

VIBRATION ISOLATION SYLODYN – Elastomer



SYLODYN	Static load up to	Damping area (dynamic and static load)
NB = red/pink	0.000 - 0.075 N/mm ²	0.12 N/mm ²
NC = yellow	0.075 - 0.15 N/mm ²	0.25 N/mm ²
ND = green	0.15 - 0.35 N/mm ²	0.50 N/mm ²
NE = blue	0.35 - 0.75 N/mm ²	1.20 N/mm ²
NF = violet	0.75 - 1.50 N/mm ²	2.00 N/mm ²

Product description SYLODYN is a high-quality closed-cell polyurethane foam (Elastomer) that is very suitable for flexible arrangements thanks to its excellent elastic characteristics. SYLODYN can be provided with a wear-resistant top layer and is available in standard thicknesses of 12.5 and 25 mm.

- Characteristics**
- SYLODYN isolates horizontal and vertical as well as torsional vibrations.
 - Permanent elastic characteristics, even in case of momentary severe overload
 - You can cut or saw SYLODYN plates / rolls to size using a knife / Stanley knife or ribbon saw.
 - Resistant to water, engine oil, grease and diesel
 - Resistance to diluted acids, bases and solvents is available upon request.
 - SYLODYN is not resistant to acetone, ethyl acetate, thinner and more.
 - Flame extinguishing according to DIN 4102 (B2) and EN ISO 11925-2 (B, C and D)
 - When loading, the volume of SYLODYN decreases, avoiding lateral diversion (contrary to rubber). This makes SYLODYN suitable for use as permanent formwork.
 - Flexible arrangements over a larger surface result in the following advantages:
 - Smaller construction height
 - Less specific load on the base
 - Fewer torsional and vibrational bending in the machine
 - Better stability of the construction
 - Temperature resistance from -30°C up to +70°C

Application Machines and equipment, floors, ship's frames, walls, bridge crossings, stair supports, foundation of buildings, funnel cladding, vibrating and shaking feeders

Installing We can create various thicknesses (other than the standard thickness) by gluing layers to each other. For gluing the SYLODYN (also with a wear-resistant top layer) on steel, wood, concrete, synthetics, etc. we recommend using TEROKAL-2444 contact adhesive or BARYVIBRO 607 2-component glue. Avoid direct exposure to sunlight.

Dimensions Maximum roll length and width: 5,000 x 1,500 mm (net)
Special thickness, dimensions and combinations upon request

DISCLAIMER
De omschreven toepassingen en aanbevelingen zijn zo correct mogelijk weergegeven maar zijn vrijblijvend en bieden geen garanties. Bij twijfel over toepassing of verwerking zelf een test uitvoeren of contact met ons opnemen. We behouden ons het recht om zonder kennisgeving vooraf, productgegevens te wijzigen.

Selection of type

The type of SYLODYN can be determined as follows:

- Determine the weight of the device to be installed (in Newton) ($1 \text{ kg} = 10 \text{ N}$).
- Calculate the machine/floor contact surface e.g. two U sections (in mm^2).
Calculate the surface pressure = static load (in N/mm^2)
- Determine which type of SYLODYN is suitable for the calculated static load (see table on p. 1).

Calculation method

To calculate the correct thickness of SYLODYN, you should use the specification sheet belonging to the type of SYLODYN that you will be using (inquire about this at ISOPARTNER).

- Determine the interfering frequency of the machine (if unknown: divide the number of revolutions by 60 or choose the natural frequency as low as possible).
- Using the 'Natural frequency' graph, determine the related natural frequency at a thickness of 12 mm.
- Determine the reduction value in dB using the natural frequency and the interfering frequency in the 'Vibration isolation efficiency' graph (above the -10 dB line is good and above the -20 dB line is excellent).

If the required reduction is not achieved, the isolation value for thicker types should be determined in the same manner until the optimum thickness is ascertained.

Regarding the deflection, the following remarks apply:

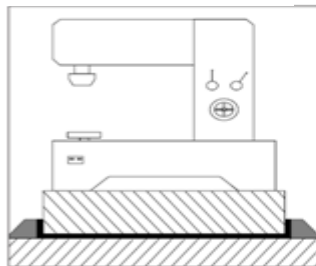
The deflection progresses approximately proportionate to the load.

The deflection is approx. 10% at maximum static load.

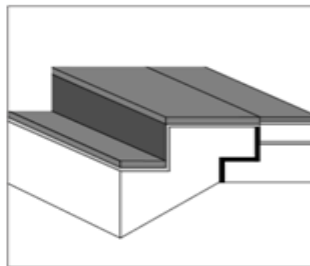
If SYLODYN strips are used, do not select strips that are too narrow compared to the thickness; instead maintain a minimum ratio of width = 2 x thickness.

To keep the aforementioned calculation method as simple as possible, we have not been able to indicate all application possibilities for SYLODYN. Therefore, do not hesitate to contact us if you cannot determine a suitable type of SYLODYN from the aforementioned or if you require additional data.

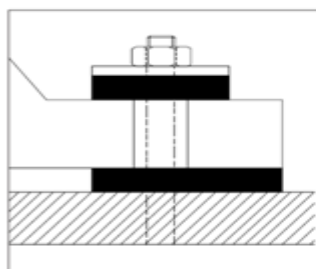
Practical examples



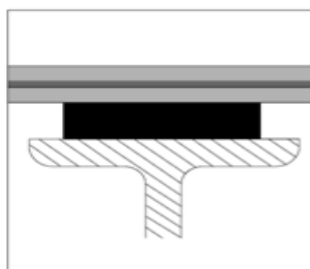
SYLOMER under a machine foundation



Acoustic disconnection of stairs and floors



Detail of machine foundation



Detail of floor support on a steel frame/truss

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Material type:

NB

NC

ND

NE

NF

Properties	Test procedures	NB	NC	ND	NE	NF
Color		red	yellow	green	blue	violet
Permanent static load (N/mm ²)**		0.075	0.150	0.350	0.750	1.500
Load peaks (N/mm ²)**		max. 2.0	max. 3.0	max. 4.0	max. 6.0	max. 8.0
Min. tensile stress at rupture (N/mm ²)	DIN EN ISO 527-3/5/100*	0.75	1.5	2.5	4	7
Min. tensile elongation at rupture (%)	DIN EN ISO 527-3/5/100*	450	500	500	500	500
Abrasion (mm ³)***	DIN 53516	>1.400	>550	>100	>80	>90
Residual compression set (%)	EN ISO 1856	<5	<5	<5	<5	<5
Static shear modulus (N/mm ²) (at permanent static load)	DIN ISO 1827*	0.13	0.21	0.35	0.61	0.8
Dynamic shear modulus (N/mm ²) (at permanent static load, 10 Hz)	DIN ISO 1827*	0.18	0.29	0.47	0.86	1.18
Mechanical loss factor	DIN 53513*	0.07	0.08	0.08	0.09	0.1
Static elasticity modulus (N/mm ²) (at permanent static load)**	DIN 53513*	0.75	1.10	2.55	6.55	11.8
Dynamic elasticity modulus (N/mm ²) (at permanent static load, 10 Hz)**	DIN 53513*	0.9	1.45	3.35	7.7	15.2
Resistance to strain at 10 % deformation (N/mm ²)		0.09	0.15	0.35	0.7	1.3
Operating temperature (°C)		-30 bis +70				
Temperature peak (°C)	short term	+120				
Inflammability	DIN 4102 EN ISO 11925-2	B 2 B, C und 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.