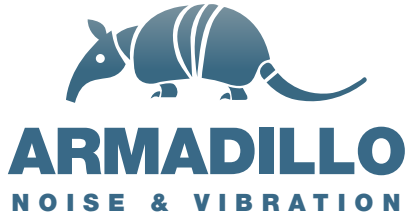


technology on your wavelength



Armadillo Noise & Vibration
1 Titleist Drive
Acushnet
MA 02743

Tel: 800 580 3984

Email: sales@armadillonvinc.com

Website: www.armadillonvinc.com

VIBRATION ISOLATION FLOATING FLOORS

 **REGUPOL**AMERICA

REGUPOL-ACOUSTICS.COM

Vibration Isolation of Floating Floors

Many floor assemblies have to withstand extreme loads while at the same time provide excellent sound isolation.

Regupol America has developed 20 unique product types for floating floors, available in different thicknesses with load range performance from 0.5 psi to 362 psi. This wide range of products and thicknesses helps you find the most appropriate product for your specific project needs.

Regupol® and Regufoam® are remarkably stable under high static and dynamic loads. Great dimensional stability, high resilience, and durability make them the leading products in the area of heavy-duty floating floors. Both product ranges have been used for sound and vibration isolation applications worldwide and have achieved technical approvals in many countries, including the very demanding and stringent German Technical Approval for building and construction materials.

Features and Benefits:

- Withstands high dynamic loads and point loads
- No cumbersome jack-up system
- Very low structural height
- Constant natural frequencies over wide load ranges
- Permanently elastic and highly resilient
- Negligible creep, even under high static and dynamic load
- Quick and easy installation with roll-out products
- Maintenance free
- Continuous full-area support
 - provides stability and reduces risk of cracks
 - allows thinner slabs and less reinforcement

Regupol and Regufoam are suitable for all kinds of structural and vibration isolation:

- Convention and Exhibition Centers
- Performing Arts Centers and Performance Stages
- Technical Equipment Rooms (HVAC, Pumps, etc.)
- TV and Recording Studios
- Cinemas and Home Cinemas
- Production Facilities and Warehouses
- Gyms
- Bowling Alleys
- Rooftops
- Airports
- Schools & Colleges
- Laboratories



- 1 flooring • 2 floating slab
 • 3 polyethylene film (8 mil) • 4 Regupol / Regufoam
 • 5 concrete subfloor • 6 perimeter isolation strips

Sound Isolation under High Loads

International building codes define the specifications for noise protection in commercial and public buildings. In addition to protection against airborne noise, it provides guidelines for protection against impact noise. Therefore, the standard defines the minimum requirements for protecting people in common rooms from unacceptable noise and vibrations.

Impact noise isolation materials must be stable enough to withstand high loads but also be soft enough to ensure sound isolation. Regupol and Regufoam floating floor materials offer high loading capacity while providing excellent sound reduction due to low dynamic stiffness.

Regupol and Regufoam have:

- High compressive strength to ensure lasting stability
- Low natural frequencies and high internal damping to ensure superior sound isolation

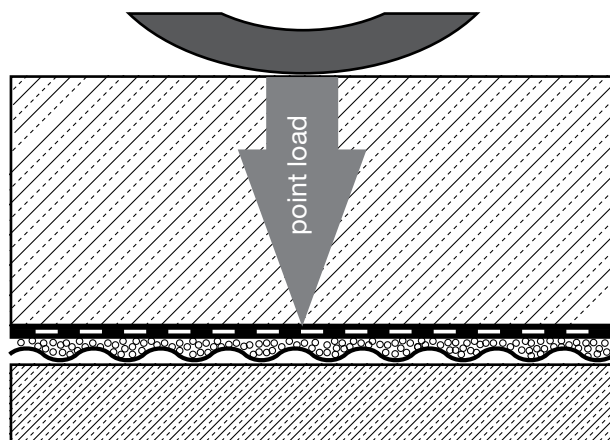
Regufoam and Regupol offer unique characteristics that result in lower deflection values, even under high loads.

The concrete slab must be sufficiently reinforced to counter these high loads, particularly the rim and corner areas. Regupol America can assist in finding the suitable isolation material and the required reinforcement of the concrete slab to avoid structural damage.

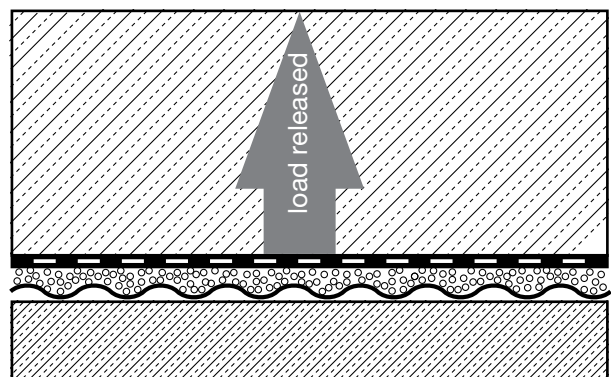


Floating floors in industrial or commercial applications may be subject to high static and dynamic loads. Regupol and Regufoam are specifically engineered to handle these loads and provide superior sound isolation.

Excellent recovery properties under high loading and stress situations are required for permanent isolation effects and structural support. Regupol and Regufoam deflect under load, while providing excellent sound isolation, and almost return to their original thickness when the load is removed. Such demanding requirements must have rigorous quality control standards. This process begins with the inspection of incoming raw materials, then production and batch controls, and ultimately to the laboratory tests to ensure the static and dynamic characteristics.



Regupol and Regufoam can withstand very heavy loads and deflect without damaging the material.

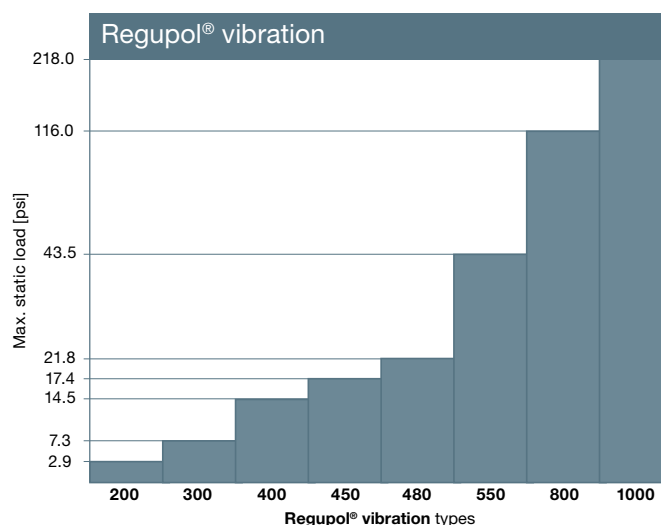


Regupol and Regufoam have excellent recovery properties and will almost return to their original thickness when the load is removed.

Regupol® Vibration Product 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.

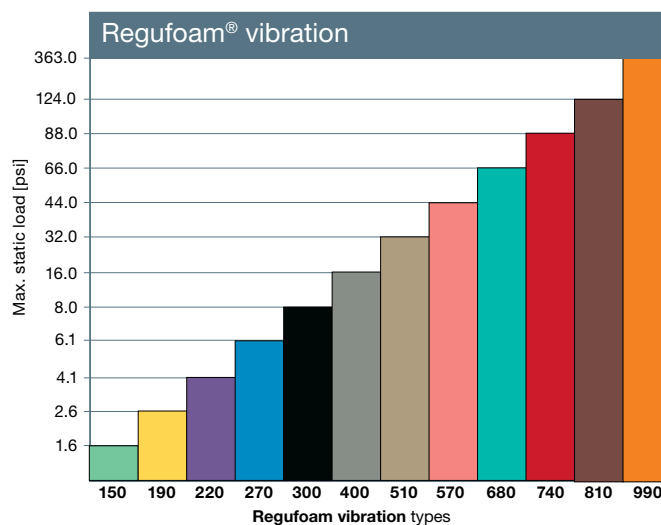
Regupol vibration offers low natural frequencies ($f_0 \geq 7.5$ Hz), which are constant over wide load ranges and can be installed in multiple layers. Some types are supplied with a dimpled underside to decrease the dynamic stiffness and to provide an air gap.



Regufoam® vibration Product 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 while supplying 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 a total thickness of 37.5 mm (1 ½"), 50 mm (2") or more.



Detailed technical data on Regupol and Regufoam is available by request.

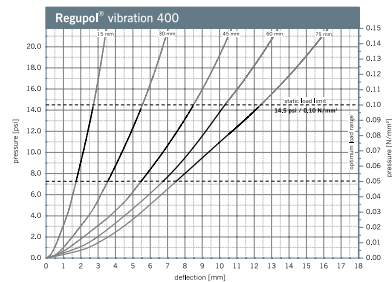
Please contact Regupol America:

Phone: +1 717.675.2190

Email: vibration@regupol.com

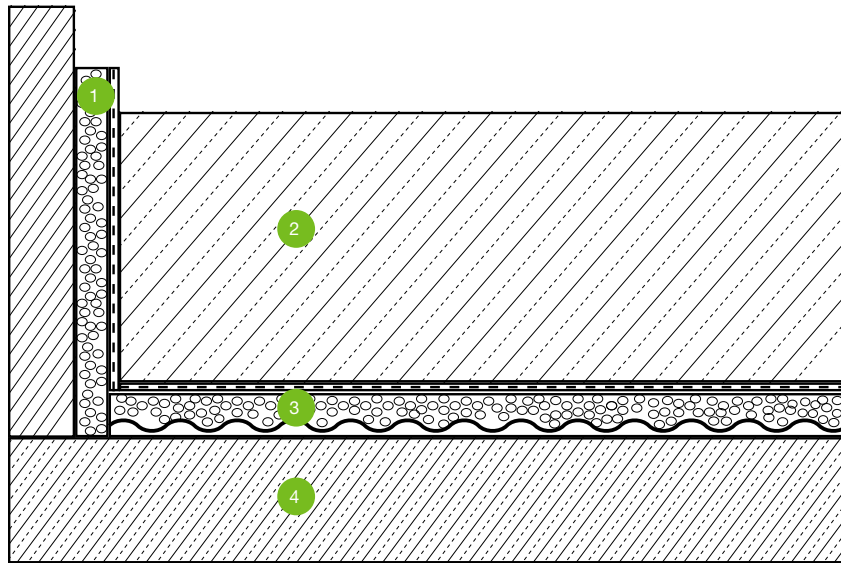
For the selection of the most appropriate **Regupol or Regufoam vibration** type you may consider the following design attributes: Static load (dead load), dynamic load (live load), point load, max. allowable deflection, max. allowable natural frequency, required dynamic stiffness, mechanical loss factor, compression hardness, durability.

Excerpt from the technical data handbook: to receive a copy of the complete data handbook, please contact us.



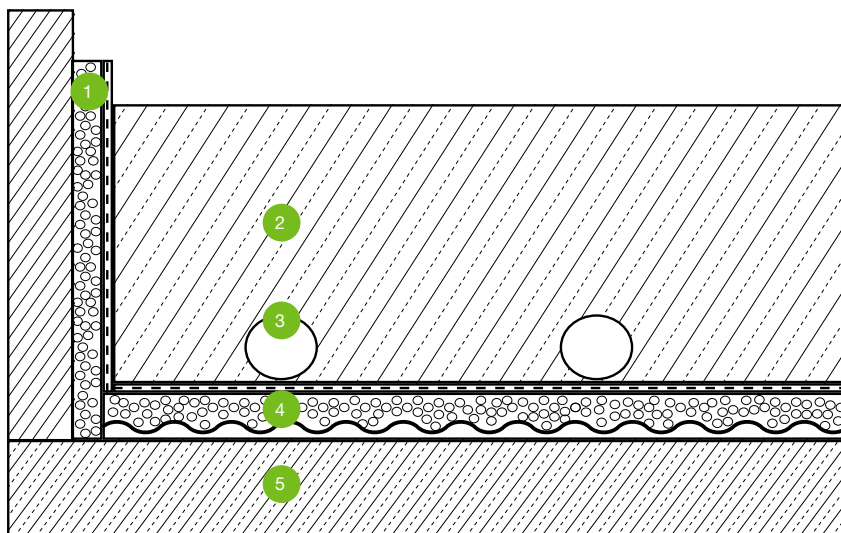
Typical Designs with Regupol and Regufoam Floating Floors

a) Floating concrete slab



- 1 perimeter isolation strip, covered with polyethylene film
- 2 floating concrete slab
- 3 Regupol or Regufoam, covered with polyethylene film
- 4 concrete subfloor

b) Floating concrete slab with underfloor heating



- 1 perimeter isolation strip, covered with polyethylene film
- 2 floating concrete slab
- 3 underfloor heating pipe
- 4 Regupol or Regufoam, covered with polyethylene film
- 5 concrete subfloor

Worldwide References with Regupol® and Regufoam®

Convention Centers & Exhibition Centers

- Spokane Convention Center, Spokane, WA
- Qatar National Convention Center, Qatar
- National Kaohsiung Center for Arts, Kaohsiung, Taiwan
- 21st Century Tower, Shanghai, China
- Cultural & Conference Center, Istanbul, Turkey
- Doha Convention Center, Doha, Qatar
- Nuremberg Trade Fair Center, Nuremberg, Germany
- Luanda Towers, Luanda, Angola
- RBC Convention Center, Winnipeg, Canada



Industrial & Commercial Projects

- AUDI Plant, Győr, Hungary
- VW Volkswagen Plant, Poznan, Poland
- Commerzbank Tower, Frankfurt, Germany
- Business Garden, Warsaw, Poland
- Deutsche Bank Tower, Frankfurt, Germany
- Cinemagnum, Nuremberg, Germany
- Multiplex Cinemas, Dublin, Ireland
- Central Bus Terminal, Munich, Germany
- ADAC Headquarters, Munich, Germany
- Taipei 101, Taipei, Taiwan
- Frankfurt Airport, Frankfurt, Germany



Music Theaters, Opera Houses, TV & Recording Studios

- Elbe Philharmonic Hall, Hamburg, Germany
- The Old Opera House, Frankfurt, Germany
- Grand Theatre, Leeds, England
- Music Academy, Zagreb, Croatia
- Wisseloord Studios, Hilversum, Netherlands
- RTL Studios, Cologne, Germany
- SWR Studios, Stuttgart, Germany
- National Theatre, Linz, Austria

Health & Education

- Warsaw University of Technology, Warsaw, Poland
- Dubai Healthcare City, Dubai, United Arab Emirates
- University Clinic, Regensburg, Germany
- KFJ Hospital, Vienna, Austria
- Clinical Center, Minden, Germany
- ADNOC Hospital, Abu Dhabi, United Arab Emirates
- Priory Community School, Western Super Mare, England



Please feel free to contact us for:

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

Phone +1 717.675.2190

Email vibration@regupol.com



Armadillo Noise & Vibration
1 Titleist Drive
Acushnet
MA 02743

Tel: 800 580 3984

Email: sales@armadillonvinc.com

Website: www.armadillonvinc.com

VIBRATION ISOLATION FLOATING FLOORS

information at: regupol-acoustics.com



Download or request
additional information about
the Regupol family of Sound Control,
or Vibration Isolation products at
Regupol-Acoustics.com



The information and data contained herein are based on industry accepted testing, manufacturing tolerances and prior product usage as set forth. It is intended as descriptive of the performance characteristics and capabilities of Regupol/Regufoam and does not certify applicability for any particular or specific project. Technical assistance, calculations and design recommendations are available from Regupol America, and are subject to terms and conditions provided upon request.