

# REGUPOL VIBRATION – ELASTOMER MATS MADE OUT OF RUBBER FIBERS

The **REGUPOL vibration** range is approved by the German building authority and offers a portfolio of eight product types which can be used in the wide load range between 0.002 N/mm<sup>2</sup> and 1.500 N/mm<sup>2</sup>. This creates many possibilities to implement an isolation concept for projects in the field of building services and HVAC equipment, machines, pools and gyms, as well as vibration protection for buildings, especially those in close proximity to rail infrastructure.

Our team is by your side to assist you in product selection, planning, conception of installation plans and to provide support during installation and implementation.

The material, made of recycled rubber from vehicle tyres, is extremely resilient and durable. Even after decades in use, its properties only change marginally. Successfully completed projects and expert opinions document the quality of these materials.

Contact us to share the expert reports.

## Possible uses

Due to higher rigidities and the admissible load ranges of some elastomer types, buildings and machine foundations can either be bedded elastically on strips or on delicate point supports. Due to the low natural frequencies available, this type of support is technically efficient, but more difficult to plan and execute.

The technical details provide a full overview of the load range of the **REGUPOL** elastomers and their non-linear material properties. They allow expert consultants to select and properly size the elastomer type that suits the situation at hand and meets its respective requirements.

**REGUPOL vibration** elastomers are largely moisture and not resistant. Due to their ozone resistance and their long-term elasticity, even after freeze-thaw alternations, they are suitable for indoor and outdoor applications. Thus, the use is not only within but also outside of buildings. The only exception is **REGUPOL vibration 200**. Due to its composition and cellular structure, it needs to be protected against moisture and water.



## Effectiveness of REGUPOL vibration elastomers

The **REGUPOL vibration** products have relatively wide load ranges and are characterised by a constant natural frequency. Best outcomes can be expected if the product is used within the range of the specified load capacity limit. Exceeding this load limit does lead to progressive spring characteristics but not to material failure. In fact, the rated value for maximum load capacity is 150 to 200 % of the specified limit.

**REGUPOL** elastomers are produced and shipped in rolls. They can be cut to size with a standard utility knife right at the construction site.



# REGUPOL VIBRATION – TECHNICAL DETAILS OVERVIEW

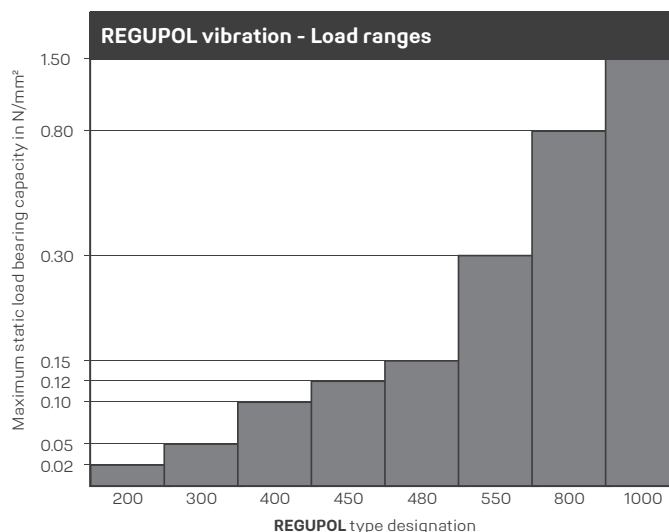


**REGUPOL vibration** is a rubber-polyurethane-composite for vibration isolation. It is available in eight different qualities.

## Forms of delivery

Depending on material. Exact dimensions are mentioned in the technical data sheets of each material type.

Customized strips and pads, self-adhesive versions and special roll lengths available on request.



REGUPOL vibration	200	300	400	450	480	550	800	1000
Maximum static load bearing capacity N/mm²	0.02	0.05	0.10	0.12	0.15	0.30	0.80	1.50
Optimum load range N/mm²	0.004 - 0.014	0.010 - 0.050	0.050 - 0.100	-- <sup>7</sup>	0.050 - 0.150	0.150 - 0.300	0.200 - 0.800	0.800 - 1.500
Tensile strength <sup>1</sup> N/mm²	0.12	0.30	0.34	0.15	0.36	0.60	0.90	2.30
Mechanical loss factor <sup>2</sup>	0.22	0.18	0.17	0.17	0.17	0.16	0.18	0.16
Static modulus of elasticity <sup>3</sup> N/mm²	0.02 - 0.08	0.10 - 0.20	0.30 - 0.55	0.20 - 0.40	0.25 - 0.80	0.50 - 1.70	1.20 - 2.90	4.00 - 11.00
Dynamic modulus of elasticity <sup>4</sup> N/mm²	0.05 - 0.38	0.20 - 1.40	0.90 - 2.40	0.45 - 2.70	1.20 - 3.30	2.50 - 7.00	3.60 - 18.20	15.00 - 45.00
Compression hardness <sup>5</sup> kPa	14	50	180	83	220	414	545	1650
Fire behaviour <sup>6</sup>	B2, E							

1 Measurement based on DIN EN ISO 1798

2 Measurement based on DIN 53513; load-, amplitude- and frequency-dependent.

3 Measurement based on 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 Measurement based on DIN 4102 and DIN EN 13501-1

7 **REGUPOL vibration 450** is used for vertical isolation.

Technical services and offers based on these are subject to our General Terms and Conditions of sale, a copy of which can be found on our website [www.regupol.com](http://www.regupol.com). Special attention should be paid to paragraphs 4 and 5. 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. Guarantees do only apply to the technical properties of the material supplied. Comment on tolerances: All technical values correspond to our current state of knowledge and are to be understood as reference values only. These values can be subject to considerable variabilities due to production and/or material reasons as well as due to outside influences (temperature, humidity etc.). Thus special agreements on material parameters might be necessary on a case-by-case basis.