation efficiency of a single-degree-of-freedom system (SDOF system) on a rigid base with **Regufoam® vibration 300 plus**. Parameter: power transmission (insertion loss) in dB, isolation factor in %.

Natural Frequency



Natural frequency of a single-degree-of-freedom system (SDOF system) considering the dynamic stiffness of **Regufoam® vibration 300 plus** on a rigid base. Dimensions of test specimens 300 mm x 300 mm.

Modulus of Elasticity

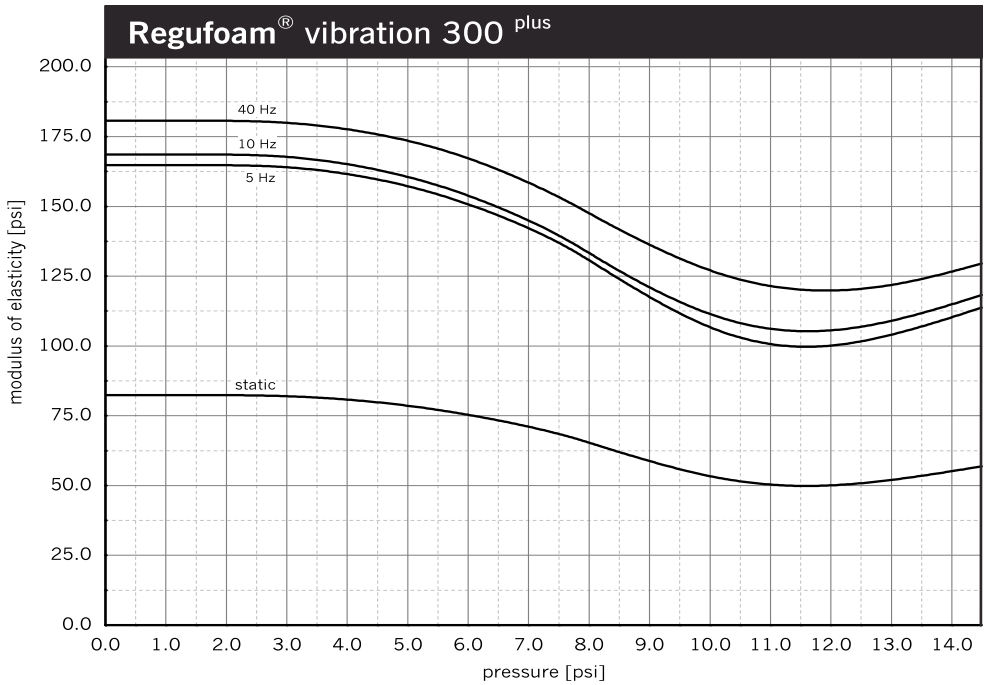


Illustration of the dynamic modulus of elasticity for sinusoidal excitation at a constant mean load and an amplitude of +/- 0.25 mm. Dimensions of specimens 300 mm x 300 mm x 25 mm; static modulus of elasticity as a result of the tangent modulus of the spring characteristic. Tested in accordance with DIN 53513.

Dynamic Stiffness

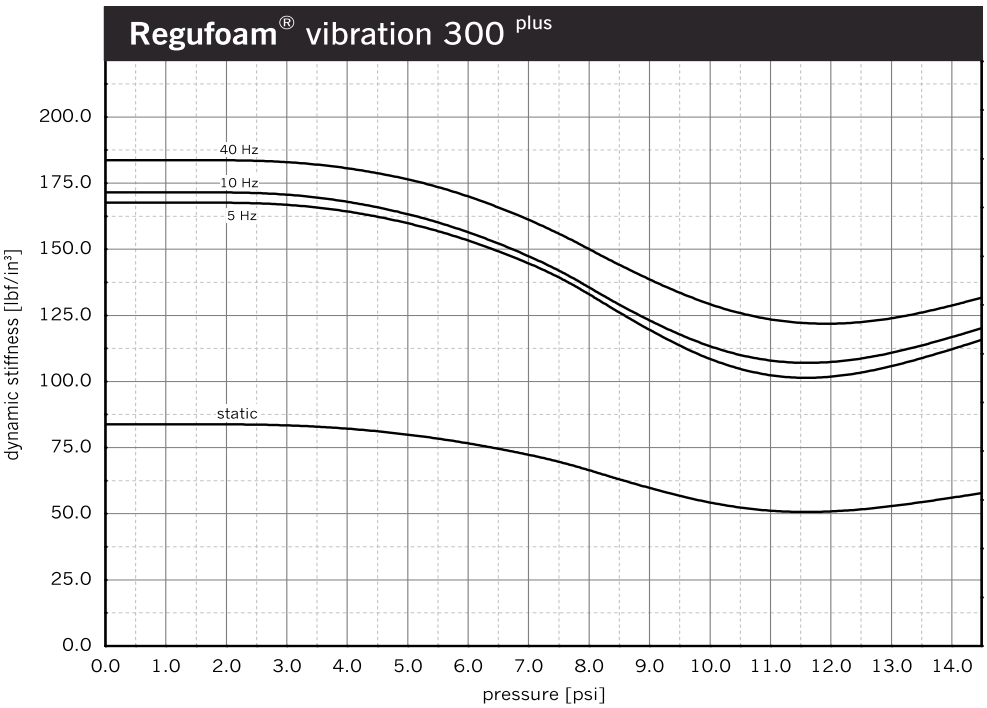
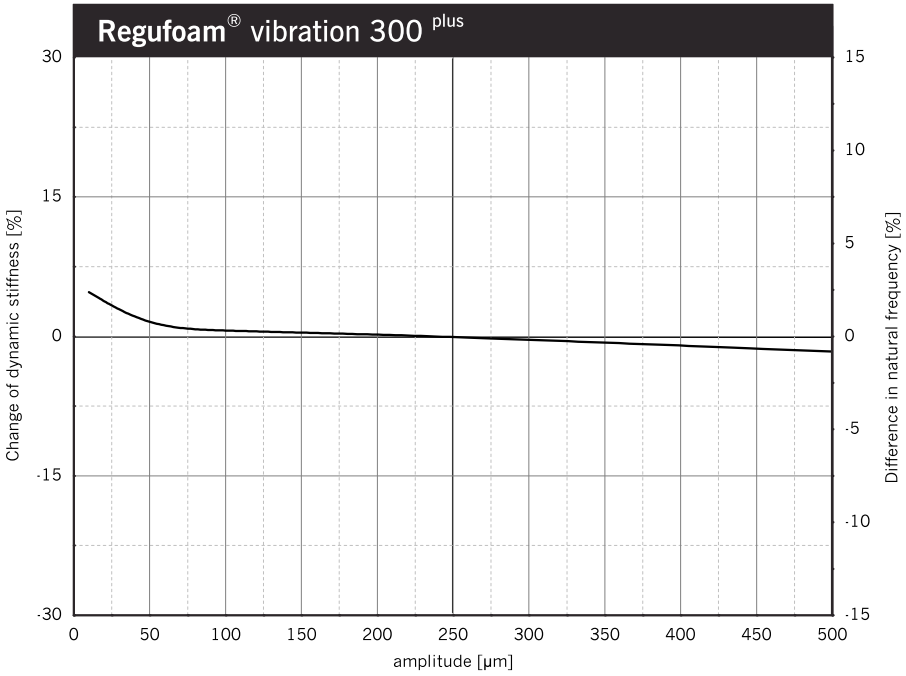
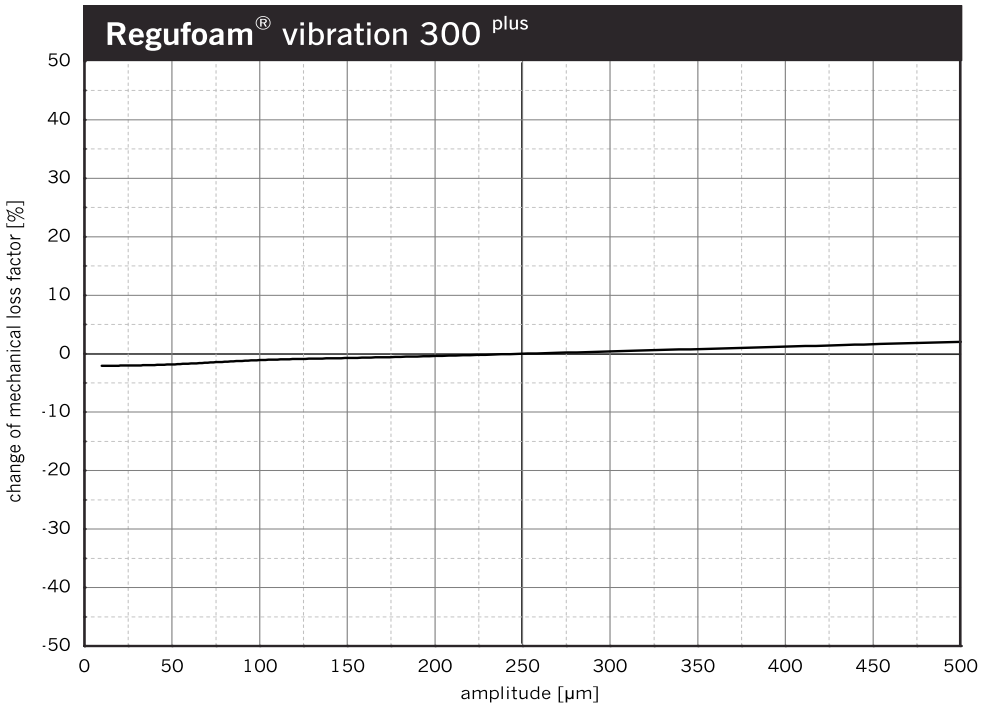


Illustration of the dynamic stiffness for sinusoidal excitation at a constant mean load and an amplitude of +/- 0.25 mm. Dimension of specimens 300 x 300 x 25 mm; static stiffness as a result of the tangent modulus of the spring characteristic. Tested in accordance with DIN 53513.

Influence of Amplitude

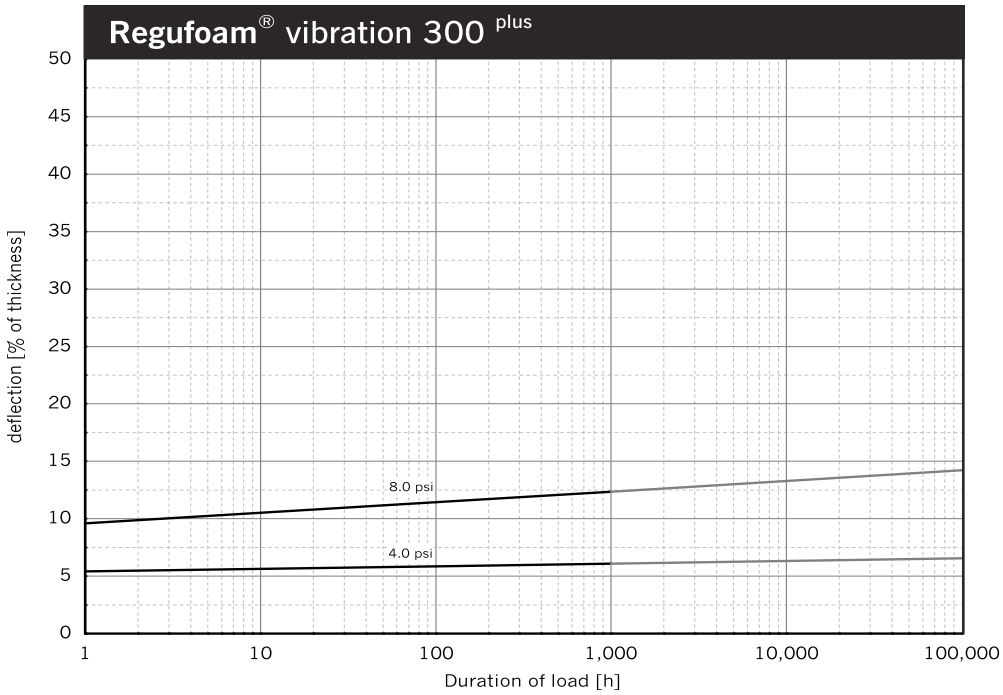


Change of the dynamic stiffness due to changes in amplitudes. Average for 5 Hz, 10 Hz and 40 Hz excitation.
Sinusoidal excitation at a constant mean load of 0.055 N/mm², dimensions of the specimens 300 x 300 x 25 mm.
Natural frequency of a single-degree-of-freedom system (SDOF system) on a rigid base.



Change of the mechanical loss factor due to changes in amplitudes.
Sinusoidal excitation at a constant mean load of 0.055 N/mm², dimensions of the specimens 300 x 300 x 25 mm.

Long-Term Creep Test



Dimension of specimens 300 x 300 x 50 mm.

Standard forms of delivery, ex Lebanon, PA

Sheets

Thickness:	25 mm and 12.5 mm Custom thicknesses available on request
Length:	59” (1,500 mm)
Width:	3.3’ (1,000 mm)

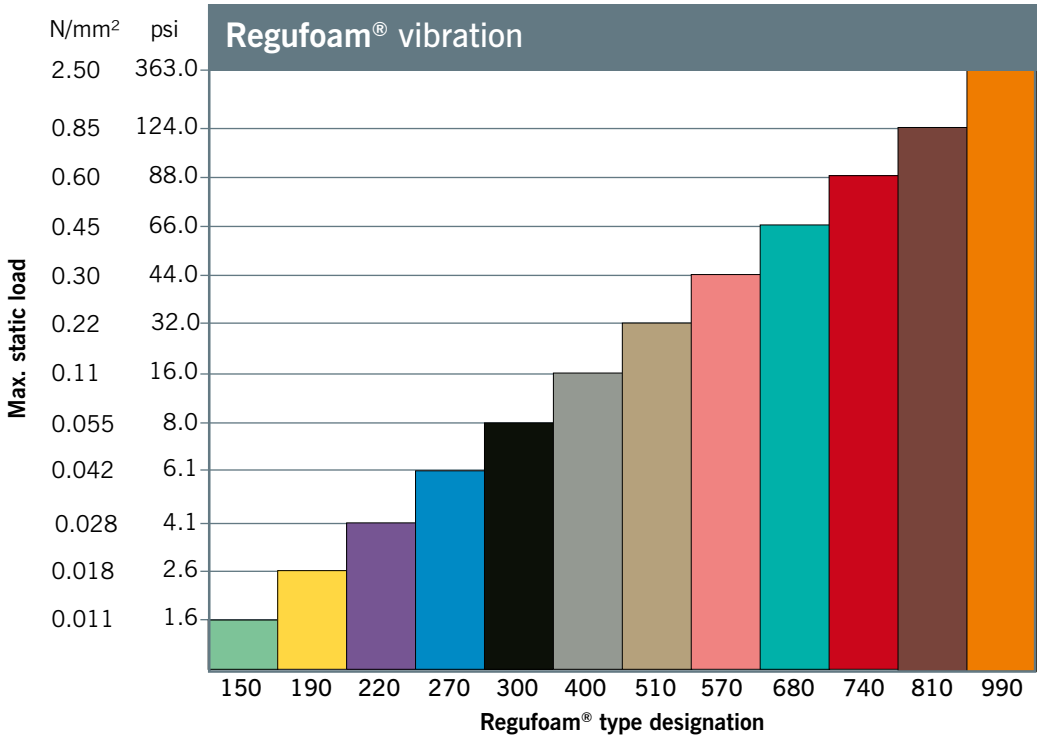
Max. static load
16.0 psi

Peak loads (rare, short-term loads)
up to 435.1 psi

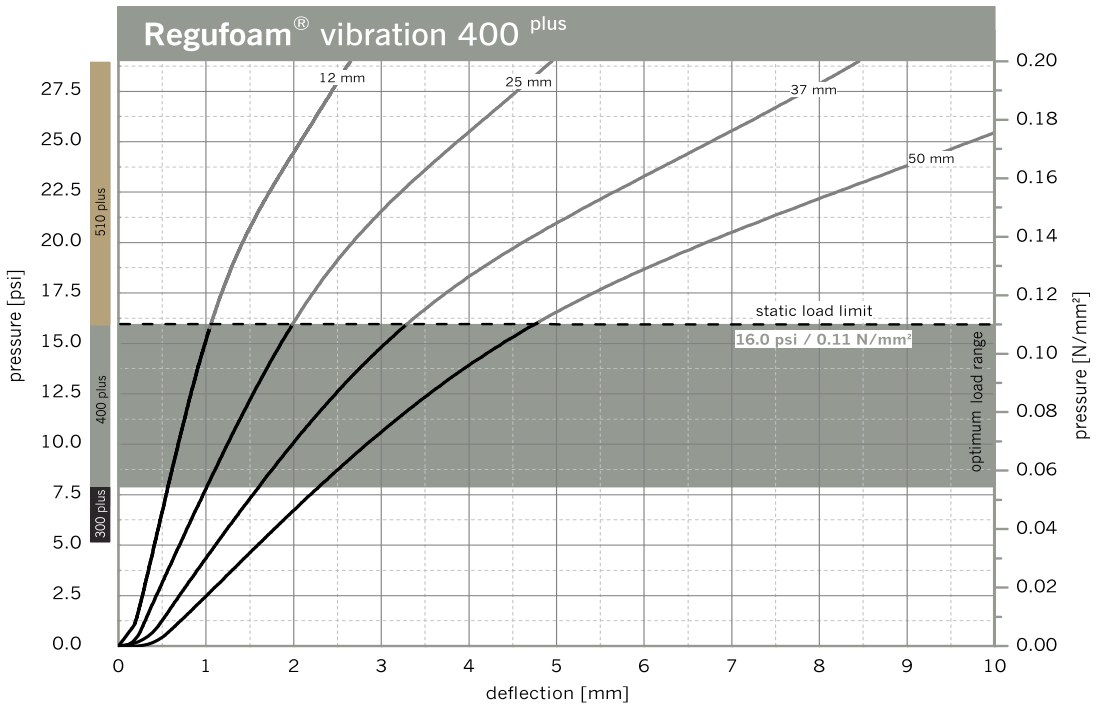
Color: Gray

Static modulus of elasticity	Based on EN 826	87.0 - 145.0 0.6 - 1.0	psi N/mm²	Tangential modulus, see figure “Modulus of elasticity”
Dynamic modulus of elasticity	Based on DIN 53513	174.1 - 290.1 1.2 - 2.0	psi N/mm²	Depending on frequency, load and thickness, see figure “dynamic stiffness“
Mechanical loss factor	DIN 53513	0.17	[-]	Load-, amplitude- and frequency-dependent
Compression set	Based on DIN EN ISO 1856	3.9	%	Measured 30 minutes after decompression with 50% deformation / 23 °C after 72 hrs
Tensile strength	Based on DIN EN ISO 1798	217.6 1.5	psi N/mm²	
Elongation at break	Based on DIN EN ISO 1798	220	%	
Tear resistance	Based on DIN ISO 34-1	34.3	lbs/in	
Fire behavior	DIN 4102 DIN EN 13501	B2 E	[-] [-]	Normal flammability
Sliding friction	in-house laboratory in-house laboratory	0.7 0.8	[-] [-]	Steel (dry) Concrete (dry)
Compression hardness	Based on DIN EN ISO 3386-2	170	kPa	Compressive stress at 25 % deformation Test specimen h = 25 mm
Rebound elasticity	Based on DIN EN ISO 8307	57	%	Depending on thickness, Test specimen h = 25 mm
Force reduction	DIN EN 14904	68	%	Depending on thickness, Test specimen h = 25 mm

Load Ranges



Load Deflection



Examination of deflection in accordance to DIN EN 826, between two stiff panels. Illustration based on the third loading. Velocity of loading and unloading 20 seconds. Tested at room temperature. Dimensions of test specimens 300 mm x 300 mm.

Vibration Isolation

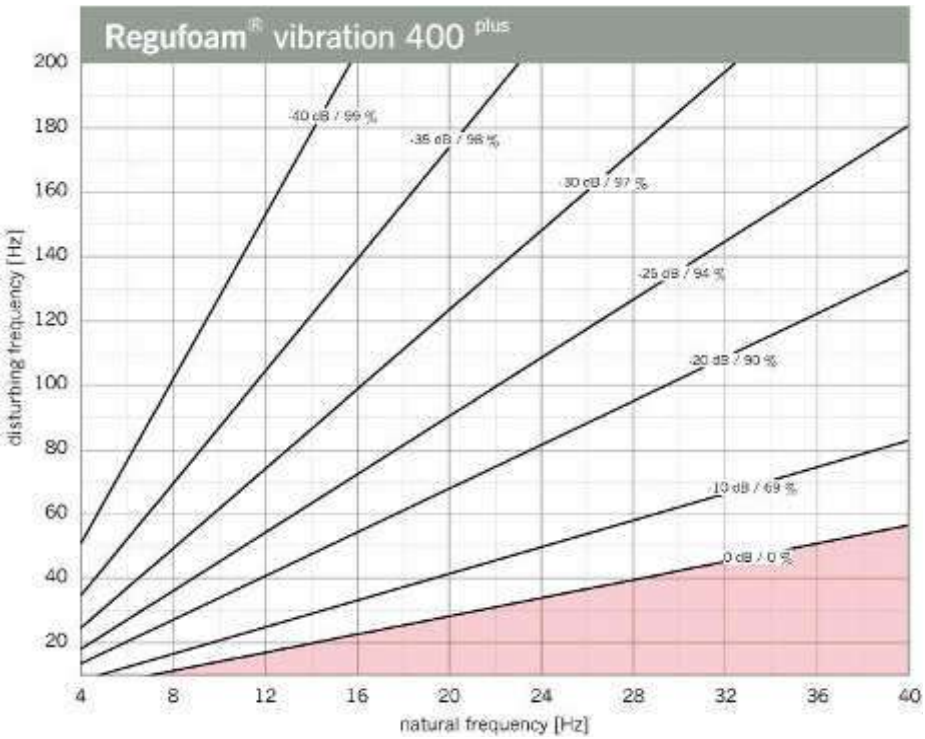
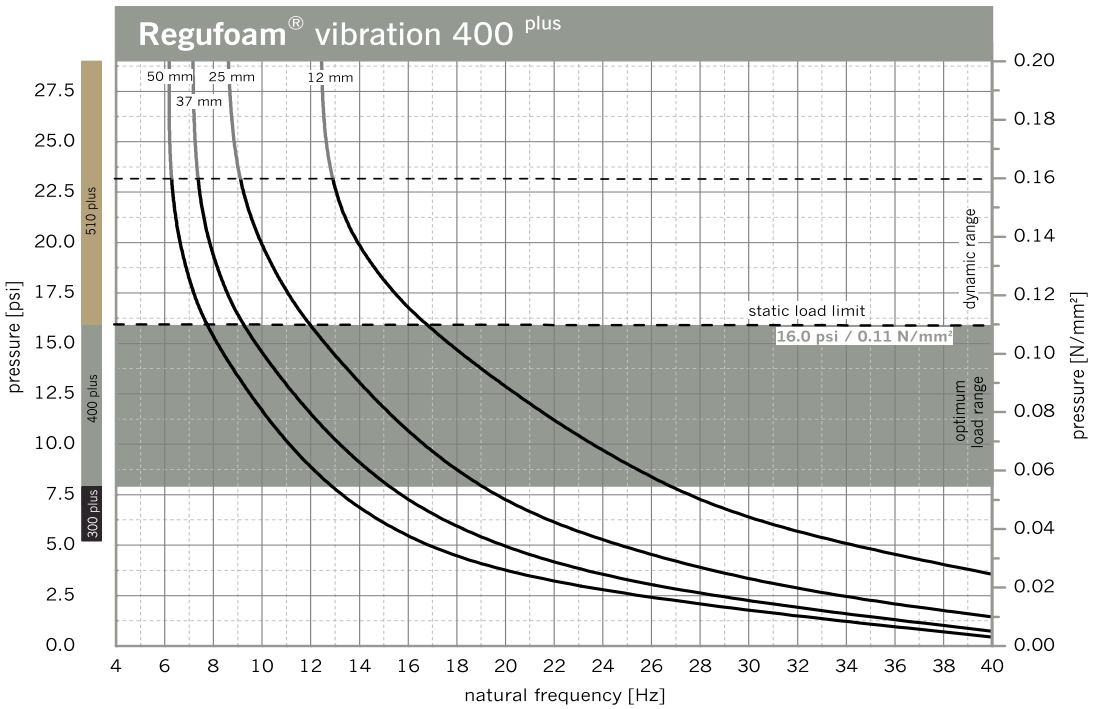


Illustration of the isolation efficiency of a single-degree-of-freedom system (SDOF system) on a rigid base with **Regufoam® vibration 400 plus**. Parameter: power transmission (insertion loss) in dB, isolation factor in %.

Natural Frequency



Natural frequency of a single-degree-of-freedom system (SDOF system) considering the dynamic stiffness of **Regufoam® vibration 400 plus** on a rigid base. Dimensions of test specimens 300 mm x 300 mm.

Modulus of Elasticity

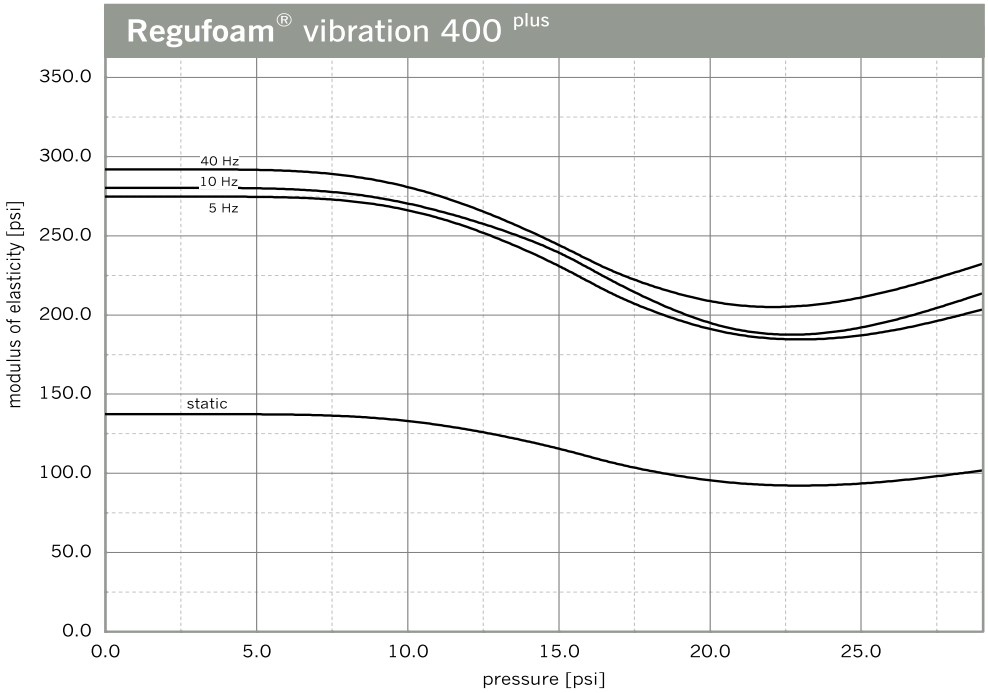


Illustration of the dynamic modulus of elasticity for sinusoidal excitation at a constant mean load and an amplitude of +/- 0.25 mm. Dimensions of specimens 300 mm x 300 mm x 25 mm; static modulus of elasticity as a result of the tangent modulus of the spring characteristic. Tested in accordance with DIN 53513.

Dynamic Stiffness

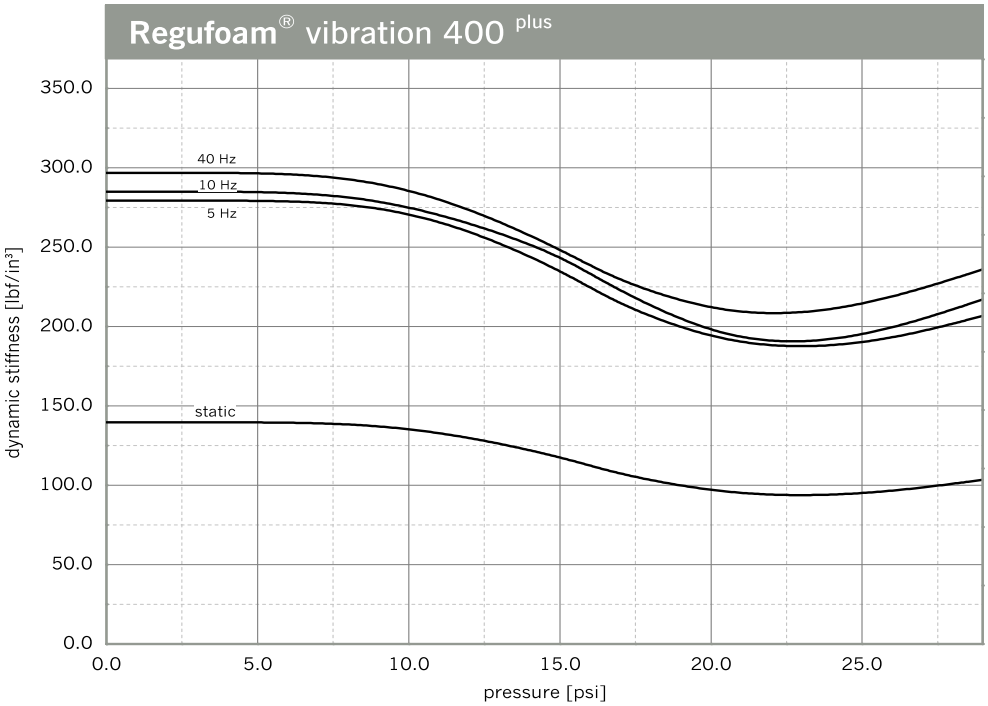
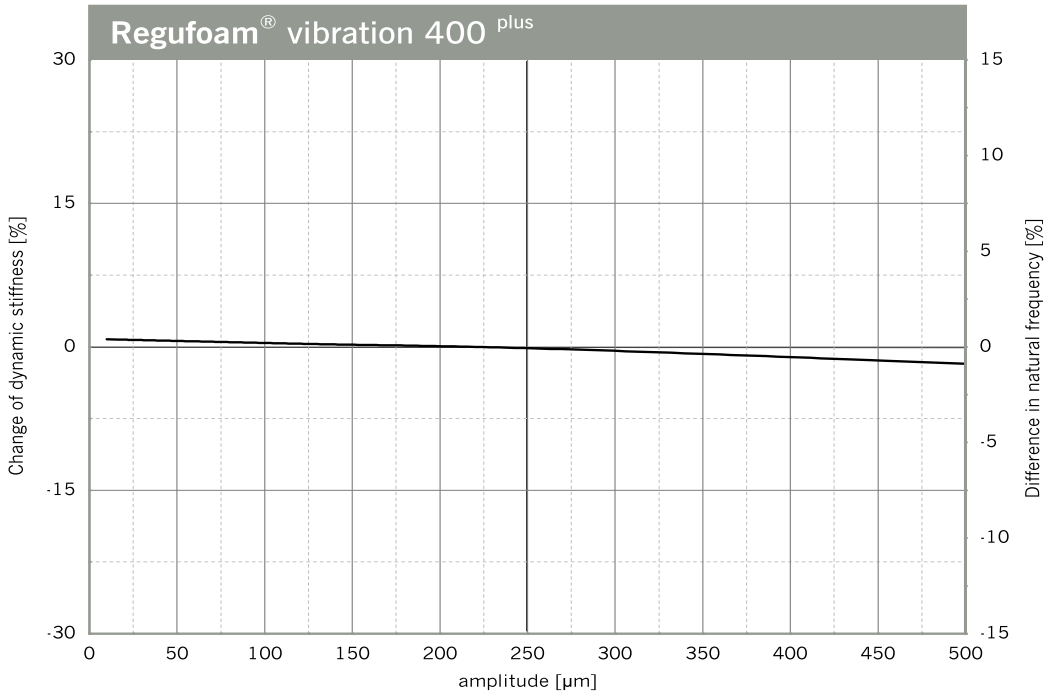
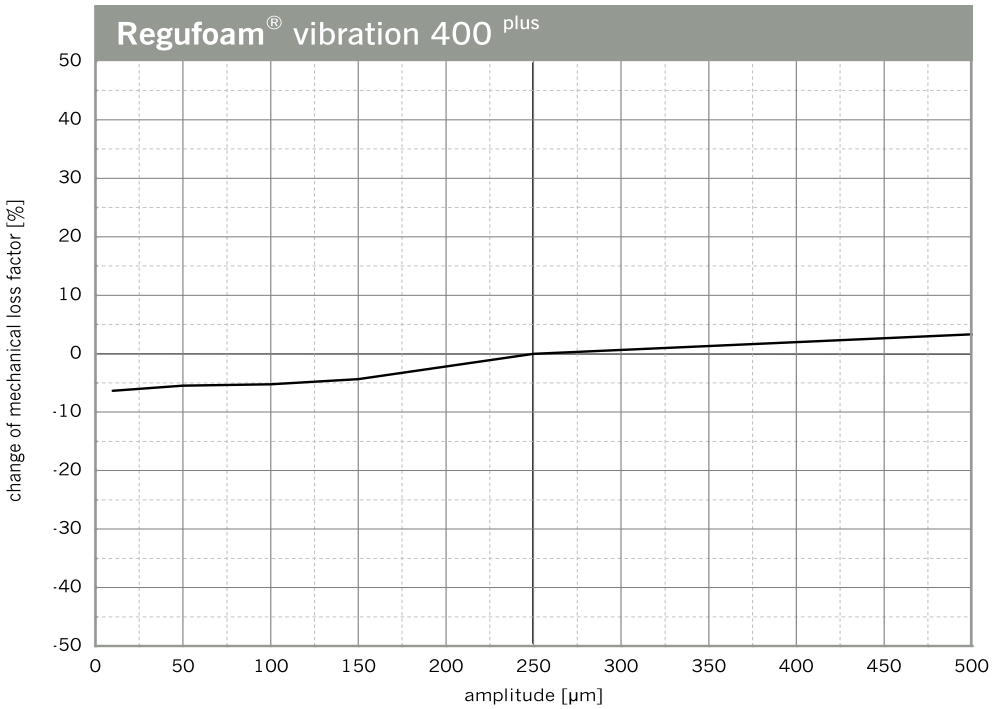


Illustration of the dynamic stiffness for sinusoidal excitation at a constant mean load and an amplitude of +/- 0.25 mm. Dimension of specimens 300 x 300 x 25 mm; static stiffness as a result of the tangent modulus of the spring characteristic. Tested in accordance with DIN 53513.

Influence of Amplitude

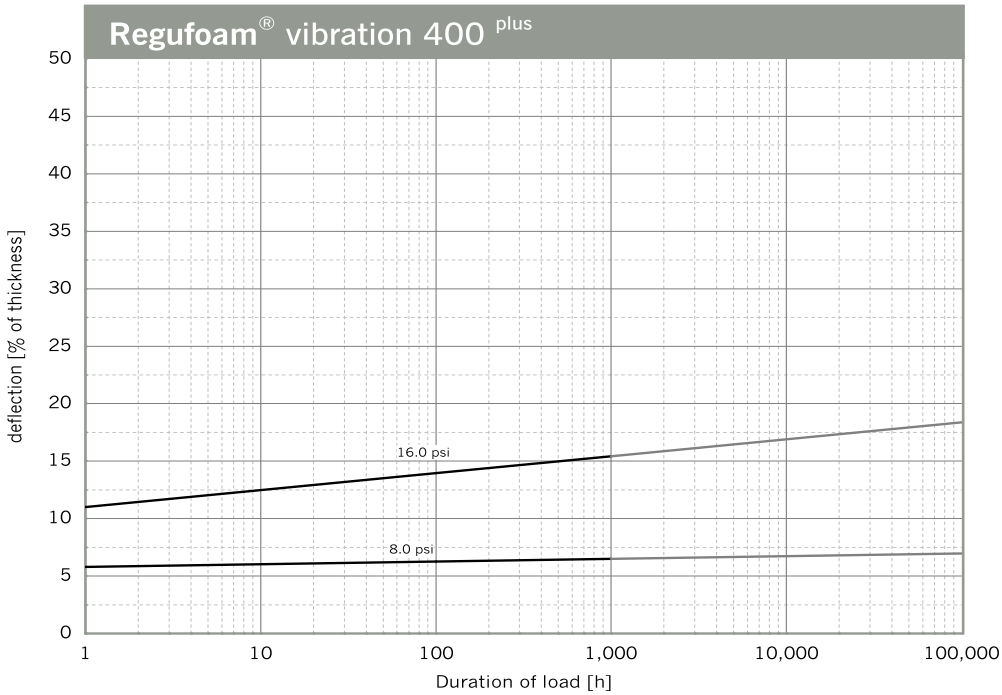


Change of the dynamic stiffness due to changes in amplitudes. Average for 5 Hz, 10 Hz and 40 Hz excitation.
Sinusoidal excitation at a constant mean load of 0.11 N/mm², dimensions of the specimens 300 x 300 x 25 mm.
Natural frequency of a single-degree-of-freedom system (SDOF system) on a rigid base.



Change of the mechanical loss factor due to changes in amplitudes.
Sinusoidal excitation at a constant mean load of 0.11 N/mm², dimensions of the specimens 300 x 300 x 25 mm.

Long-Term Creep Test



Dimension of specimens 300 x 300 x 50 mm.

Standard forms of delivery, ex Lebanon, PA

Sheets

Thickness:	25 mm and 12.5 mm Custom thicknesses available on request
Length:	59” (1,500 mm)
Width:	3.3’ (1,000 mm)

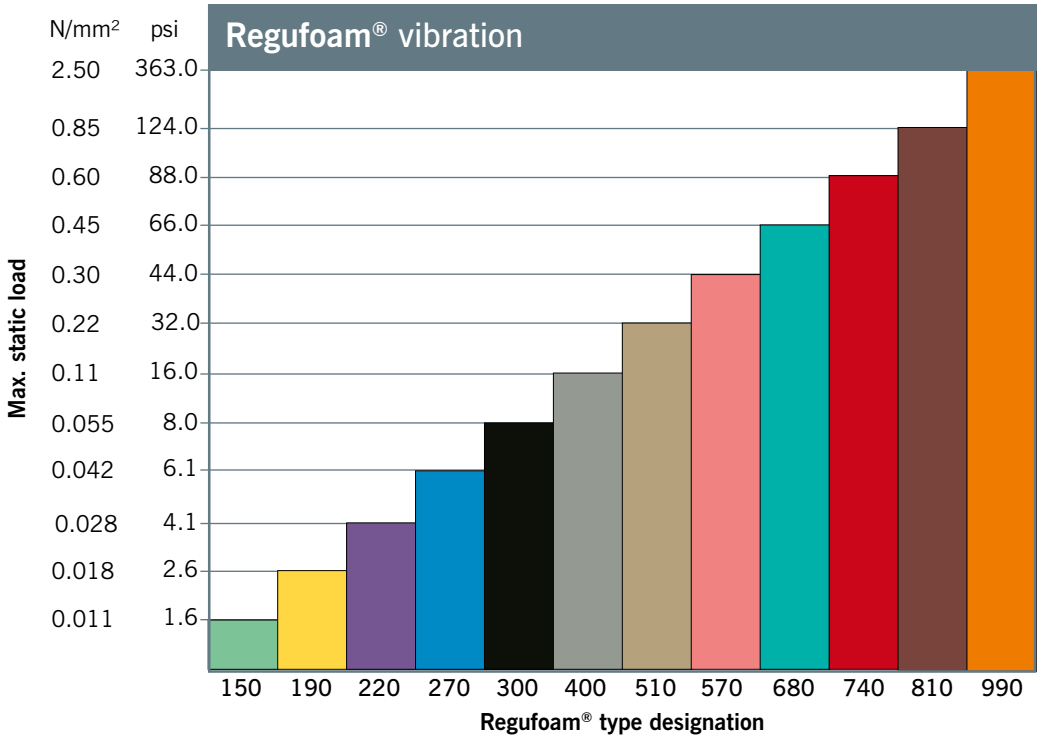
Max. static load
32.0 psi

Peak loads (rare, short-term loads)
up to 580.2 psi

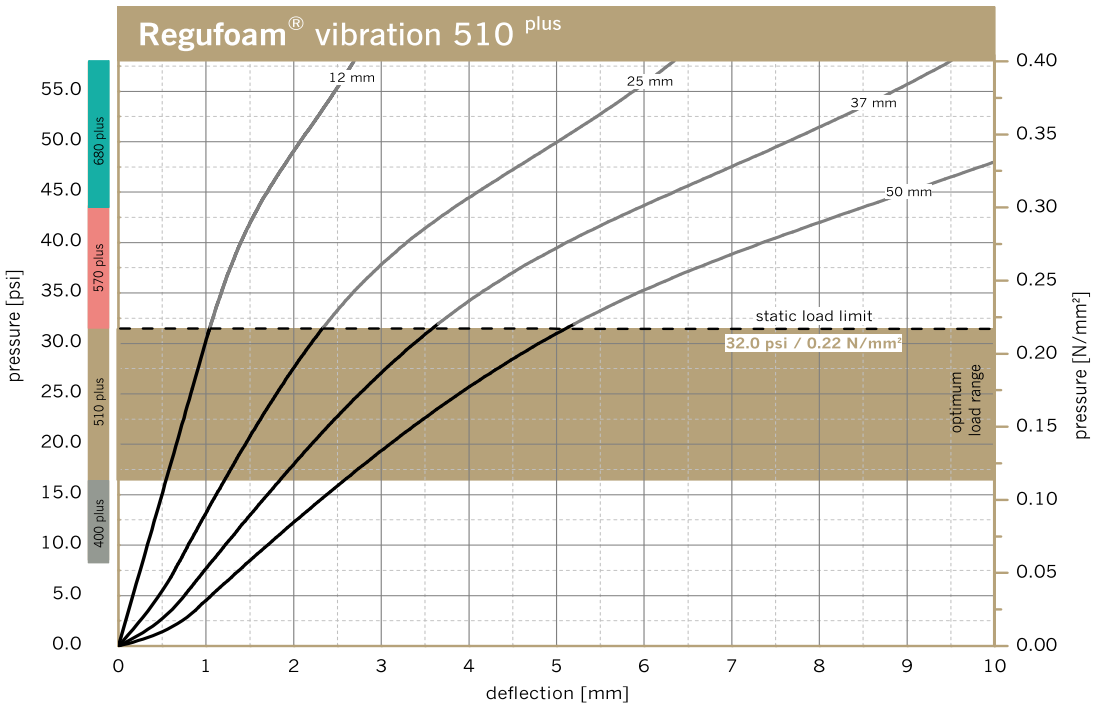
Color: Beige

Static modulus of elasticity	Based on EN 826	159.5 - 246.6 1.1 - 1.7	psi N/mm²	Tangential modulus, see figure “Modulus of elasticity”
Dynamic modulus of elasticity	Based on DIN 53513	319.1 - 536.6 2.2 - 3.7	psi N/mm²	Depending on frequency, load and thickness, see figure “dynamic stiffness“
Mechanical loss factor	DIN 53513	0.15	[-]	Load-, amplitude- and frequency-dependent
Compression set	Based on DIN EN ISO 1856	4.2	%	Measured 30 minutes after decompression with 50% deformation / 23 °C after 72 hrs
Tensile strength	Based on DIN EN ISO 1798	348.1 2.4	psi N/mm²	
Elongation at break	Based on DIN EN ISO 1798	240	%	
Tear resistance	Based on DIN ISO 34-1	53.1	lbs/in	
Fire behavior	DIN 4102 DIN EN 13501	B2 E	[-] [-]	Normal flammability
Sliding friction	in-house laboratory in-house laboratory	0.7 0.8	[-] [-]	Steel (dry) Concrete (dry)
Compression hardness	Based on DIN EN ISO 3386-2	330	kPa	Compressive stress at 25 % deformation Test specimen h = 25 mm
Rebound elasticity	Based on DIN EN ISO 8307	60	%	Depending on thickness, Test specimen h = 25 mm
Force reduction	DIN EN 14904	61	%	Depending on thickness, Test specimen h = 25 mm

Load Ranges



Load Deflection



Examination of deflection in accordance to DIN EN 826, between two stiff panels. Illustration based on the third loading. Velocity of loading and unloading 20 seconds. Tested at room temperature. Dimensions of test specimens 300 mm x 300 mm.

Vibration Isolation

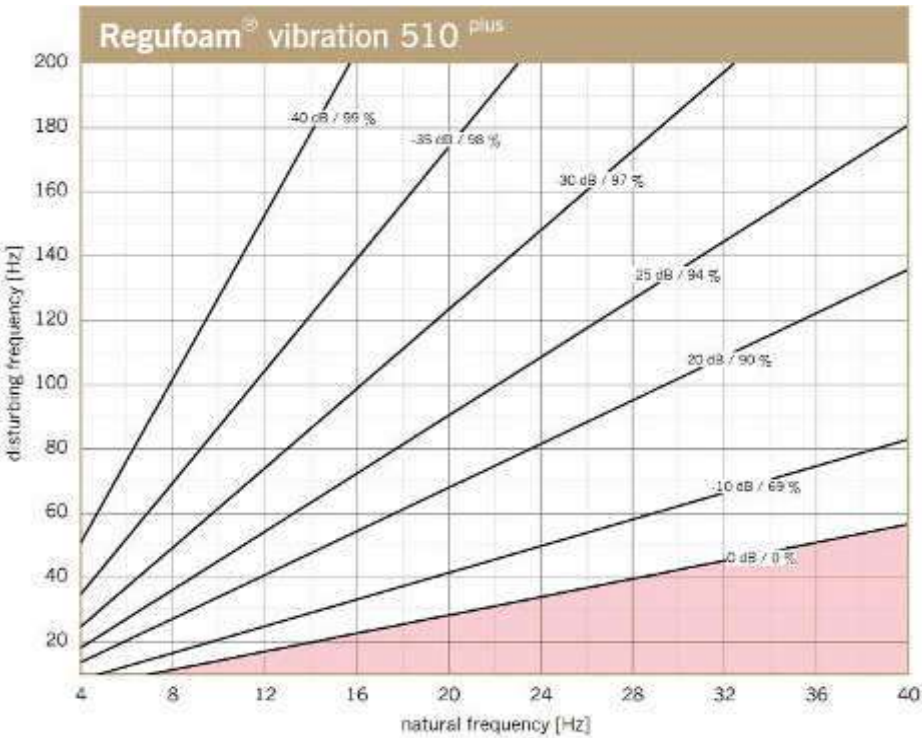
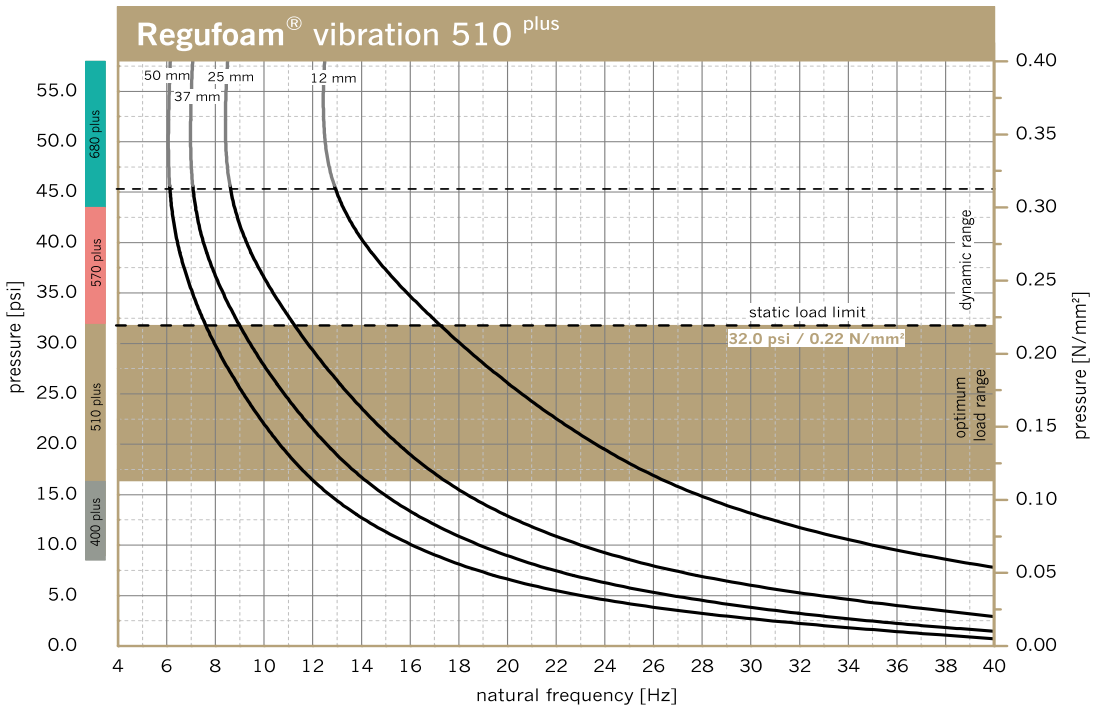


Illustration of the isolation efficiency of a single-degree-of-freedom system (SDOF system) on a rigid base with **Regufoam® vibration 510 plus**. Parameter: power transmission (insertion loss) in dB, isolation factor in %.

Natural Frequency



Natural frequency of a single-degree-of-freedom system (SDOF system) considering the dynamic stiffness of **Regufoam® vibration 510 plus** on a rigid base. Dimensions of test specimens 300 mm x 300 mm.

Modulus of Elasticity

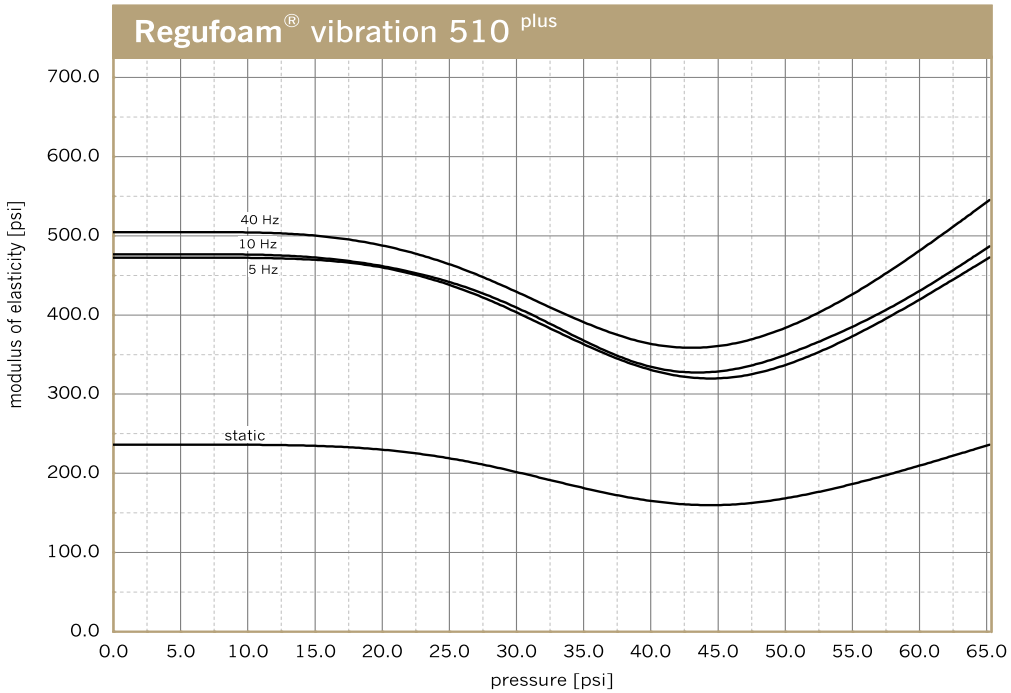


Illustration of the dynamic modulus of elasticity for sinusoidal excitation at a constant mean load and an amplitude of +/- 0.25 mm. Dimensions of specimens 300 mm x 300 mm x 25 mm; static modulus of elasticity as a result of the tangent modulus of the spring characteristic. Tested in accordance with DIN 53513.

Dynamic Stiffness

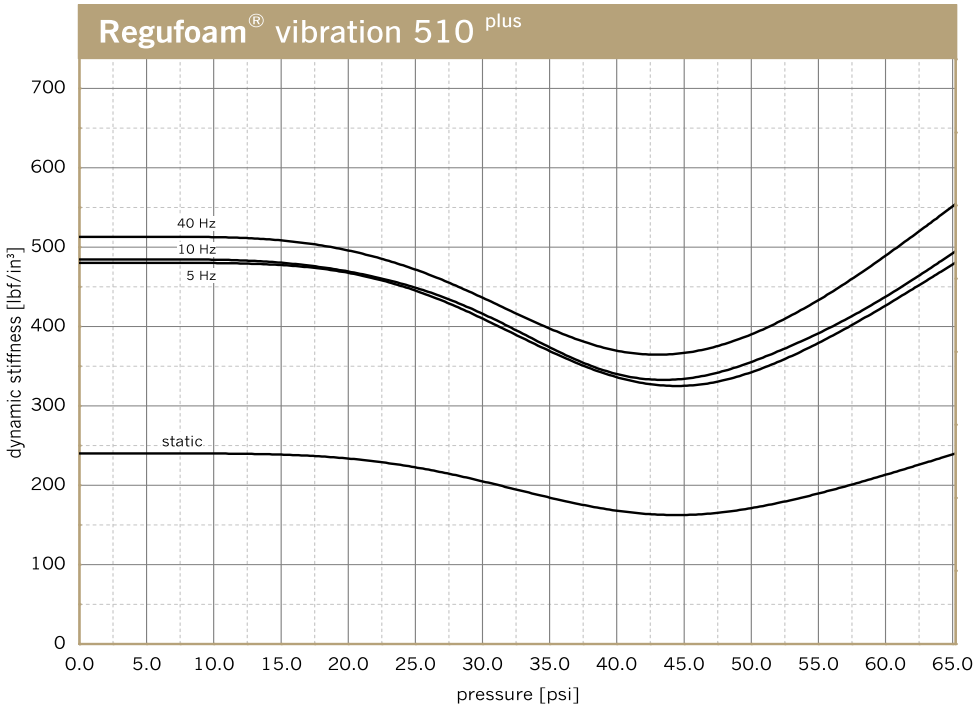
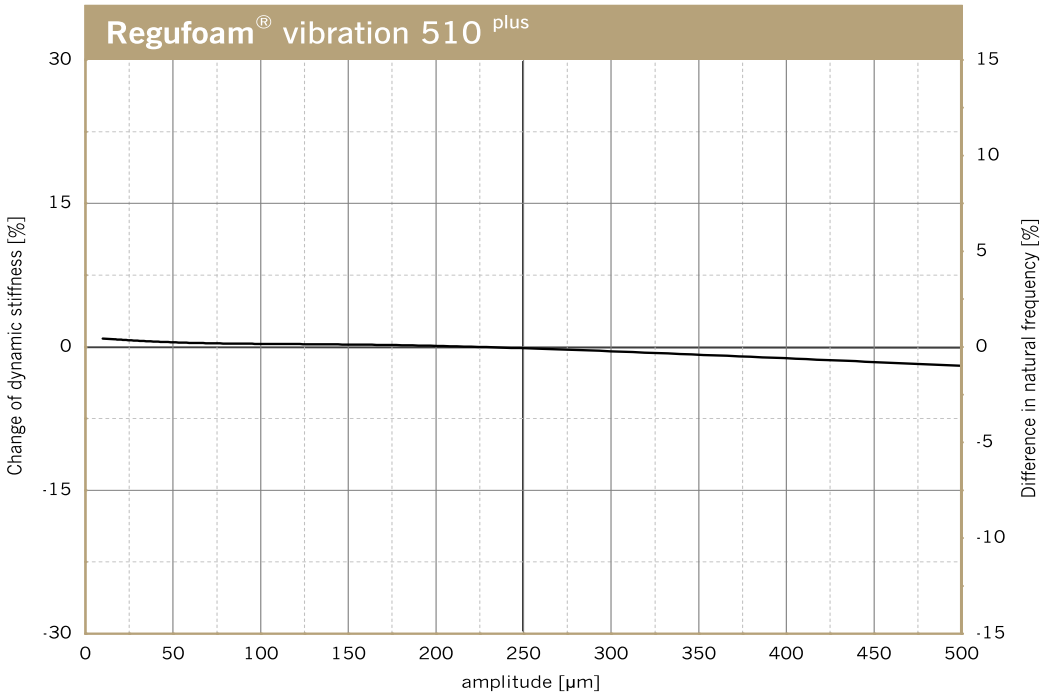
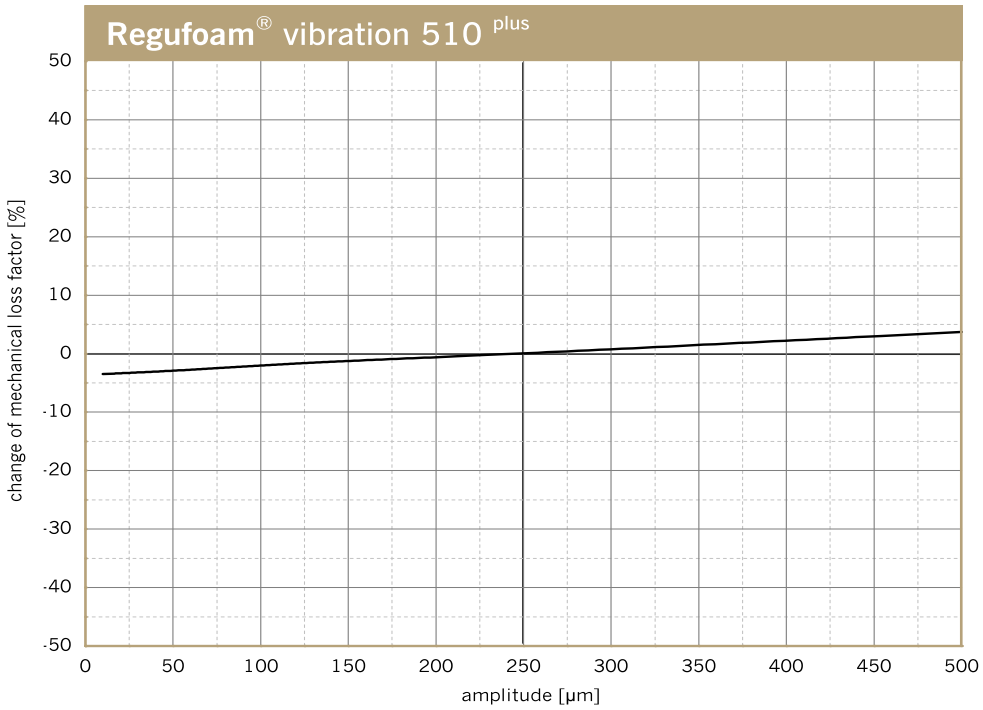


Illustration of the dynamic stiffness for sinusoidal excitation at a constant mean load and an amplitude of +/- 0.25 mm. Dimension of specimens 300 x 300 x 25 mm; static stiffness as a result of the tangent modulus of the spring characteristic. Tested in accordance with DIN 53513.

Influence of Amplitude

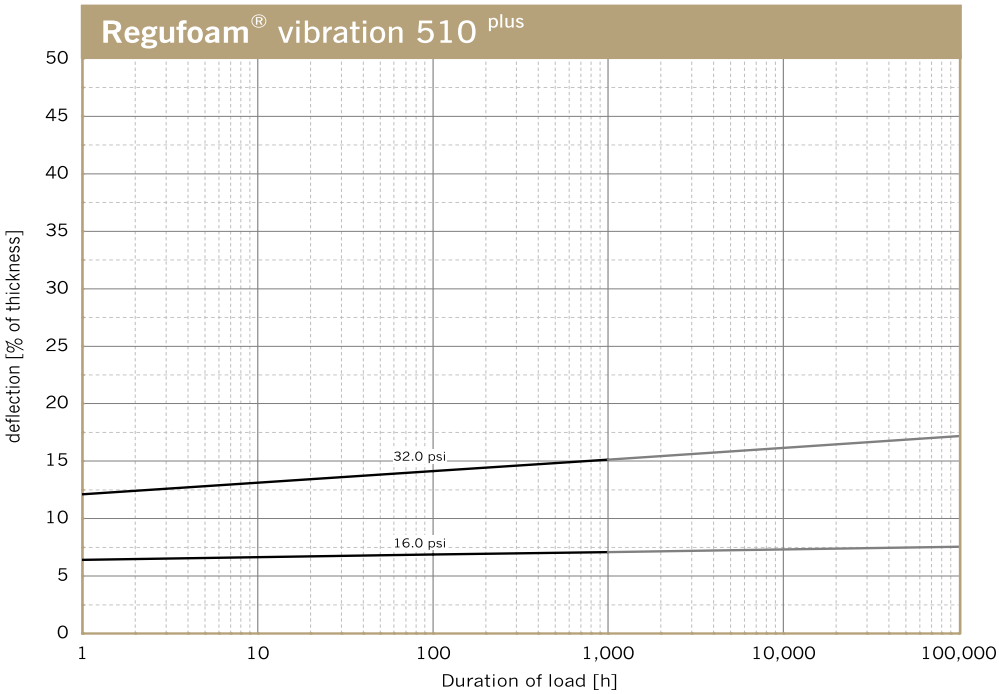


Change of the dynamic stiffness due to changes in amplitudes. Average for 5 Hz, 10 Hz and 40 Hz excitation.
Sinusoidal excitation at a constant mean load of 0.22 N/mm², dimensions of the specimens 300 x 300 x 25 mm.
Natural frequency of a single-degree-of-freedom system (SDOF system) on a rigid base.



Change of the mechanical loss factor due to changes in amplitudes.
Sinusoidal excitation at a constant mean load of 0.22 N/mm², dimensions of the specimens 300 x 300 x 25 mm.

Long-Term Creep Test



Dimension of specimens 300 x 300 x 50 mm.

Standard forms of delivery, ex Lebanon, PA

Sheets

Thickness:	25 mm and 12.5 mm Custom thicknesses available on request
Length:	59” (1,500 mm)
Width:	3.3’ (1,000 mm)

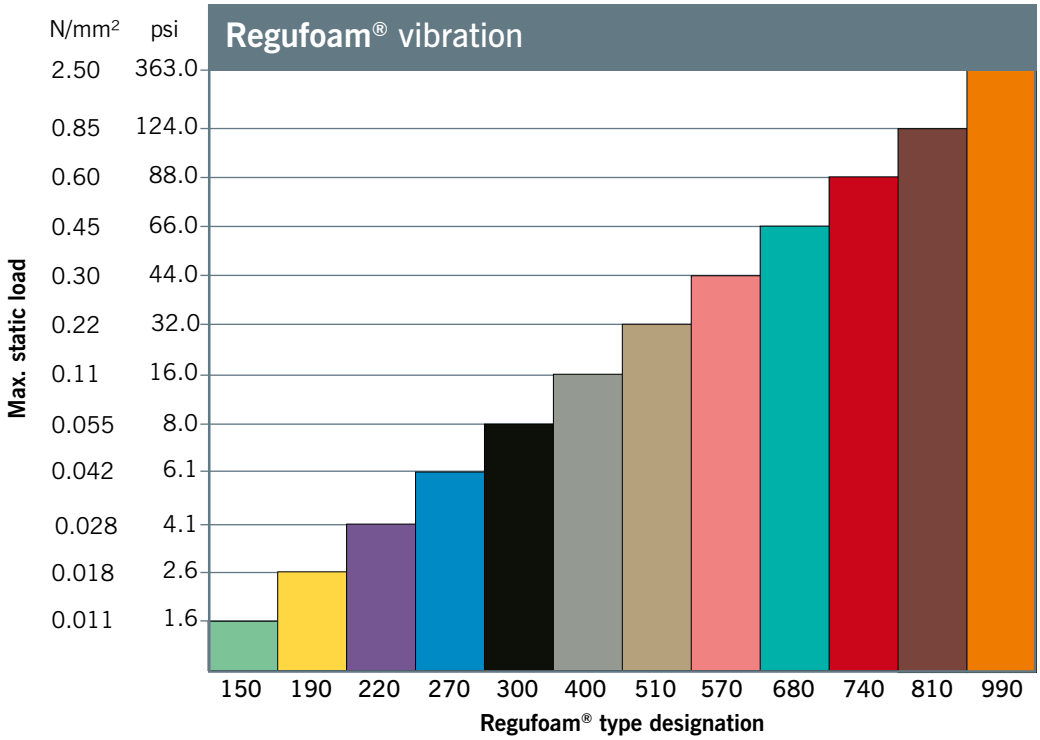
Max. static load
44.0 psi

Peak loads (rare, short-term loads)
up to 652.7 psi

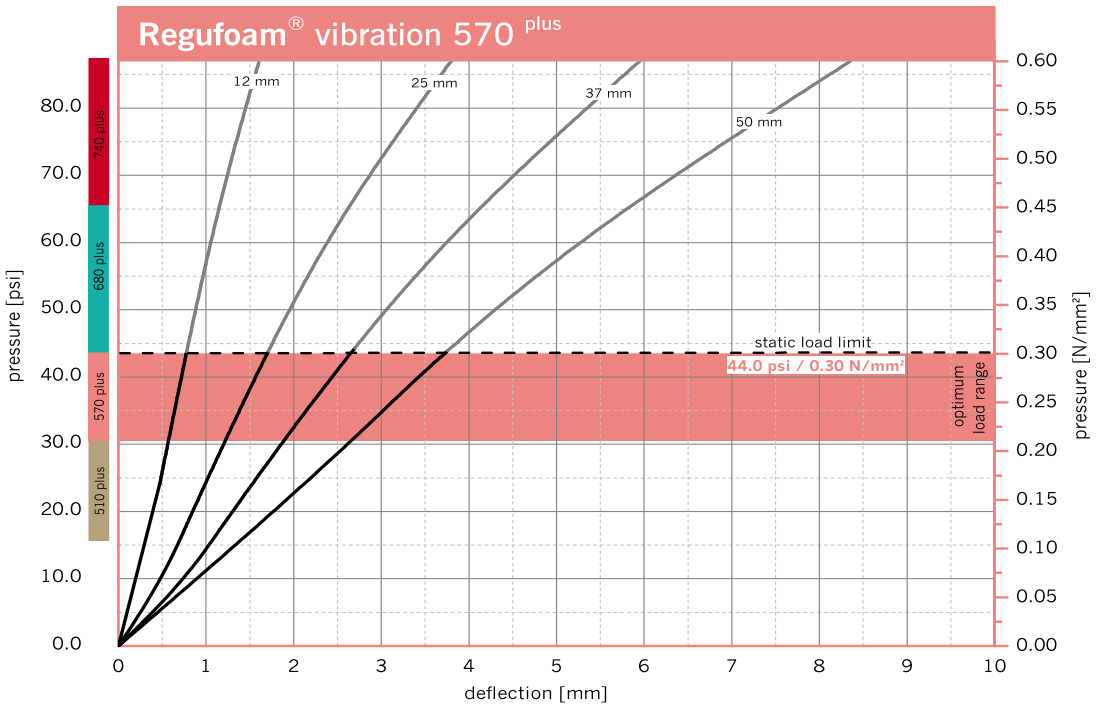
Color: Rose

Static modulus of elasticity	Based on EN 826	377.1 - 420.6 2.6 - 2.9	psi N/mm²	Tangential modulus, see figure “Modulus of elasticity”
Dynamic modulus of elasticity	Based on DIN 53513	768.7 - 942.8 5.3 - 6.5	psi N/mm²	Depending on frequency, load and thickness, see figure “dynamic stiffness“
Mechanical loss factor	DIN 53513	0.14	[-]	Load-, amplitude- and frequency-dependent
Compression set	Based on DIN EN ISO 1856	4.4	%	Measured 30 minutes after decompression with 50% deformation / 23 °C after 72 hrs
Tensile strength	Based on DIN EN ISO 1798	420.6 2.9	psi N/mm²	
Elongation at break	Based on DIN EN ISO 1798	210	%	
Tear resistance	Based on DIN ISO 34-1	80.5	lbs/in	
Fire behavior	DIN 4102 DIN EN 13501	B2 E	[-] [-]	Normal flammability
Sliding friction	in-house laboratory in-house laboratory	0.6 0.7	[-] [-]	Steel (dry) Concrete (dry)
Compression hardness	Based on DIN EN ISO 3386-2	620	kPa	Compressive stress at 25 % deformation Test specimen h = 25 mm
Rebound elasticity	Based on DIN EN ISO 8307	58	%	Depending on thickness, Test specimen h = 25 mm
Force reduction	DIN EN 14904	50	%	Depending on thickness, Test specimen h = 25 mm

Load Ranges



Load Deflection



Examination of deflection in accordance to DIN EN 826, between two stiff panels. Illustration based on the third loading.
Velocity of loading and unloading 20 seconds. Tested at room temperature. Dimensions of test specimens 300 mm x 300 mm.

Vibration Isolation

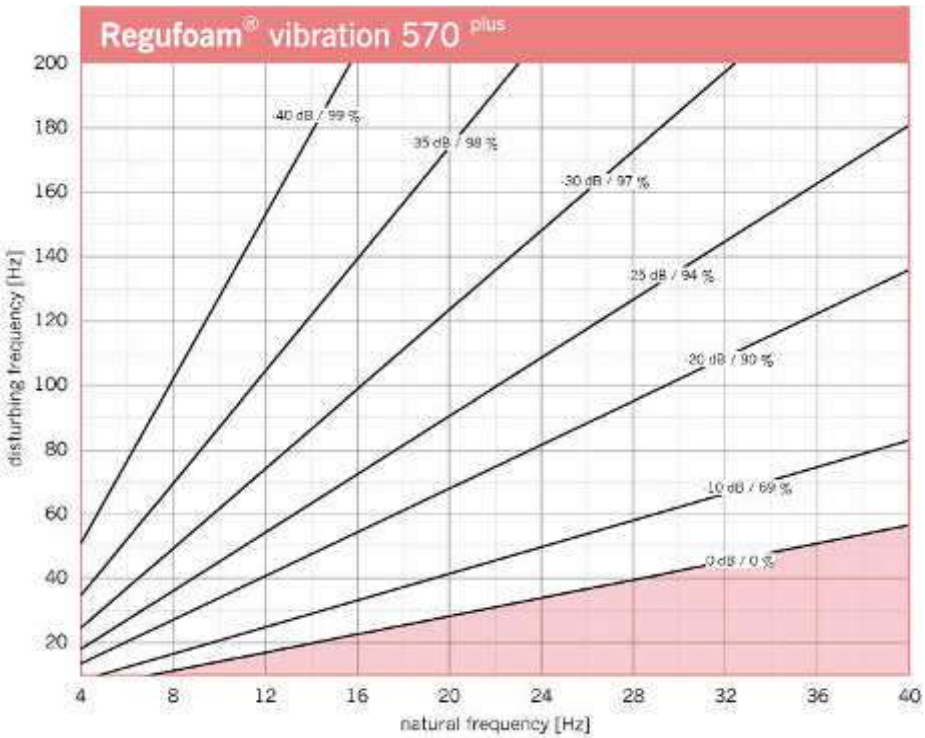
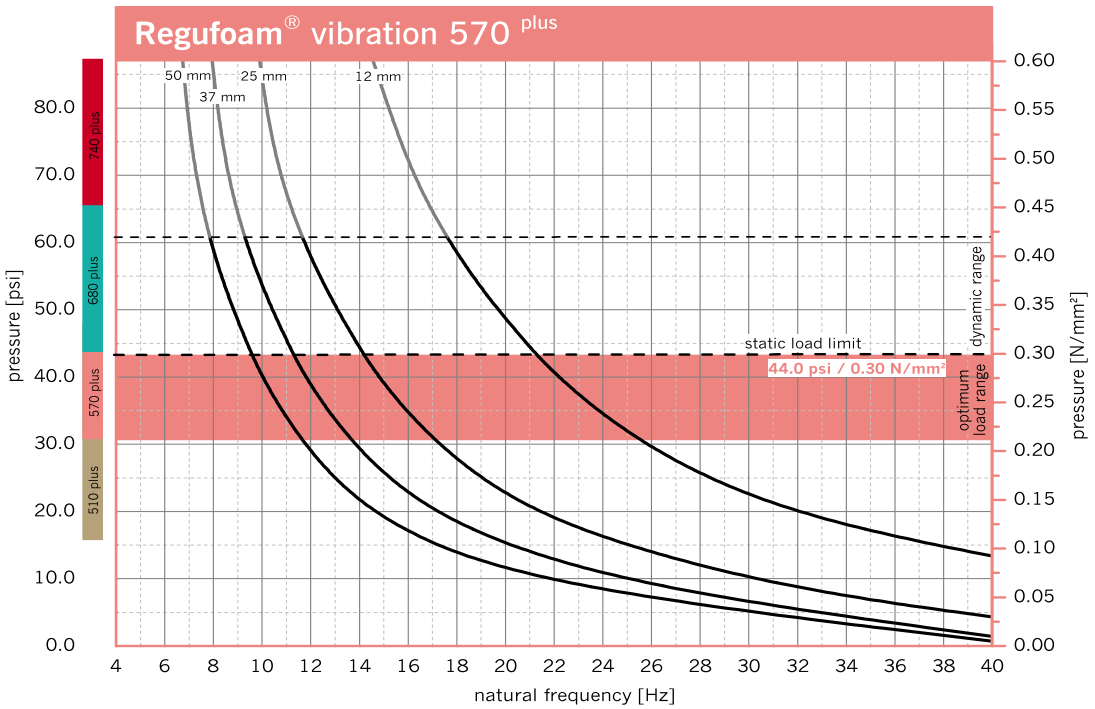


Illustration of the isolation efficiency of a single-degree-of-freedom system (SDOF system) on a rigid base with **Regufoam® vibration 570 plus**. Parameter: power transmission (insertion loss) in dB, isolation factor in %.

Natural Frequency



Natural frequency of a single-degree-of-freedom system (SDOF system) considering the dynamic stiffness of **Regufoam® vibration 570 plus** on a rigid base. Dimensions of test specimens 300 mm x 300 mm.

Modulus of Elasticity

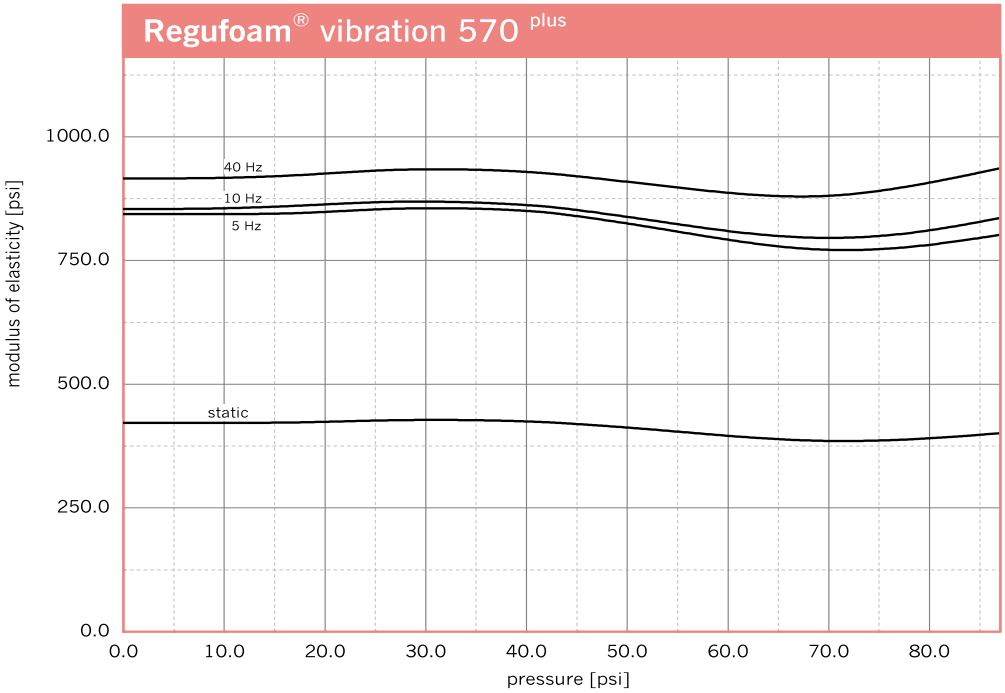


Illustration of the dynamic modulus of elasticity for sinusoidal excitation at a constant mean load and an amplitude of +/- 0.25 mm. Dimensions of specimens 300 mm x 300 mm x 25 mm; static modulus of elasticity as a result of the tangent modulus of the spring characteristic. Tested in accordance with DIN 53513.

Dynamic Stiffness

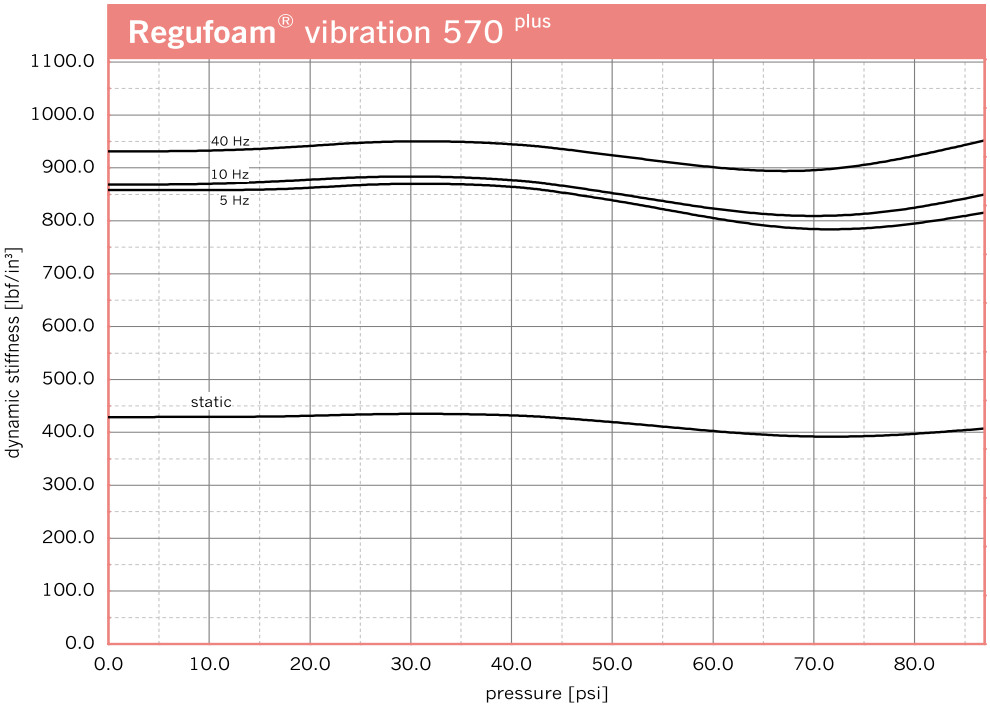
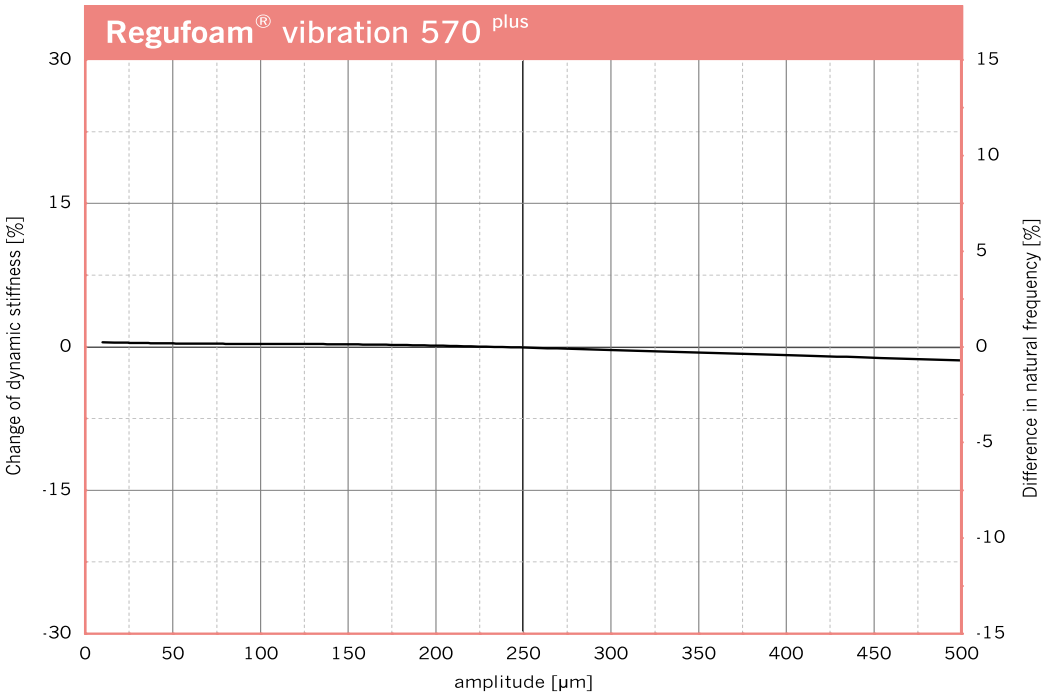
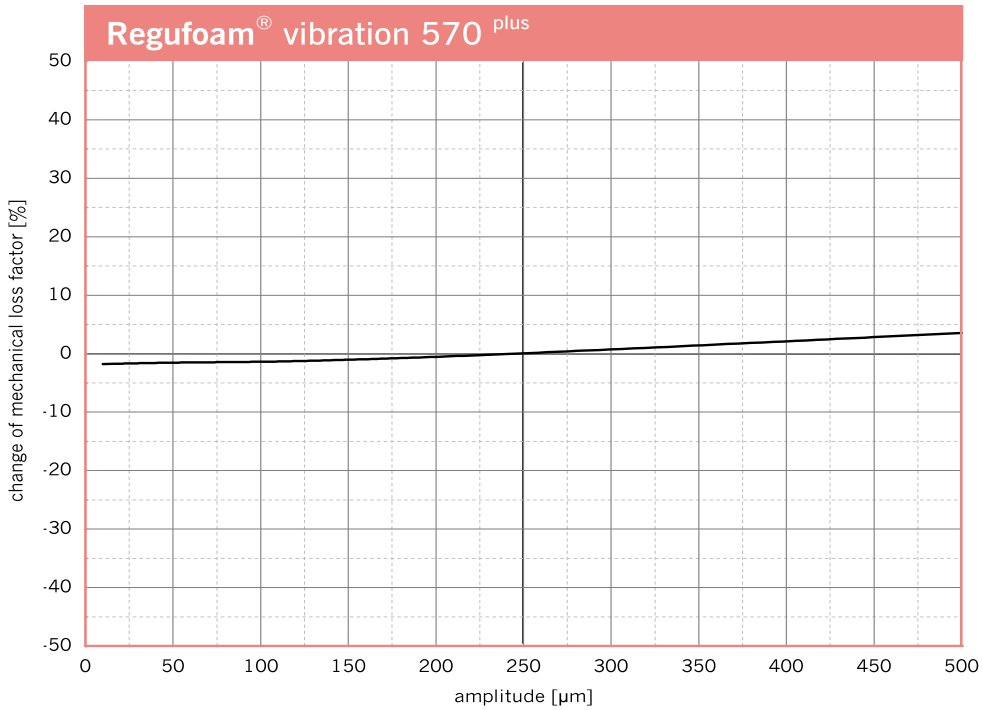


Illustration of the dynamic stiffness for sinusoidal excitation at a constant mean load and an amplitude of +/- 0.25 mm. Dimension of specimens 300 x 300 x 25 mm; static stiffness as a result of the tangent modulus of the spring characteristic. Tested in accordance with DIN 53513.

Influence of Amplitude

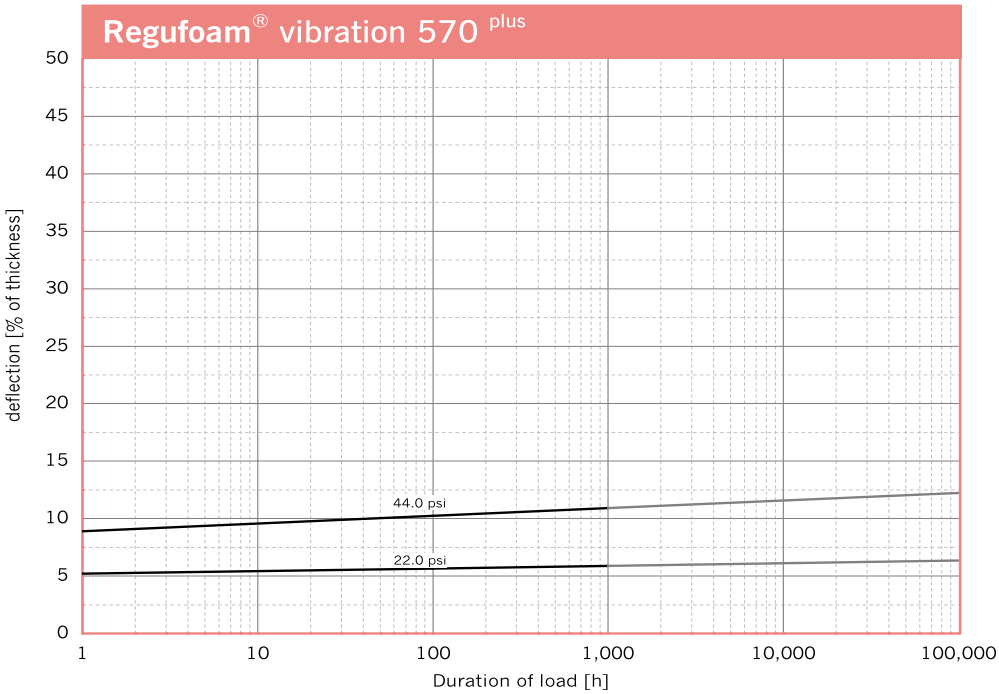


Change of the dynamic stiffness due to changes in amplitudes. Average for 5 Hz, 10 Hz and 40 Hz excitation.
Sinusoidal excitation at a constant mean load of 0.30 N/mm², dimensions of the specimens 300 x 300 x 25 mm.
Natural frequency of a single-degree-of-freedom system (SDOF system) on a rigid base.



Change of the mechanical loss factor due to changes in amplitudes.
Sinusoidal excitation at a constant mean load of 0.30 N/mm², dimensions of the specimens 300 x 300 x 25 mm.

Long-Term Creep Test



Dimension of specimens 300 x 300 x 50 mm.

Standard forms of delivery, ex Lebanon, PA

Sheets

Thickness:	25 mm and 12.5 mm Custom thicknesses available on request
Length:	59” (1,500 mm)
Width:	3.3’ (1,000 mm)

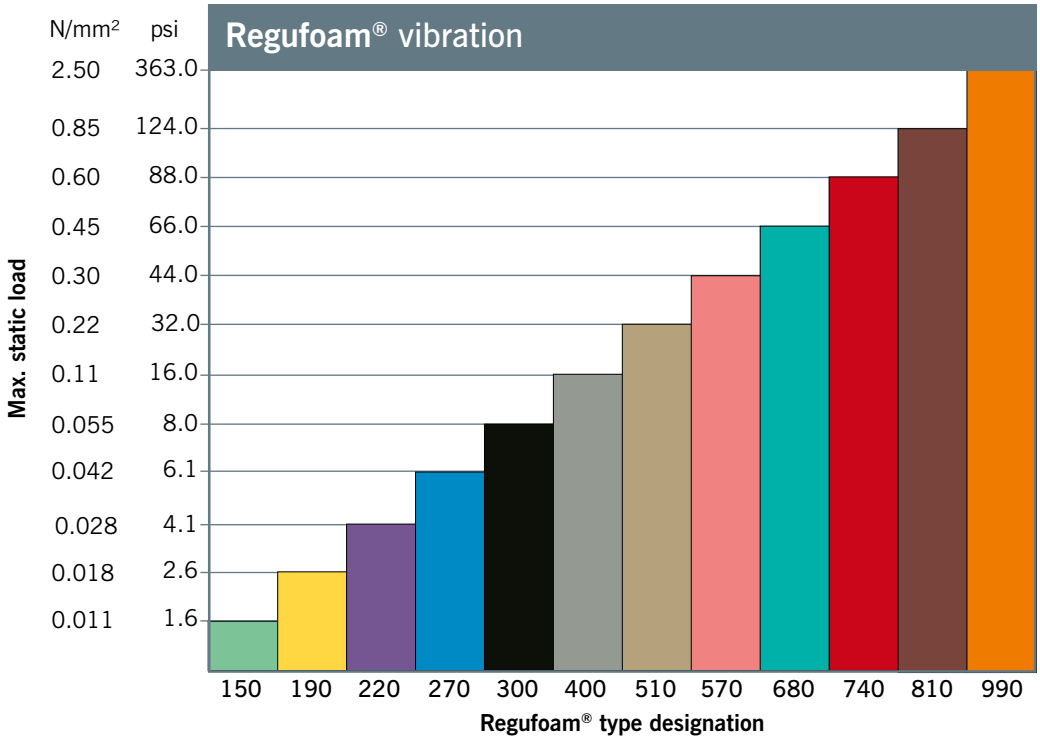
Max. static load
66.0 psi

Peak loads (rare, short-term loads)
up to 725.2 psi

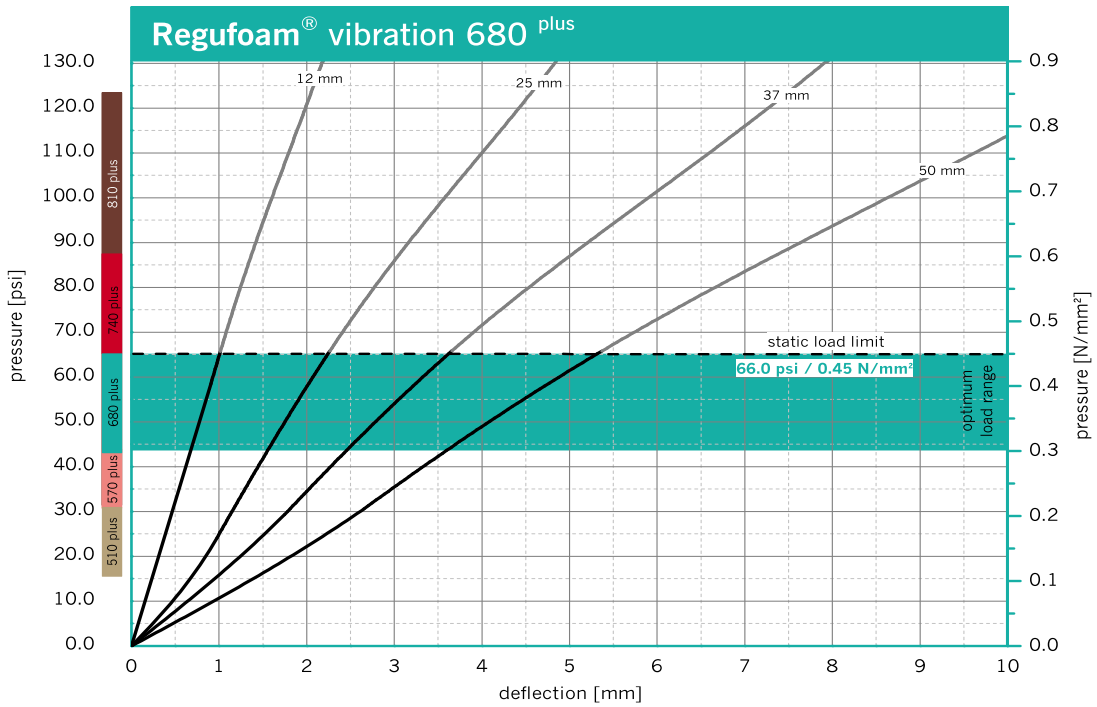
Color: Turquoise

Static modulus of elasticity	Based on EN 826	290.1 - 420.6 2.0 - 2.9	psi N/mm²	Tangential modulus, see figure “Modulus of elasticity”
Dynamic modulus of elasticity	Based on DIN 53513	1,015 - 1,450 7.0 - 10.0	psi N/mm²	Depending on frequency, load and thickness, see figure “dynamic stiffness“
Mechanical loss factor	DIN 53513	0.12	[-]	Load-, amplitude- and frequency-dependent
Compression set	Based on DIN EN ISO 1856	6.2	%	Measured 30 minutes after decompression with 50% deformation / 23 °C after 72 hrs
Tensile strength	Based on DIN EN ISO 1798	522.1 3.6	psi N/mm²	
Elongation at break	Based on DIN EN ISO 1798	230	%	
Tear resistance	Based on DIN ISO 34-1	105.6	lbs/in	
Fire behavior	DIN 4102 DIN EN 13501	B2 E	[-] [-]	Normal flammability
Sliding friction	in-house laboratory in-house laboratory	0.6 0.7	[-] [-]	Steel (dry) Concrete (dry)
Compression hardness	Based on DIN EN ISO 3386-2	840	kPa	Compressive stress at 25 % deformation Test specimen h = 25 mm
Rebound elasticity	Based on DIN EN ISO 8307	58	%	Depending on thickness, Test specimen h = 25 mm
Force reduction	DIN EN 14904	44	%	Depending on thickness, Test specimen h = 25 mm

Load Ranges



Load Deflection



Examination of deflection in accordance to DIN EN 826, between two stiff panels. Illustration based on the third loading. Velocity of loading and unloading 20 seconds. Tested at room temperature. Dimensions of test specimens 300 mm x 300 mm.

Vibration Isolation

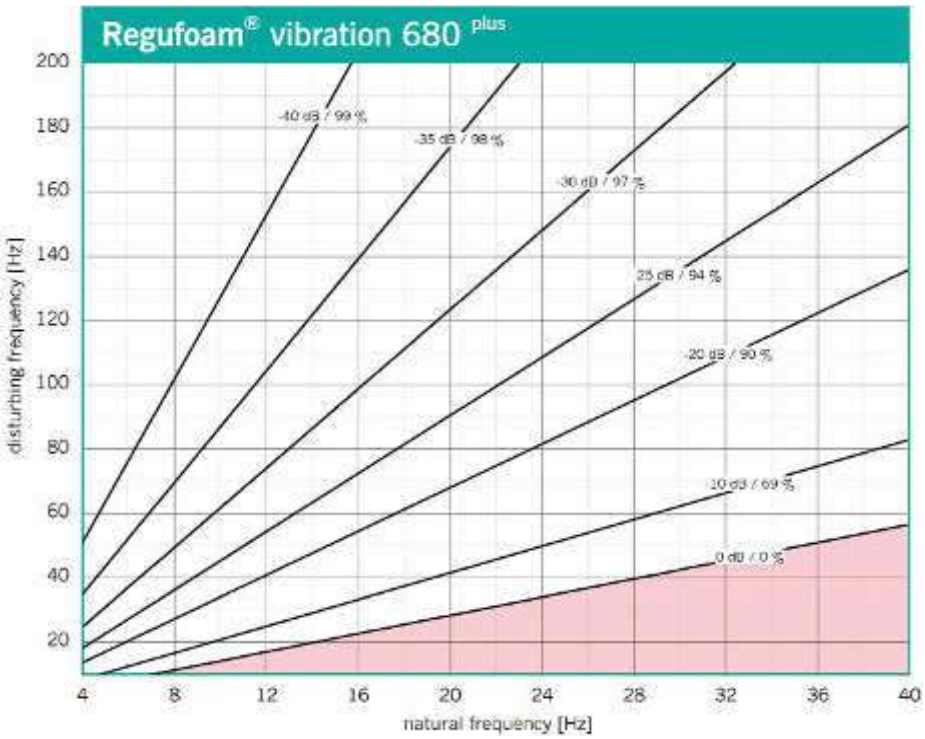
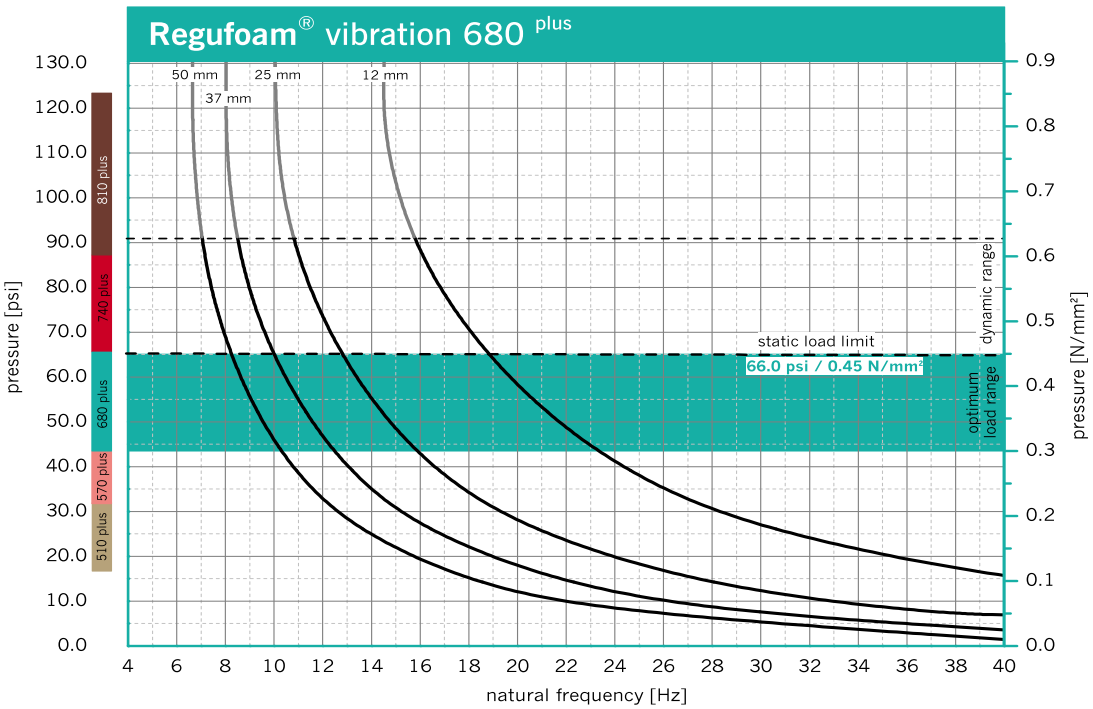


Illustration of the isolation efficiency of a single-degree-of-freedom system (SDOF system) on a rigid base with **Regufoam® vibration 680 plus**. Parameter: power transmission (insertion loss) in dB, isolation factor in %.

Natural Frequency



Natural frequency of a single-degree-of-freedom system (SDOF system) considering the dynamic stiffness of **Regufoam® vibration 680 plus** on a rigid base. Dimensions of test specimens 300 mm x 300 mm.

Modulus of Elasticity

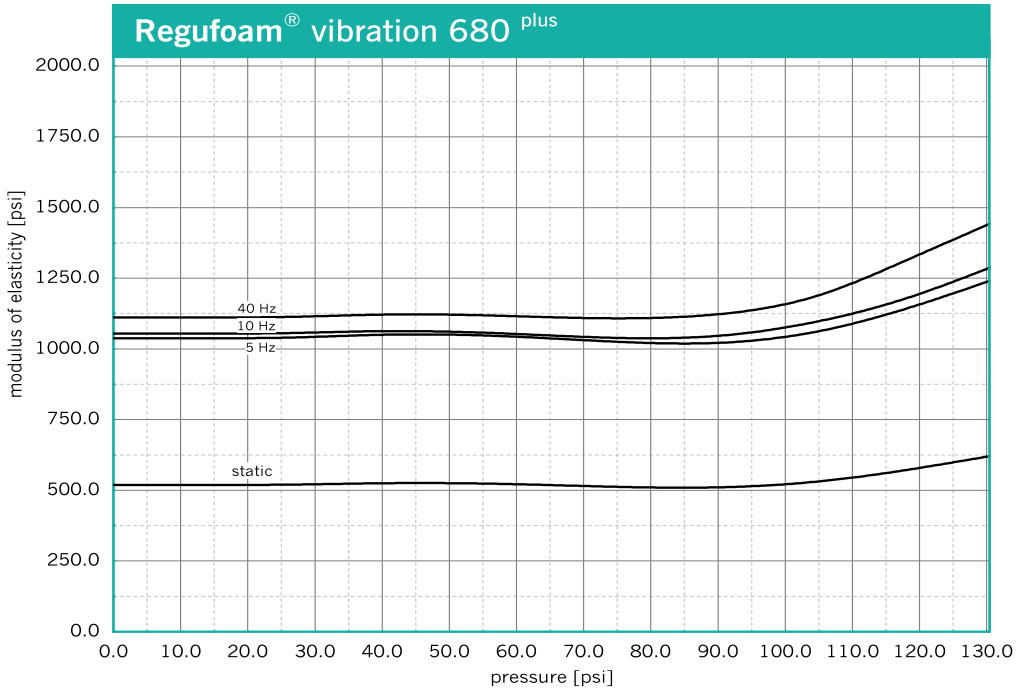


Illustration of the dynamic modulus of elasticity for sinusoidal excitation at a constant mean load and an amplitude of +/- 0.25 mm. Dimensions of specimens 300 mm x 300 mm x 25 mm; static modulus of elasticity as a result of the tangent modulus of the spring characteristic. Tested in accordance with DIN 53513.

Dynamic Stiffness

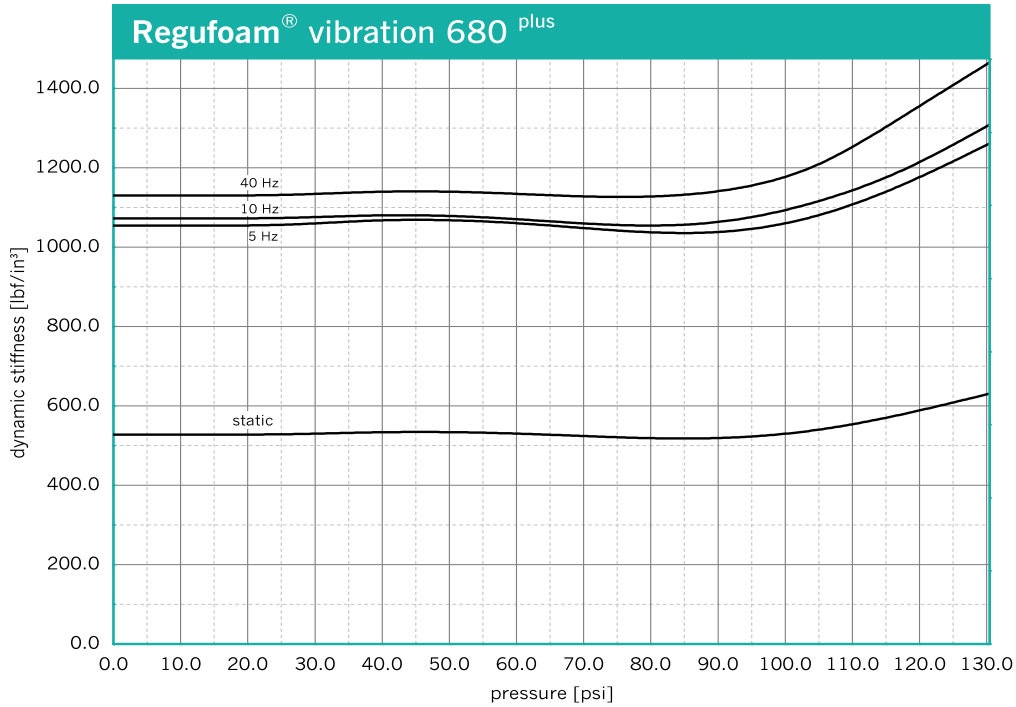
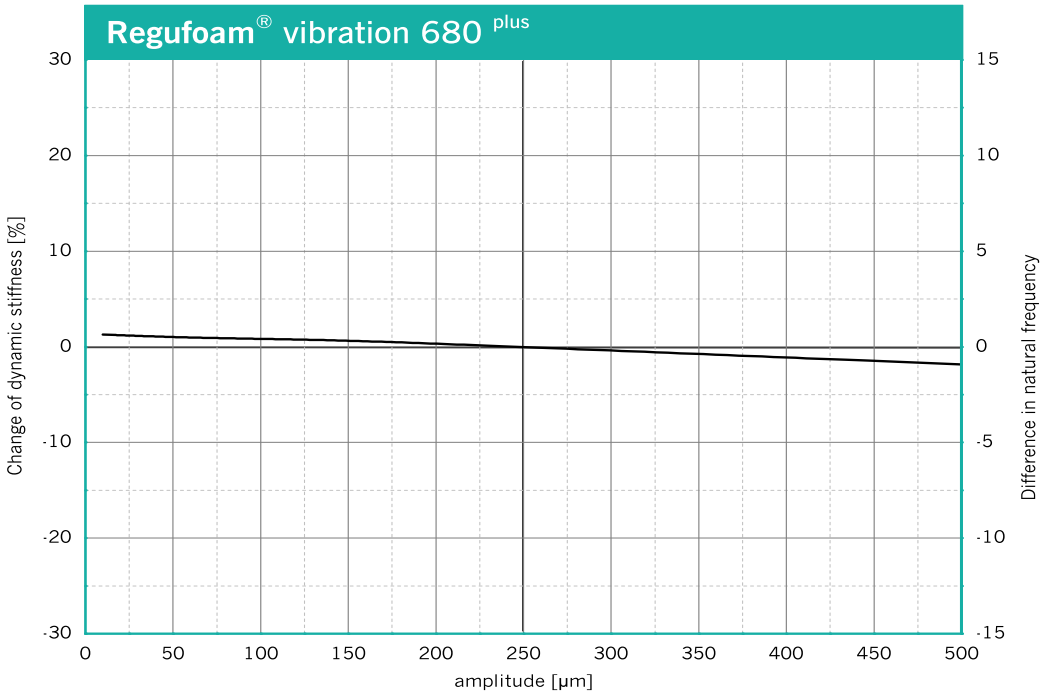
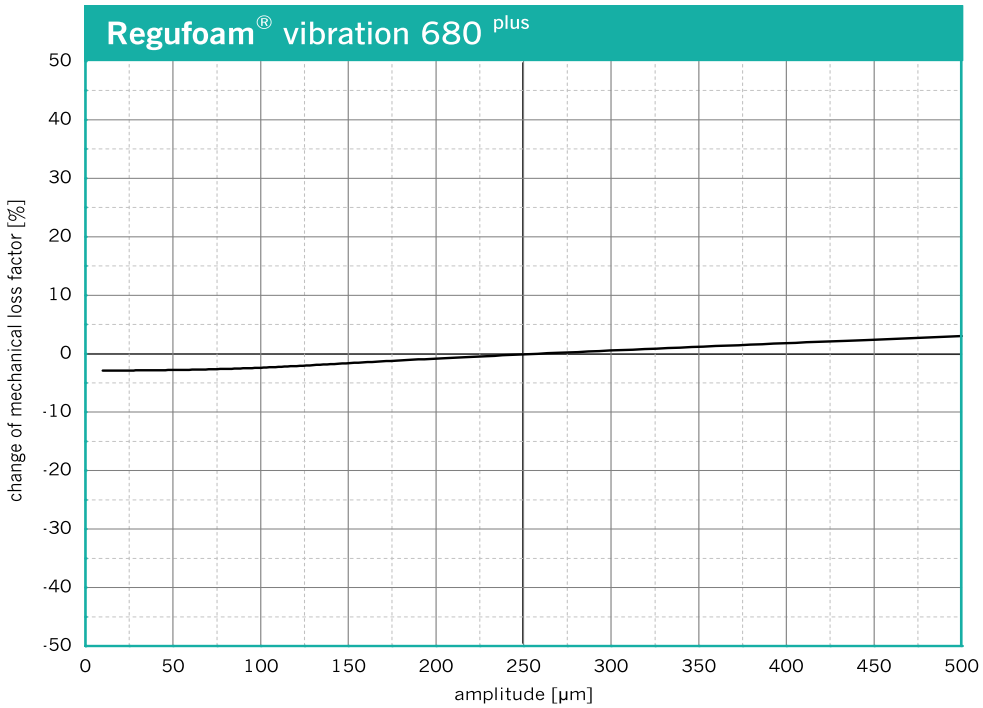


Illustration of the dynamic stiffness for sinusoidal excitation at a constant mean load and an amplitude of +/- 0.25 mm. Dimension of specimens 300 x 300 x 25 mm; static stiffness as a result of the tangent modulus of the spring characteristic. Tested in accordance with DIN 53513.

Influence of Amplitude

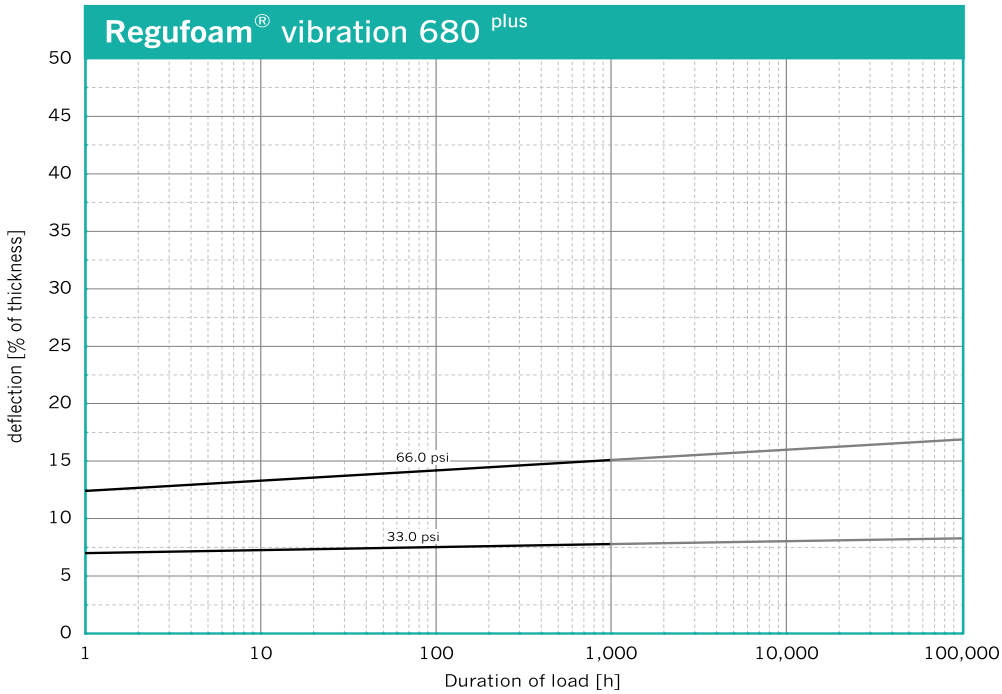


Change of the dynamic stiffness due to changes in amplitudes. Average for 5 Hz, 10 Hz and 40 Hz excitation.
Sinusoidal excitation at a constant mean load of 0.45 N/mm², dimensions of the specimens 300 x 300 x 25 mm.
Natural frequency of a single-degree-of-freedom system (SDOF system) on a rigid base.



Change of the mechanical loss factor due to changes in amplitudes.
Sinusoidal excitation at a constant mean load of 0.45 N/mm², dimensions of the specimens 300 x 300 x 25 mm.

Long-Term Creep Test



Dimension of specimens 300 x 300 x 50 mm.

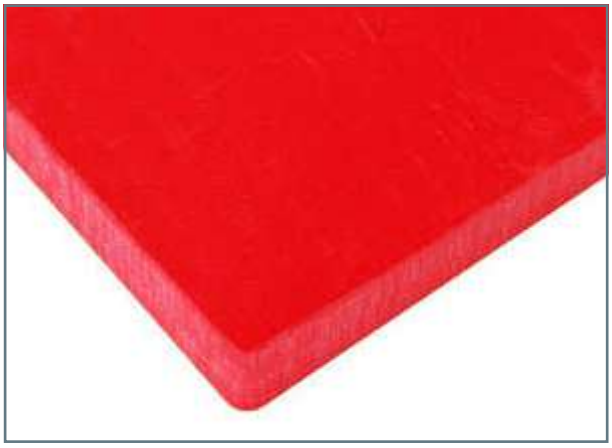
Standard forms of delivery, ex Lebanon, PA

Sheets

Thickness:	25 mm and 12.5 mm Custom thicknesses available on request
Length:	59” (1,500 mm)
Width:	3.3’ (1,000 mm)

Max. static load
88.0 psi

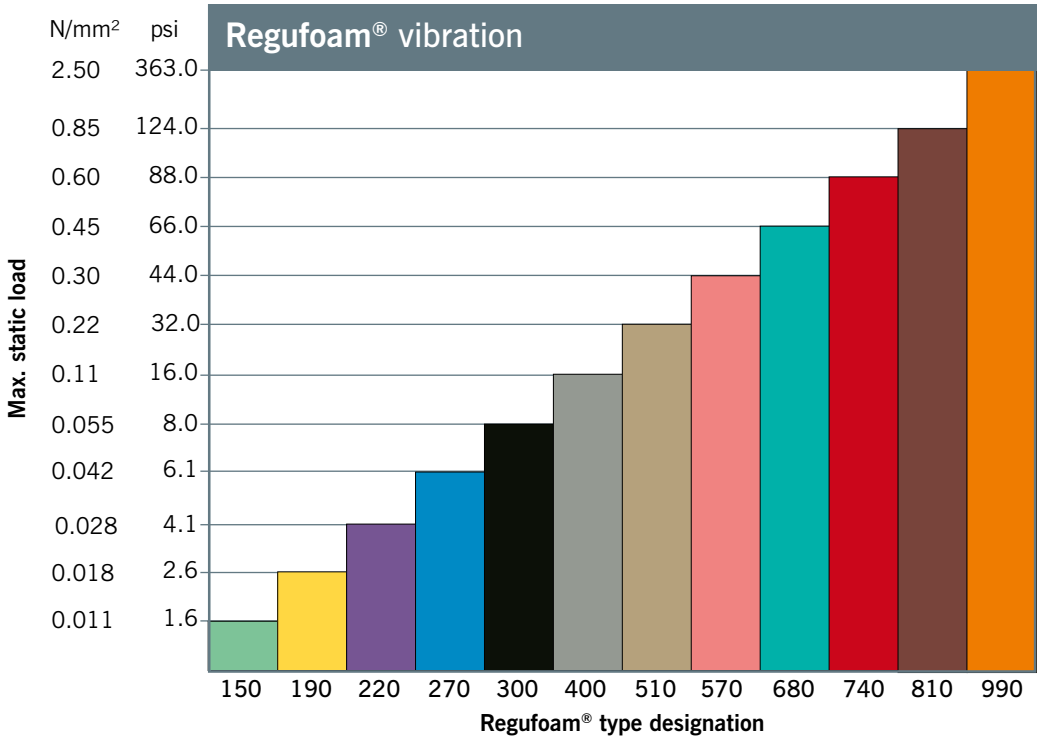
Peak loads (rare, short-term loads)
up to 870.2 psi



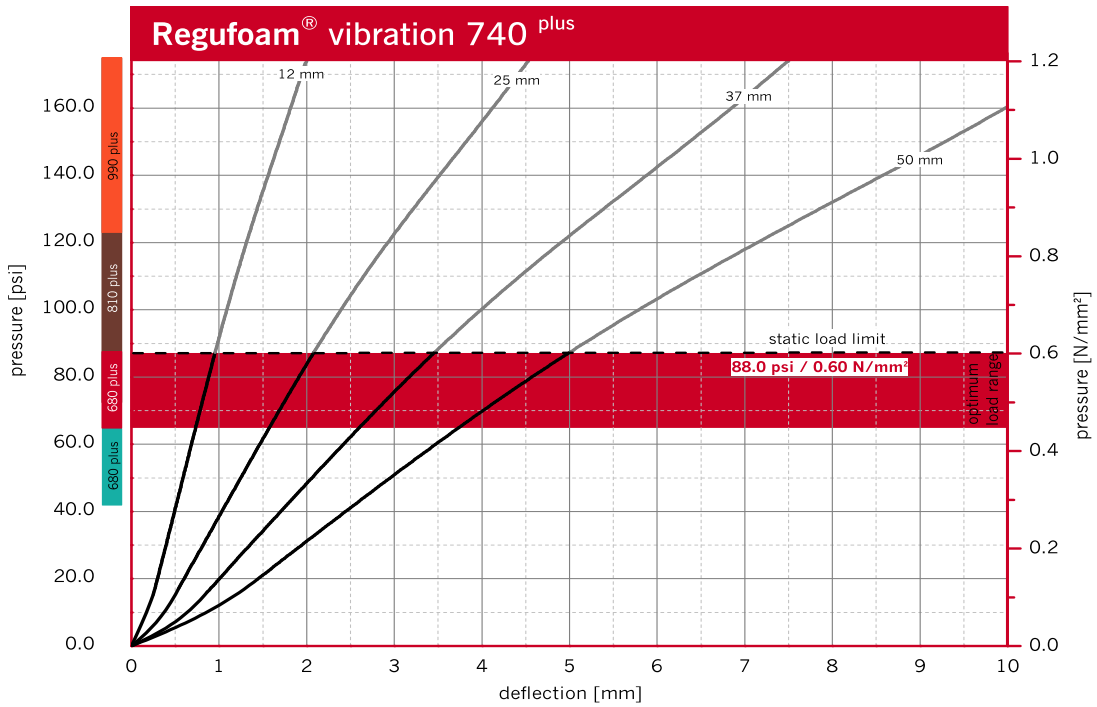
Color: Red

Static modulus of elasticity	Based on EN 826	623.7 - 855.7 4.3 - 5.9	psi N/mm²	Tangential modulus, see figure “Modulus of elasticity”
Dynamic modulus of elasticity	Based on DIN 53513	1,291 - 1,886 8.9 - 13.0	psi N/mm²	Depending on frequency, load and thickness, see figure “dynamic stiffness“
Mechanical loss factor	DIN 53513	0.11	[-]	Load-, amplitude- and frequency-dependent
Compression set	Based on DIN EN ISO 1856	4.8	%	Measured 30 minutes after decompression with 50% deformation / 23 °C after 72 hrs
Tensile strength	Based on DIN EN ISO 1798	580.2 4.0	psi N/mm²	
Elongation at break	Based on DIN EN ISO 1798	210	%	
Tear resistance	Based on DIN ISO 34-1	108.5	lbs/in	
Fire behavior	DIN 4102 DIN EN 13501	B2 E	[-] [-]	Normal flammability
Sliding friction	in-house laboratory in-house laboratory	0.6 0.7	[-] [-]	Steel (dry) Concrete (dry)
Compression hardness	Based on DIN EN ISO 3386-2	1050	kPa	Compressive stress at 25 % deformation Test specimen h = 25 mm
Rebound elasticity	Based on DIN EN ISO 8307	59	%	Depending on thickness, Test specimen h = 25 mm
Force reduction	DIN EN 14904	39	%	Depending on thickness, Test specimen h = 25 mm

Load Ranges



Load Deflection



Examination of deflection in accordance to DIN EN 826, between two stiff panels. Illustration based on the third loading. Velocity of loading and unloading 20 seconds. Tested at room temperature. Dimensions of test specimens 250 mm x 250 mm.

Vibration Isolation

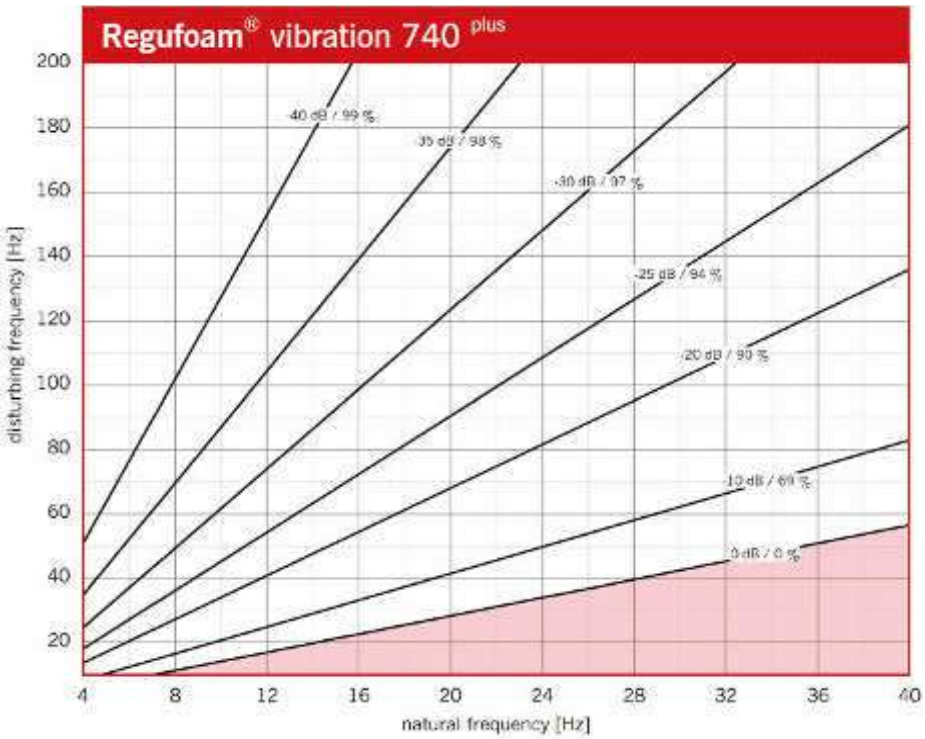
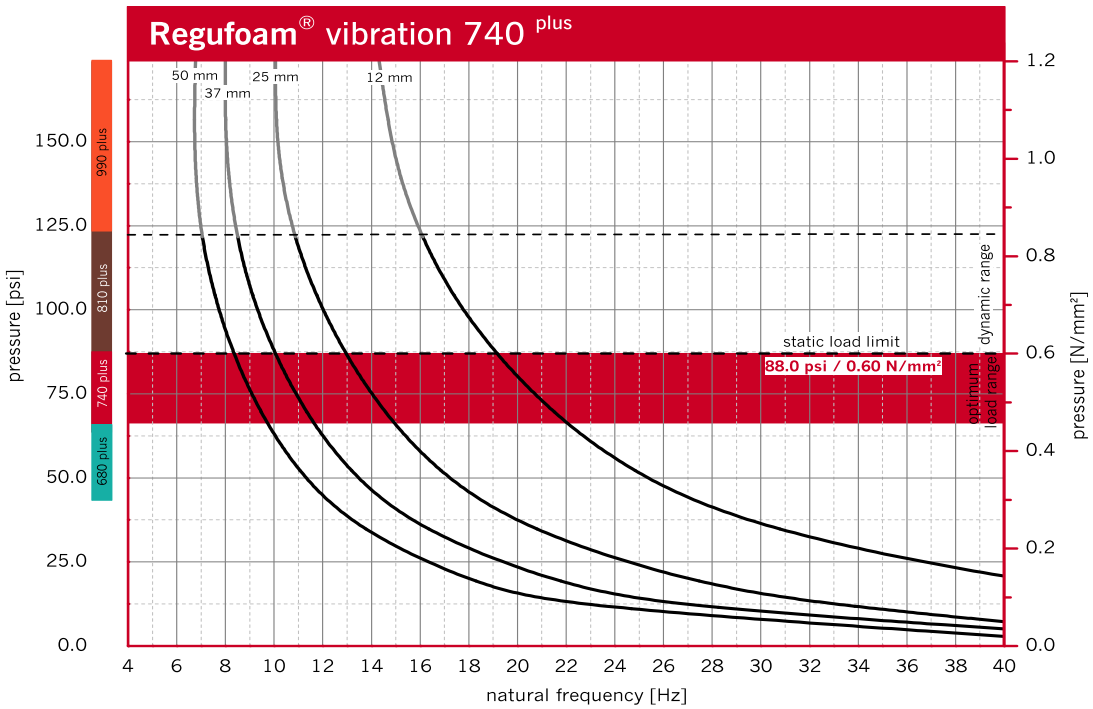


Illustration of the isolation efficiency of a single-degree-of-freedom system (SDOF system) on a rigid base with **Regufoam® vibration 740 plus**. Parameter: power transmission (insertion loss) in dB, isolation factor in %.

Natural Frequency



Natural frequency of a single-degree-of-freedom system (SDOF system) considering the dynamic stiffness of **Regufoam® vibration 740 plus** on a rigid base. Dimensions of test specimens 250 mm x 250 mm.

Modulus of Elasticity

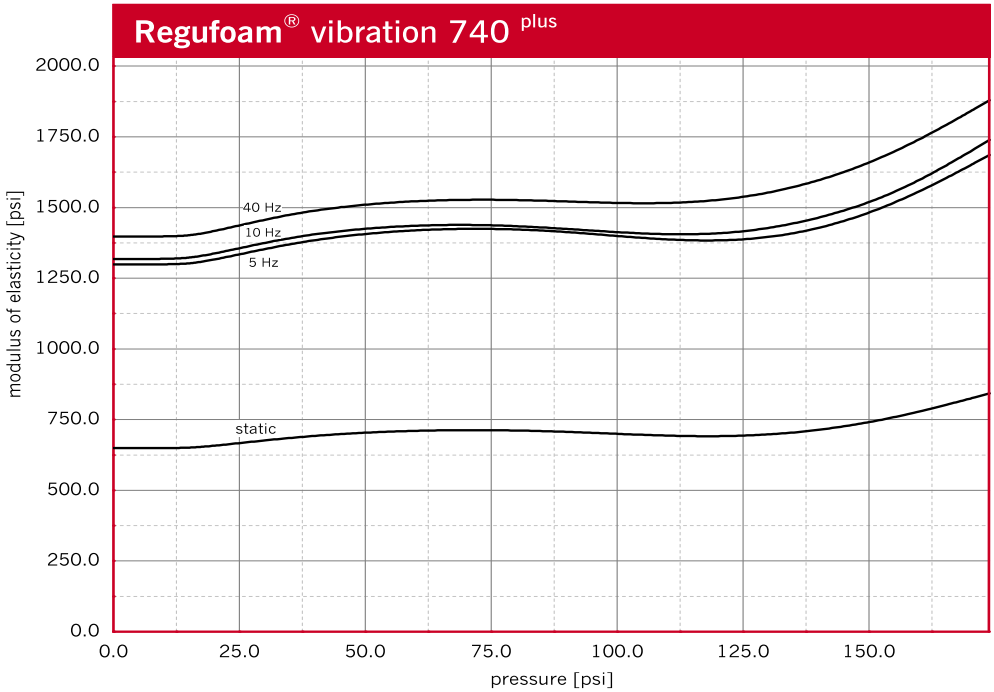


Illustration of the dynamic modulus of elasticity for sinusoidal excitation at a constant mean load and an amplitude of +/- 0.25 mm. Dimensions of specimens 250 mm x 250 mm x 25 mm; static modulus of elasticity as a result of the tangent modulus of the spring characteristic. Tested in accordance with DIN 53513.

Dynamic Stiffness

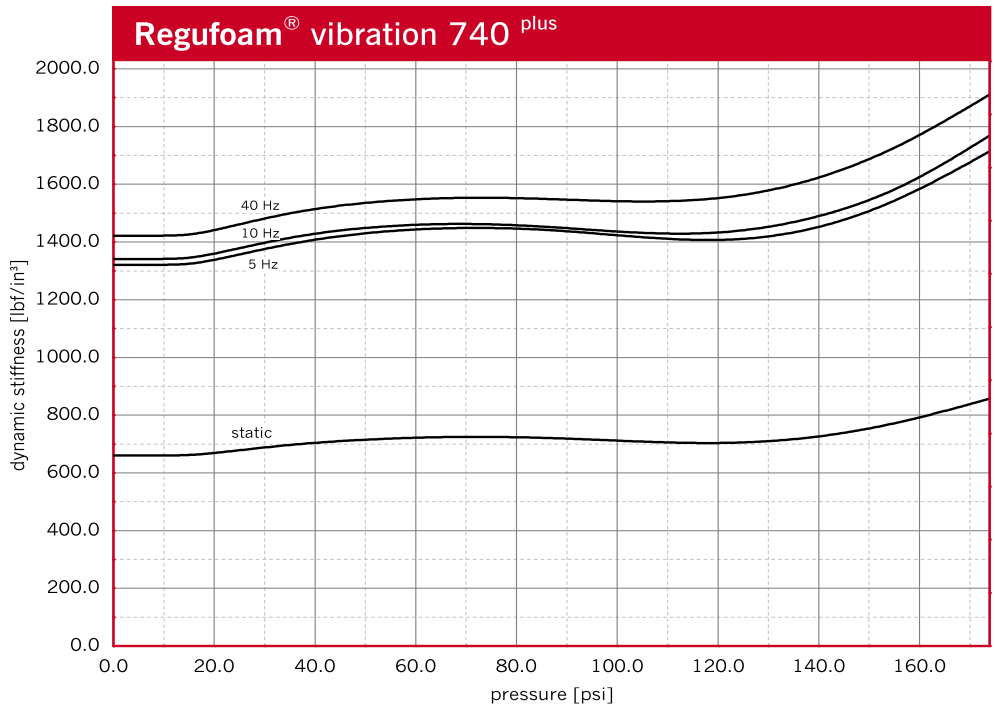
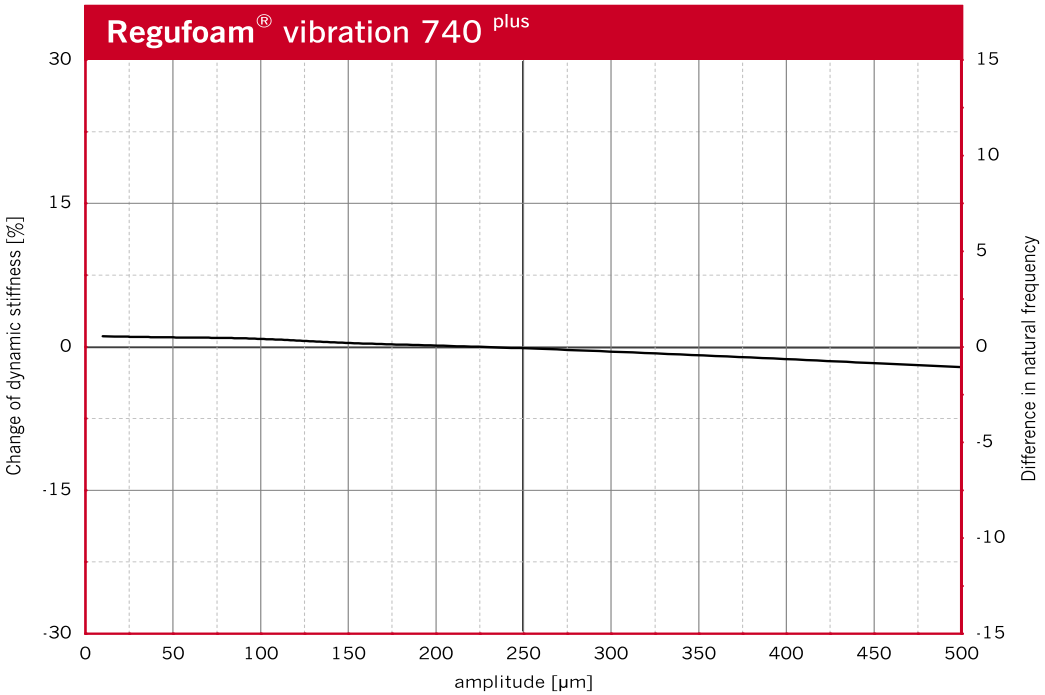
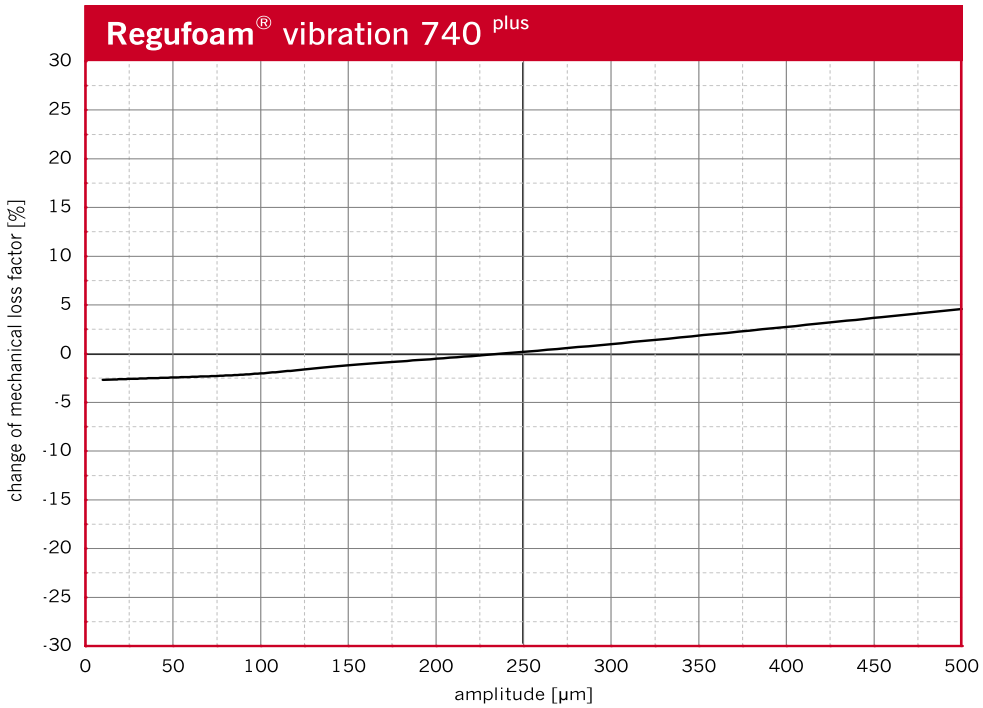


Illustration of the dynamic stiffness for sinusoidal excitation at a constant mean load and an amplitude of +/- 0.25 mm. Dimension of specimens 250 x 250 x 25 mm; static stiffness as a result of the tangent modulus of the spring characteristic. Tested in accordance with DIN 53513.

Influence of Amplitude

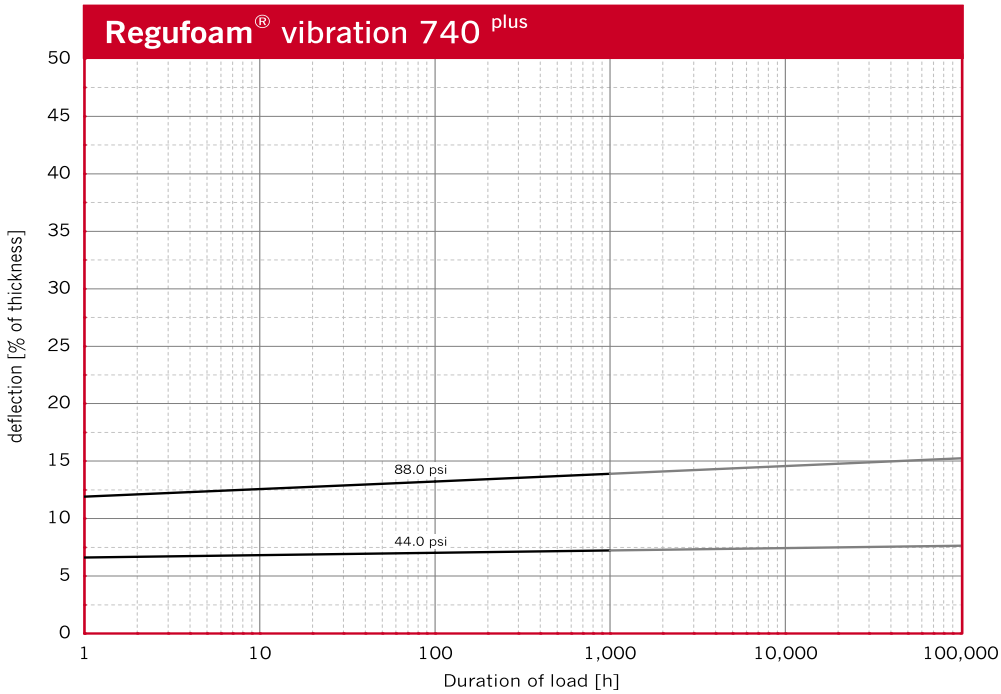


Change of the dynamic stiffness due to changes in amplitudes. Average for 5 Hz, 10 Hz and 40 Hz excitation.
Sinusoidal excitation at a constant mean load of 0.60 N/mm², dimensions of the specimens 250 x 250 x 25 mm.
Natural frequency of a single-degree-of-freedom system (SDOF system) on a rigid base.



Change of the mechanical loss factor due to changes in amplitudes.
Sinusoidal excitation at a constant mean load of 0.60 N/mm², dimensions of the specimens 250 x 250 x 25 mm.

Long-Term Creep Test



Dimension of specimens 250 x 250 x 50 mm.

Standard forms of delivery, ex Lebanon, PA

Sheets

Thickness:	25 mm and 12.5 mm Custom thicknesses available on request
Length:	59” (1,500 mm)
Width:	3.3’ (1,000 mm)

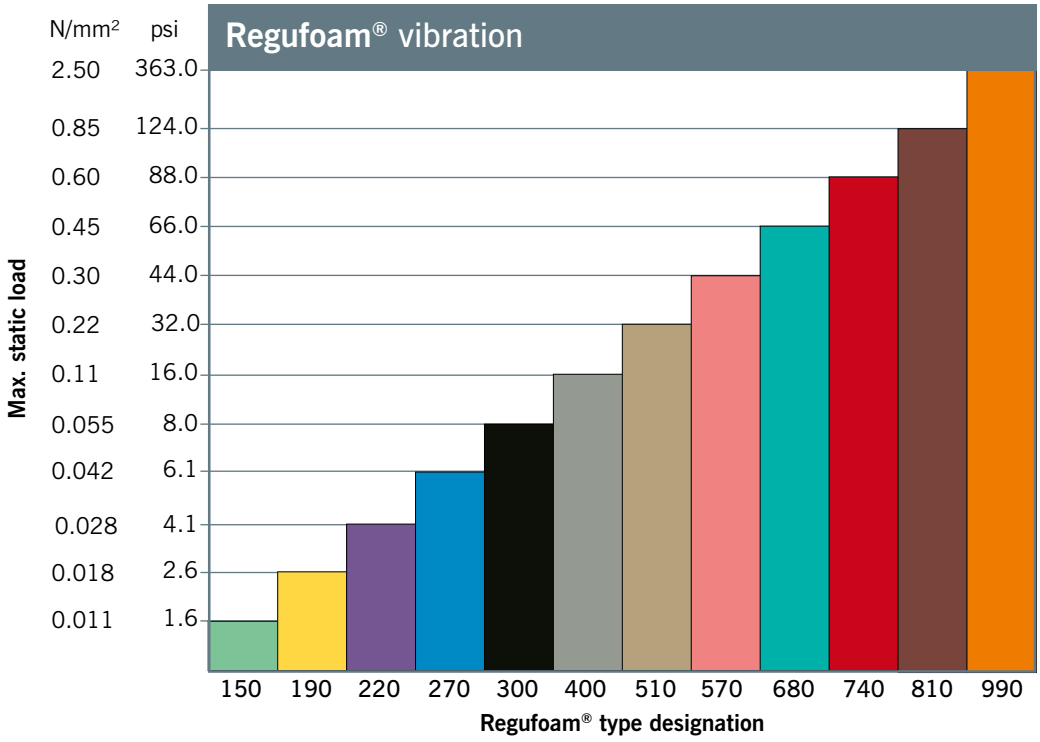
Max. static load
124.0 psi

Peak loads (rare, short-term loads)
up to 1,015 psi

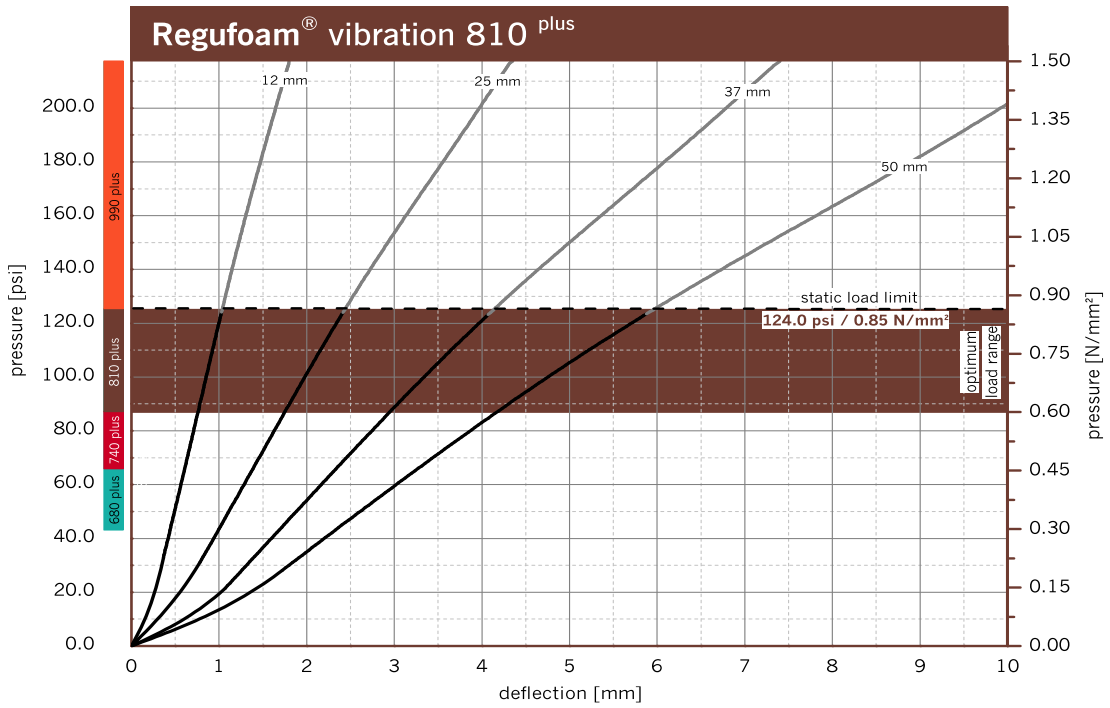
Color: Brown

Static modulus of elasticity	Based on EN 826	783.2 - 1,160 5.4 - 8.0	psi N/mm²	Tangential modulus, see figure “Modulus of elasticity”
Dynamic modulus of elasticity	Based on DIN 53513	1.595 - 2,393 11.0 - 16.5	psi N/mm²	Depending on frequency, load and thickness, see figure “dynamic stiffness“
Mechanical loss factor	DIN 53513	0.10	[-]	Load-, amplitude- and frequency-dependent
Compression set	Based on DIN EN ISO 1856	7.9	%	Measured 30 minutes after decompression with 50% deformation / 23 °C after 72 hrs
Tensile strength	Based on DIN EN ISO 1798	667.2 4.6	psi N/mm²	
Elongation at break	Based on DIN EN ISO 1798	230	%	
Tear resistance	Based on DIN ISO 34-1	114.2	lbs/in	
Fire behavior	DIN 4102 DIN EN 13501	B2 E	[-] [-]	Normal flammability
Sliding friction	in-house laboratory in-house laboratory	0.6 0.75	[-] [-]	Steel (dry) Concrete (dry)
Compression hardness	Based on DIN EN ISO 3386-2	1241	kPa	Compressive stress at 25 % deformation Test specimen h = 25 mm
Rebound elasticity	Based on DIN EN ISO 8307	58	%	Depending on thickness, Test specimen h = 25 mm
Force reduction	DIN EN 14904	35	%	Depending on thickness, Test specimen h = 25 mm

Load Ranges



Load Deflection



Examination of deflection in accordance to DIN EN 826, between two stiff panels. Illustration based on the third loading. Velocity of loading and unloading 20 seconds. Tested at room temperature. Dimensions of test specimens 250 mm x 250 mm.

Vibration Isolation

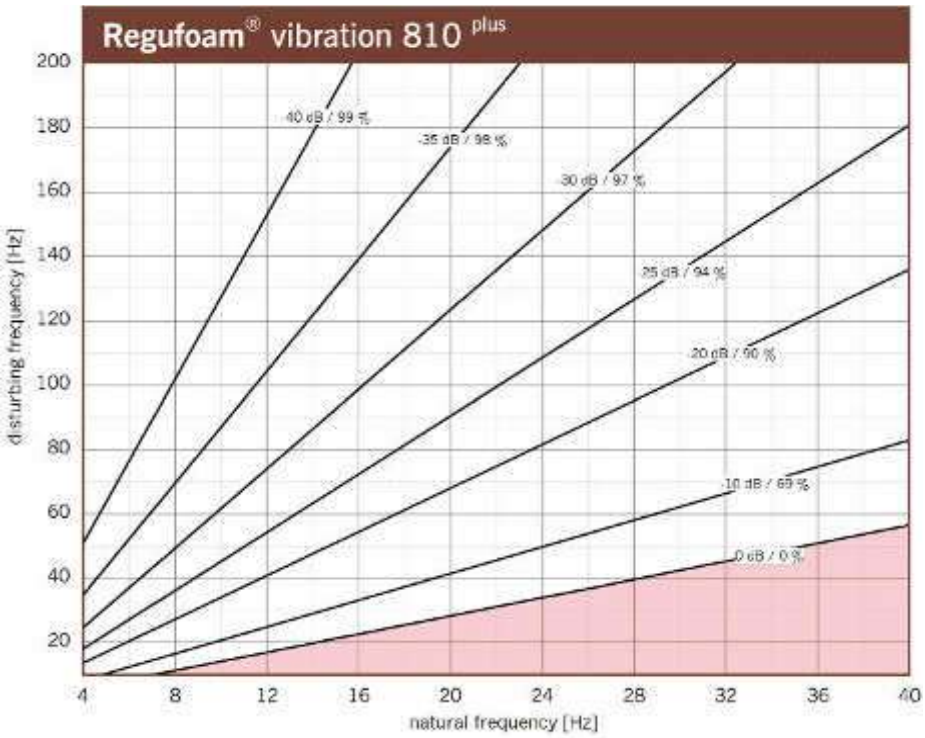
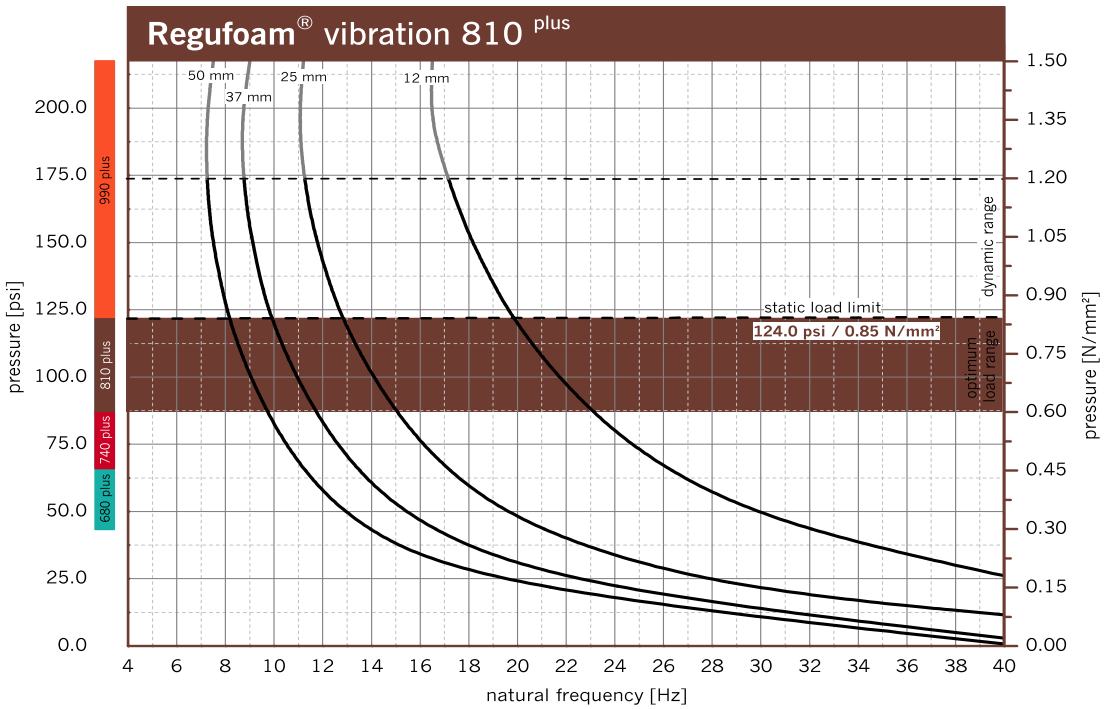


Illustration of the isolation efficiency of a single-degree-of-freedom system (SDOF system) on a rigid base with **Regufoam® vibration 810 plus**. Parameter: power transmission (insertion loss) in dB, isolation factor in %.

Natural Frequency



Natural frequency of a single-degree-of-freedom system (SDOF system) considering the dynamic stiffness of **Regufoam® vibration 810 plus** on a rigid base. Dimensions of test specimens 250 mm x 250 mm.

Modulus of Elasticity

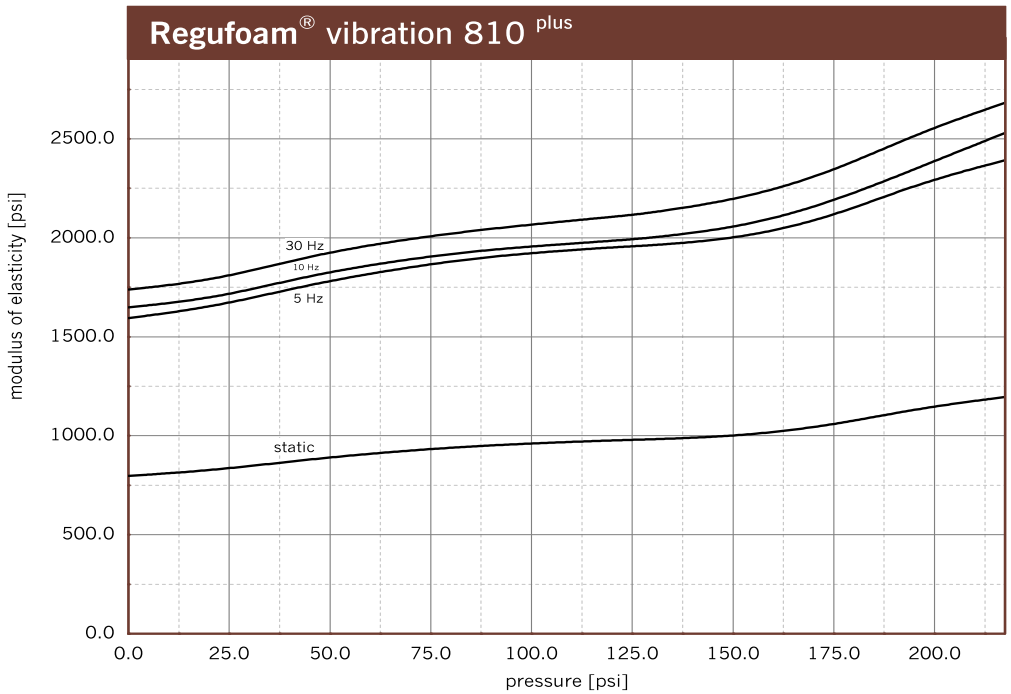


Illustration of the dynamic modulus of elasticity for sinusoidal excitation at a constant mean load and an amplitude of +/- 0.10 mm. Dimensions of specimens 250 mm x 250 mm x 25 mm; static modulus of elasticity as a result of the tangent modulus of the spring characteristic. Tested in accordance with DIN 53513.

Dynamic Stiffness

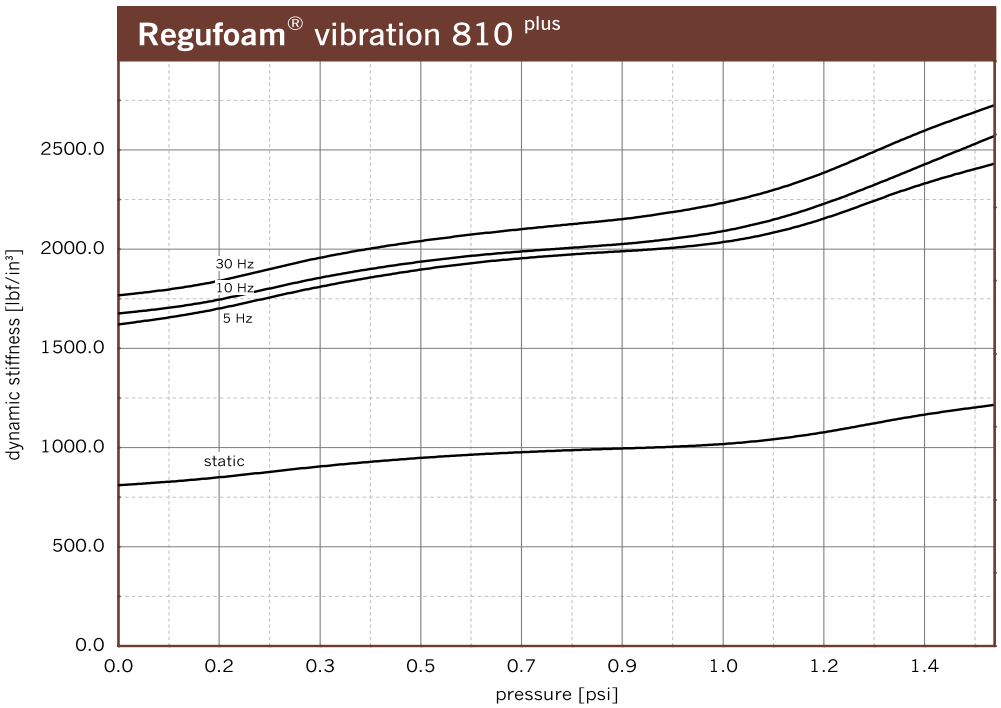
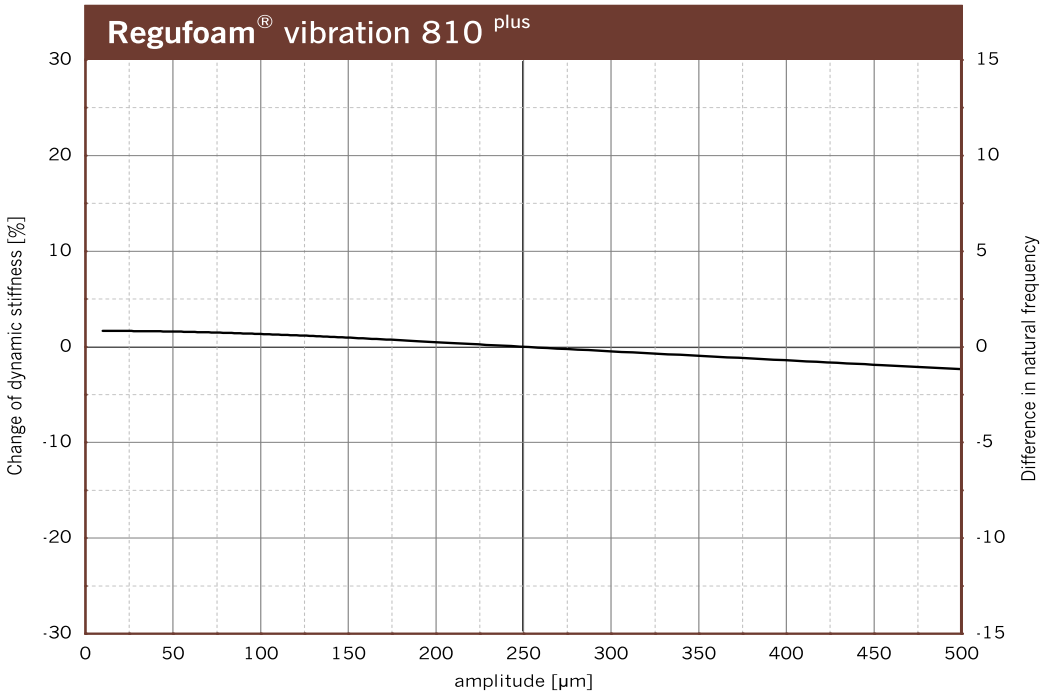
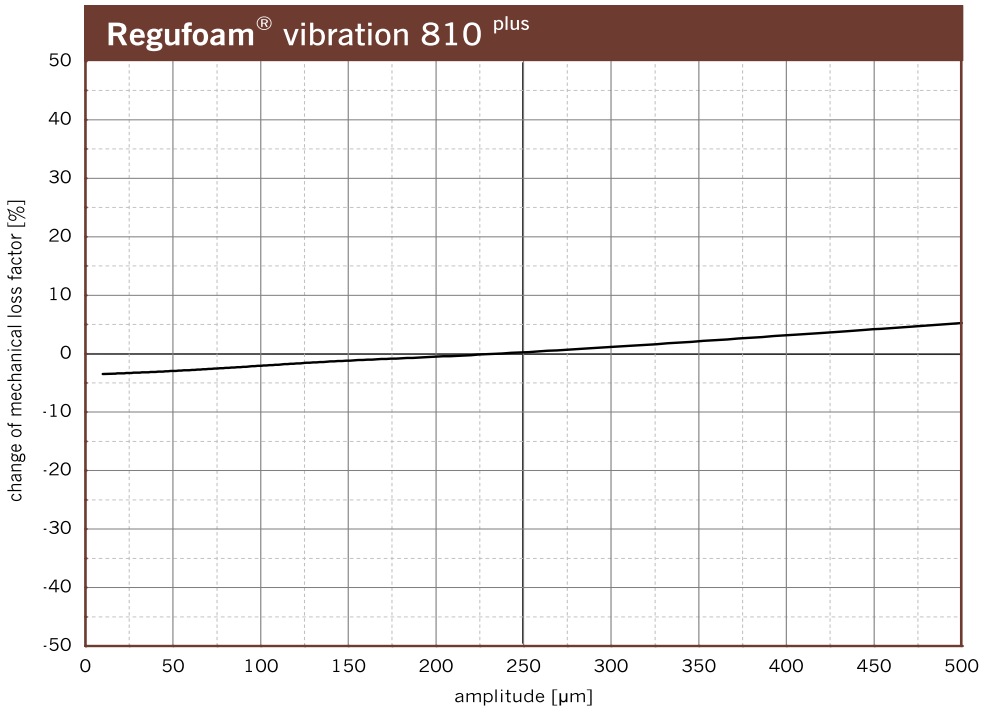


Illustration of the dynamic stiffness for sinusoidal excitation at a constant mean load and an amplitude of ± 0,10 mm. Dimension of specimens 250 x 250 x 25 mm; static stiffness as a result of the tangent modulus of the spring characteristic. Tested in accordance with DIN 53513.

Influence of Amplitude

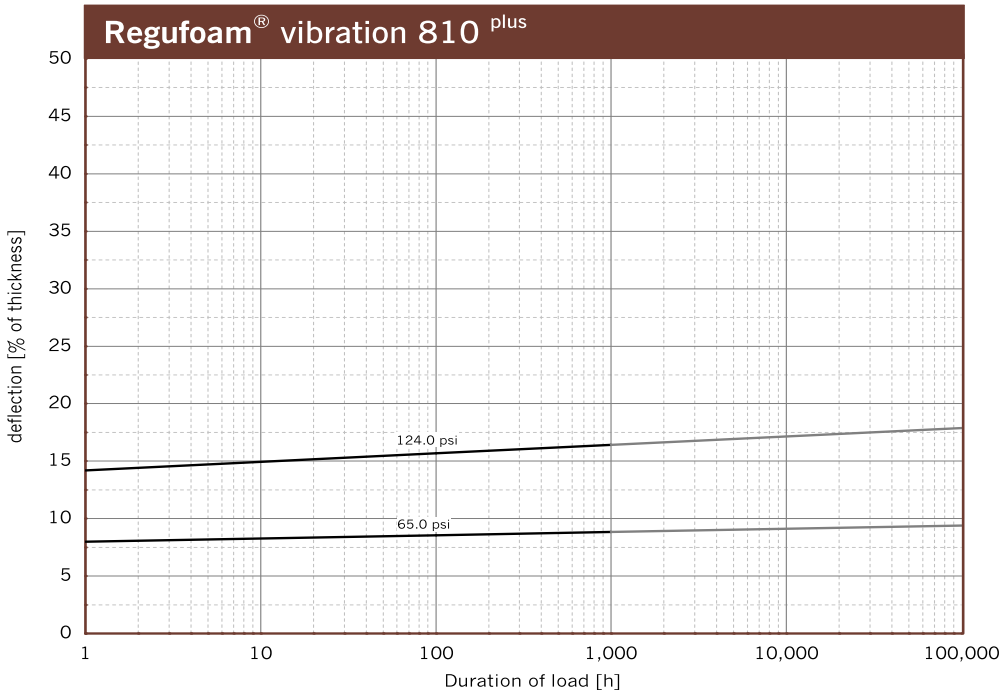


Change of the dynamic stiffness due to changes in amplitudes. Average for 5 Hz, 10 Hz and 40 Hz excitation.
Sinusoidal excitation at a constant mean load of 0.85 N/mm², dimensions of the specimens 250 x 250 x 25 mm.
Natural frequency of a single-degree-of-freedom system (SDOF system) on a rigid base.



Change of the mechanical loss factor due to changes in amplitudes.
Sinusoidal excitation at a constant mean load of 0.85 N/mm², dimensions of the specimens 250 x 250 x 25 mm.

Long-Term Creep Test



Dimension of specimens 250 x 250 x 50 mm.

Standard forms of delivery, ex Lebanon, PA

Sheets

Thickness:	25 mm and 12.5 mm Custom thicknesses available on request
Length:	59” (1,500 mm)
Width:	3.3’ (1,000 mm)

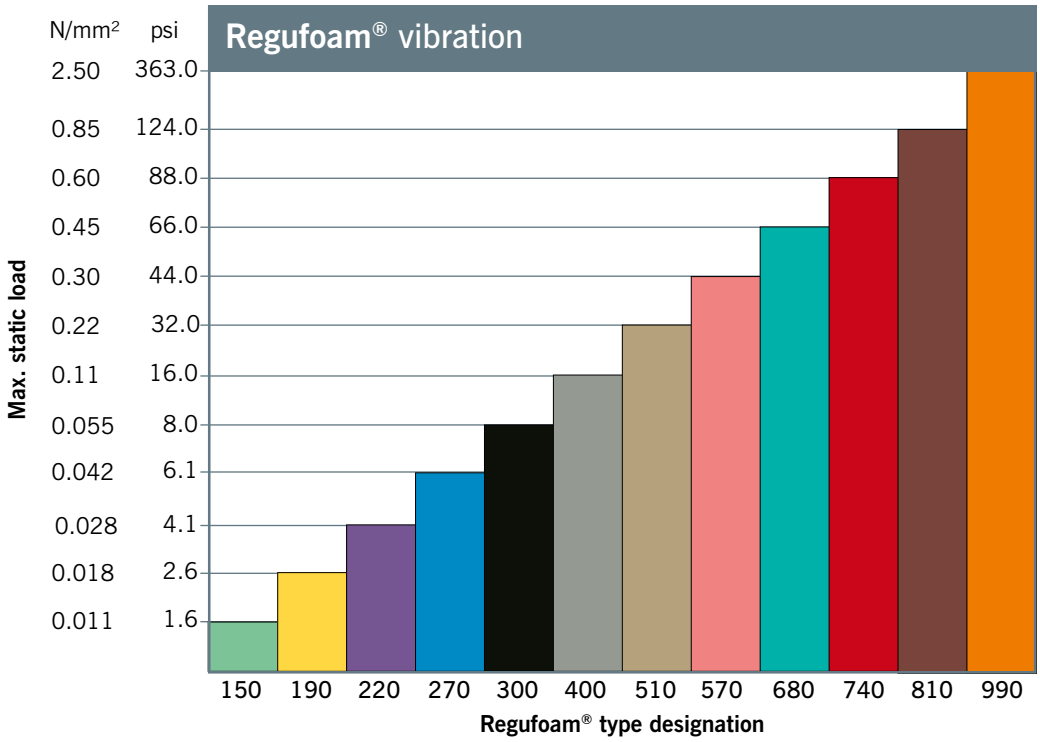
Max. static load
363.0 psi

Peak loads (rare, short-term loads)
up to 1,160 psi

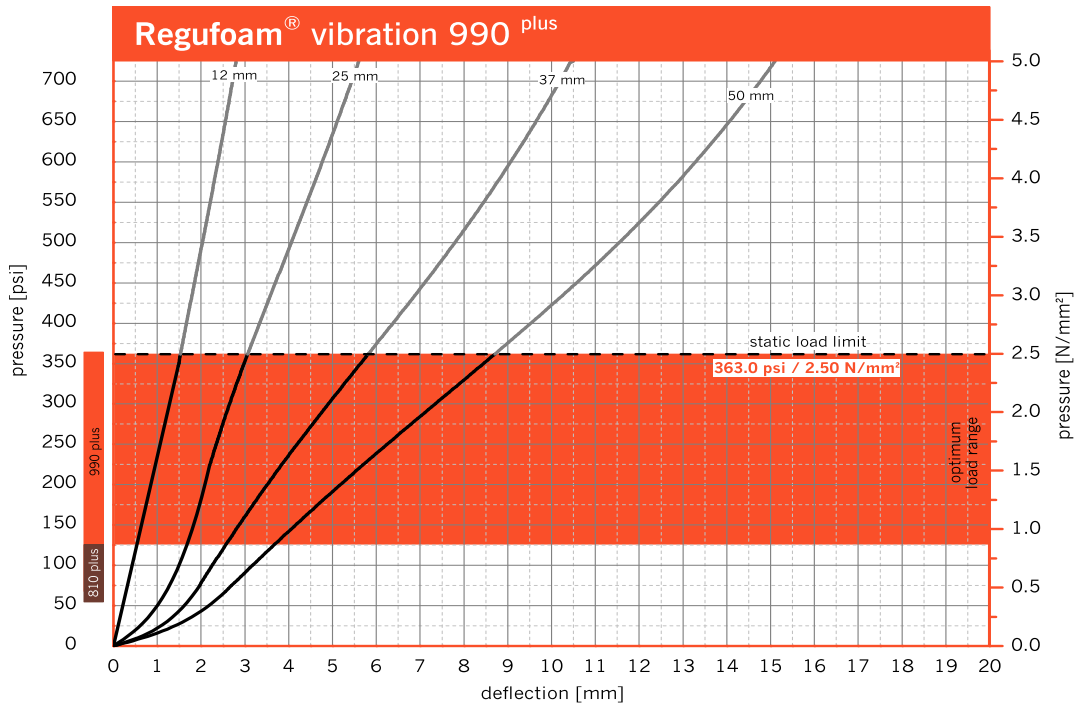
Color: Orange

Static modulus of elasticity	Based on EN 826	2,901 - 11.313 20.0 - 78.0	psi N/mm²	Tangential modulus, see figure “Modulus of elasticity”
Dynamic modulus of elasticity	Based on DIN 53513	5.947 - 23,206 41.0 - 160.0	psi N/mm²	Depending on frequency, load and thickness, see figure “dynamic stiffness“
Mechanical loss factor	DIN 53513	0.09	[-]	Load-, amplitude- and frequency-dependent
Compression set	Based on DIN EN ISO 1856	8.6	%	Measured 30 minutes after decompression with 50% deformation / 23 °C after 72 hrs
Tensile strength	Based on DIN EN ISO 1798	1,000.8 6.9	psi N/mm²	
Elongation at break	Based on DIN EN ISO 1798	190	%	
Tear resistance	Based on DIN ISO 34-1	197.0	lbs/in	
Fire behavior	DIN 4102 DIN EN 13501	B2 E	[-] [-]	Normal flammability
Sliding friction	in-house laboratory in-house laboratory	0.5 0.6	[-] [-]	Steel (dry) Concrete (dry)
Compression hardness	Based on DIN EN ISO 3386-2	3640	kPa	Compressive stress at 25 % deformation Test specimen h = 25 mm
Rebound elasticity	Based on DIN EN ISO 8307	55	%	Depending on thickness, Test specimen h = 25 mm
Force reduction	DIN EN 14904	20	%	Depending on thickness, Test specimen h = 25 mm

Load Ranges



Load Deflection



Examination of deflection in accordance to DIN EN 826, between two stiff panels. Illustration based on the third loading. Velocity of loading and unloading 20 seconds. Tested at room temperature. Dimensions of test specimens 125 mm x 125 mm.

Vibration Isolation

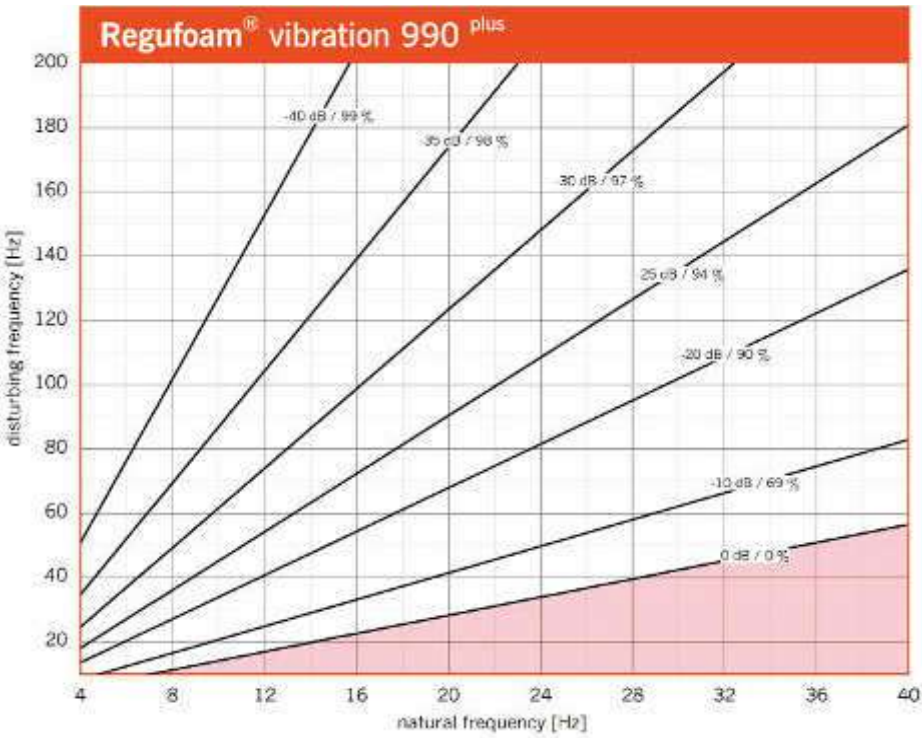
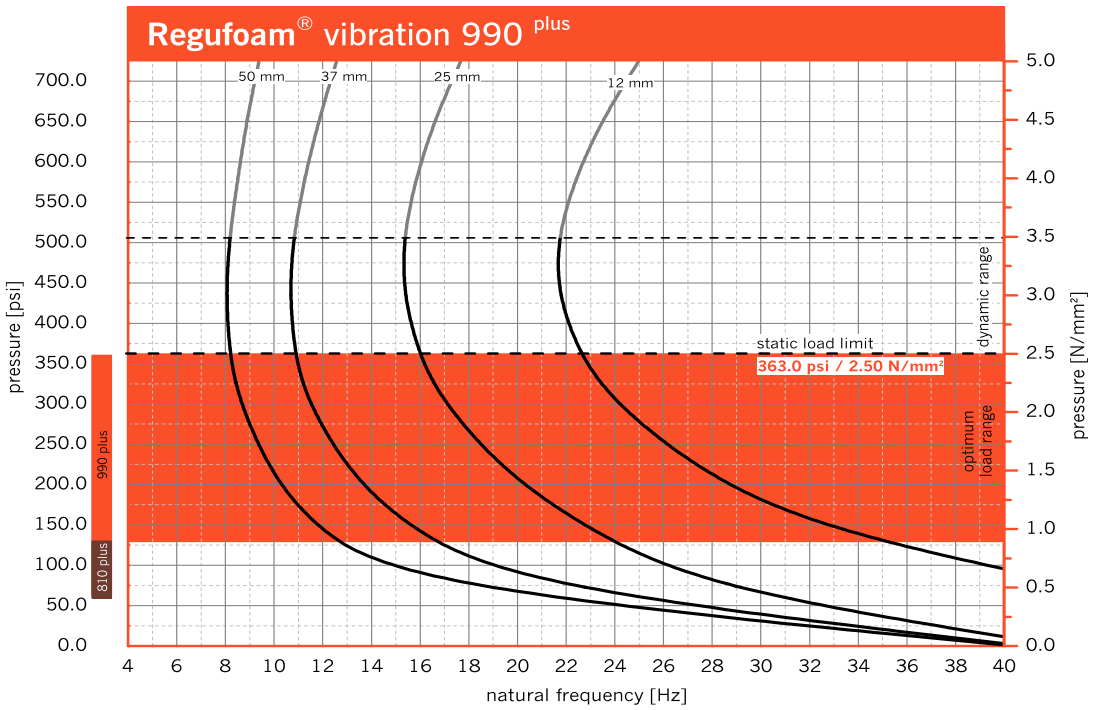


Illustration of the isolation efficiency of a single-degree-of-freedom system (SDOF system) on a rigid base with **Regufoam® vibration 990 plus**. Parameter: power transmission (insertion loss) in dB, isolation factor in %.

Natural Frequency



Natural frequency of a single-degree-of-freedom system (SDOF system) considering the dynamic stiffness of **Regufoam® vibration 990 plus** on a rigid base. Dimensions of test specimens 125 mm x 125 mm.

Modulus of Elasticity

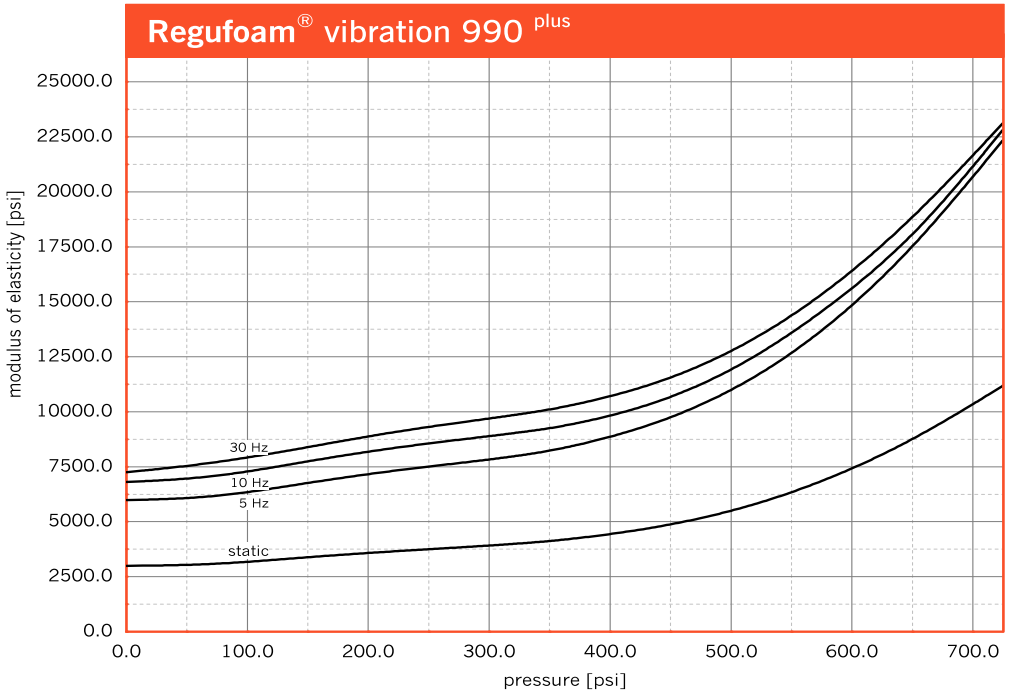


Illustration of the dynamic modulus of elasticity for sinusoidal excitation at a constant mean load and an amplitude of ± 0,10 mm. of +/- 0.25 mm. Dimensions of specimens 125 mm x 125 mm x 25 mm; static modulus of elasticity as a result of the tangent modulus of the spring characteristic. Tested in accordance with DIN 53513.

Dynamic Stiffness

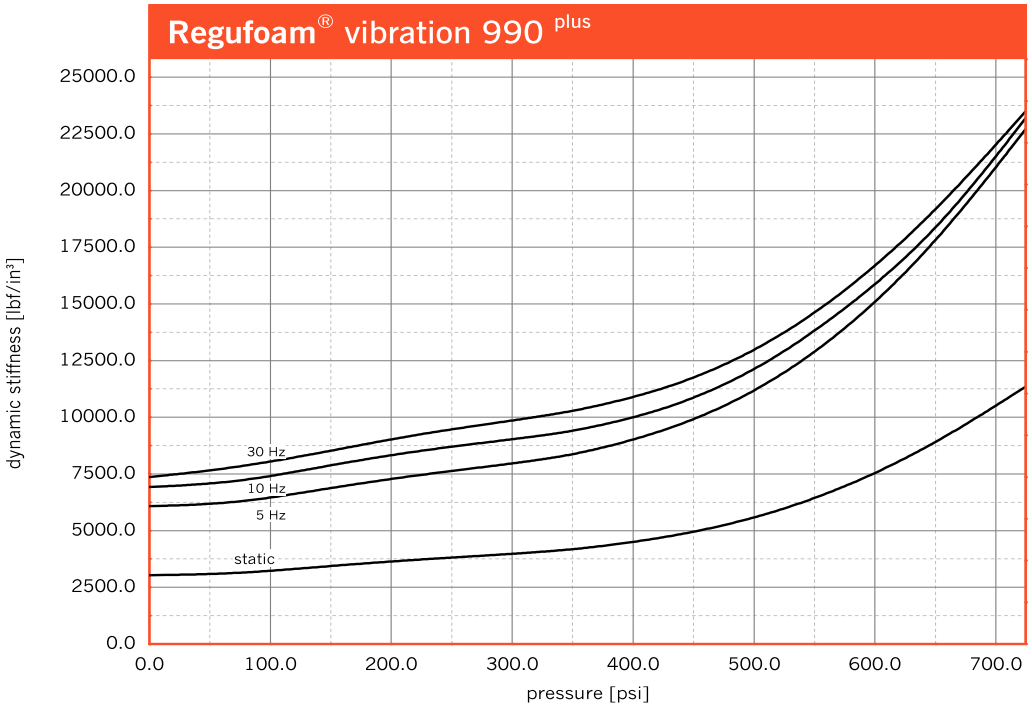
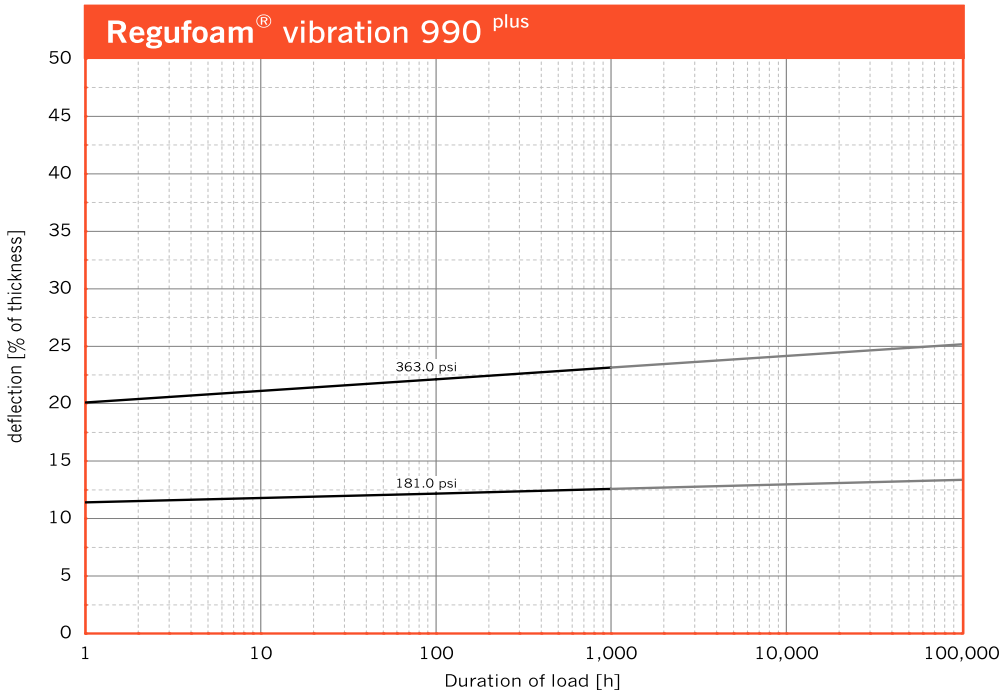


Illustration of the dynamic stiffness for sinusoidal excitation at a constant mean load and an amplitude of ± 0,10 mm. Dimension of specimens 125 x 125 x 25 mm; static stiffness as a result of the tangent modulus of the spring characteristic. Tested in accordance with DIN 53513.

Long-Term Creep Test



Dimension of specimens 125 x 125 x 50 mm.

Please feel free to contact us

- Detailed technical information
- Calculations and recommendations
- Custom solutions for your individual project
- Installation instructions

Phone +1 800-537-8737
Email vibration@regupol.com

Regupol America LLC
11 Ritter Way
Lebanon, PA 17042
USA

www.regupol.com

ARMADILLO
NOISE & VIBRATION

Armadillo Noise & Vibration
1 Titleist Drive
Acushnet
MA 02743

Tel: 800 580 3984
Email: sales@armadillonvinc.com
Website: www.armadillonvinc.com

REGUPOL AMERICA

Technical services and offers based on these are subject to our General Terms and Conditions of sale. In so far, please be advised as follows: Our expertise is the development and manufacturing of products. With our recommendation, we can only assist you in selecting a product that is suitable for your demand. However, we cannot act as your engineer or consulting expert. This would only be possible subject to a separately concluded service contract for which we would have to bill you. Such contracts are not a part of our scope of supply and services. Hence, our recommendation does not lay claim for its correctness. The technical information given in the documents are guideline values. They are liable to manufacturing tolerances, which may vary depending on the type of underlying properties. The currently valid versions of this information are provided on our website and in the PDF versions of this catalogue. The PDF versions are available for download from our website. We do not assume liability for typing or printing errors.

REGUPOL AMERICA • VIBRATION
TECHDATAALLTYPES US 01.31.2015