



Technical Specifications Sylomer

Sylomer is a mixed cellular urethane foam product designed for the isolation of noise and vibration. Available in a wide range of densities for varying static loads (0.005N/mm² to 0.8N/mm²) and isolation capabilities (10Hz and below), Sylomer is used in a number of industries to reduce structureborne and/or airborne noise and improve the quality of usable space. A convenient color coding system differentiates each grade of material. Soundown has successfully been using Sylomer to reduce shipboard noise levels since 1984.

The primary grades of Sylomer used in the isolation of yacht interiors are L-12 (green) and R-12 (blue). Sylomer L-12 has a static load range of up to 7.25 psi and is typically used at 15-20% coverage to isolate subfloors installed over structural soles, tank tops, or frames. Sylomer R-12 has a static load range of up to 3.5 psi and is typically used to isolate finish panels from structural bulkheads or one face of a stud wall from the other. Sylomer is easily installed without the need for specialty tools and the convenient color coding system aids in preventing mishandling on the job site.

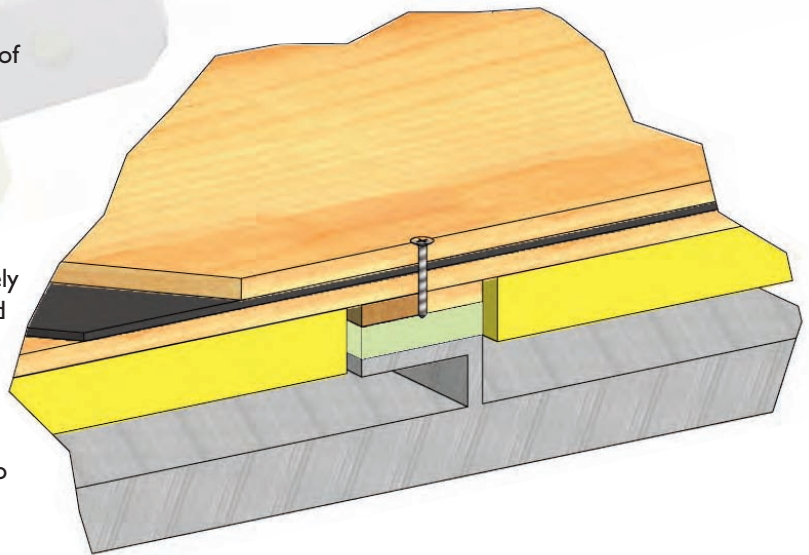
Sylomer's load bearing and vibration isolation characteristics make it the preferred product for floating the interiors of yachts. Floated interiors are acoustically decoupled from the structure of the vessel, which greatly reduces structureborne and airborne noise transmission. Decoupling the interior from the vessel's structure breaks the paths by which noise from mechanical sources travels to the accommodation areas.

Domestic noises from people speaking, AV systems, footfall, and other noises created by owners/guests and crew living in relatively close quarters travels via the same paths as mechanical noise and can be just as bothersome. Floating interiors on Sylomer greatly increases privacy by reducing the transmission of living noises between occupied spaces. High privacy bulkheads are often used in critical interfaces, such as cabin to cabin, cabin to passage, guest/owner cabin to crew and for any space adjacent to the galley or other working areas of a vessel.

Soundown representatives are available to help you understand how floated interiors may best be integrated into your construction. Typical installation details are available for a wide range of steel, aluminum FRP and wood constructions.



Sylomer is available in rolls for installation with adhesive or IsoStrips (with wood bonded 1 or 2 sides) for screw fastening



Typical installation of a floated sole on L12 over a stiffened tank top.



8" ID (203.2mm) ENGINE EXHAUST PIPE



| SOUNDOWN CORPORATION | | | |
|----------------------------|------------------|---------------|-------|
| ACOUSTIC INSULATION DETAIL | | | |
| SIZE: A | PART NO.: 101010 | DWG NO.: 1010 | SHEET |
| SCALE: NONE | DATE: 09-09-04 | | |

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Typical Physical Properties

Material:

Mixed cell polyurethane (PUR) with combined spring and shock-absorbing properties

Standard delivery specifications:

Thickness: 12.5 mm / 25 mm

Rolls: 1.5 m wide, 5.0 m long

Strips: up to 1.5 m wide, up to 5.0 m long

Other dimensions (including thickness), stamped components and moulded components available on request.



Material type:

| Properties | Test procedures | dark gray | yellow | orange | blue | green | brown | red | gray | turquoise |
|--|----------------------------|-------------------|----------|-----------|----------|----------|----------|----------|----------|-----------|
| Permanent static load (N/mm2)** | | 0.005 | 0.01 | 0.016 | 0.025 | 0.050 | 0.10 | 0.20 | 0.40 | 0.80 |
| Load peaks (N/mm2)** | | max. 0.3 | max. 0.5 | max. 0.75 | max. 1.0 | max. 2.0 | max. 3.0 | max. 4.0 | max. 5.0 | max. 6.0 |
| Min. tensile stress at rupture (N/mm2) | DIN EN ISO 527-3/5/100* | 0.2 | 0.4 | 0.45 | 0.5 | 0.75 | 1.0 | 1.5 | 2.5 | 3.5 |
| Min. tensile elongation at rupture (%) | DIN EN ISO 527-3/5/100* | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 |
| Abrasion (mm3)*** | DIN 53516 | >1,500 | 1,400 | 400 | 770 | 1,160 | 1,410 | 1000 | 400 | 250 |
| Residual compression set (%) | EN ISO 1856 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <10 |
| Static shear modulus (N/mm2) (at permanent static load) | DIN ISO 1827* | 0.03 | 0.03 | 0.05 | 0.07 | 0.13 | 0.23 | 0.35 | 0.58 | 0.81 |
| Dynamic shear modulus (N/mm2) (at permanent static load, 10 Hz) | DIN ISO 1827* | 0.09 | 0.09 | 0.12 | 0.17 | 0.27 | 0.44 | 0.68 | 1.13 | 1.6 |
| Mechanical loss factor | DIN 53513* | 0.20 | 0.25 | 0.23 | 0.21 | 0.20 | 0.16 | 0.15 | 0.13 | 0.13 |
| Static elasticity modulus (N/mm2) (at permanent static load)** | DIN 53513* | 0.10 | 0.08 | 0.13 | 0.20 | 0.52 | 0.79 | 1.62 | 3.0 | 6.8 |
| Dynamic elasticity modulus (N/mm2) (at permanent static load, 10 Hz)** | DIN 53513* | 0.15 | 0.18 | 0.29 | 0.41 | 0.88 | 1.34 | 2.83 | 5.3 | 10.8 |
| Resistance to strain at 10 % deformation (N/mm2) | | 0.007 | 0.012 | 0.019 | 0.029 | 0.057 | 0.12 | 0.22 | 0.39 | 0.81 |
| Operating temperature (°C) | | -30 to +70 | | | | | | | | |
| Temperature peak (°C) | short term | +120 | | | | | | | | |
| Inflammability | DIN 4102 EN ISO 11925-2 | B 2 B, C and D | | | | | | | | |

* Measurement procedure similar to the relevant standard

** Data valid for a form factor of $q=3$, material thickness 25 mm

*** Measurement of abrasion depends on density with varying testing parameters

All information and data is based on our current knowledge. The data can be applied for calculations and as guidelines, are subject to typical manufacturing tolerances, and are not guaranteed. We reserve the right to amend the data.

Detailed data sheets on the various material types and special specifications available on request.

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