



Decoupled Flexible Noise Barrier with Abrasion Resistant Facing



Silentstep is an inexpensive high performance acoustic carpet underlay that offers excellent support for all types of carpet and provides significant reduction in transfer of air-borne and impact noise between floors, when laid on most types of flooring. It performs especially well on lightweight flooring materials such as timber, fibreglass and composite panel materials.

Silentstep uses a decoupled mass barrier approach and is composed of flexible, high mass (4kg/m^2) noise barrier, based on **Wavebar**[®] technology, laminated to a layer of high performance 9mm thick, decoupling foam.

The decoupling foam is a high grade bonded, polyether polyurethane foam that provides excellent hydrolysis resistance and wear. This foam is especially suited for use in wet and humid areas, such as boats or tropical environments.

When used under carpet **Silentstep** provides excellent reduction in both airborne and impact noise from the floor above into the room directly below.

Silentstep is easy to cut and lay and provides a firm cushioned base for the carpet. The amount of "give" in the material provides a "plush" feel to the carpeted room not available from lesser performing lighter weight thin section materials. The construction of **Silentstep** increases overall transmission loss through the use of the decoupled barrier and provides a high degree of sound absorption thereby reducing reverberant noise levels.

FEATURES

- Meets BCA ($L_n, T_w + C_i$ requirements)
- Will meet AAAC 4-Star rating on properly constructed floors.
- FMVSS - 302
- SAEJ 3699
- >36dB improvement from 315 Hz
- Impact Isolation Class > 54dB
- Improved mid to high frequency performance
- Reduced air borne noise
- Improved impact noise reduction
- Resists hydrolysis - foam will not rot
- Includes **Wavebar** flexible barrier technology
- Easily cut, shaped, fabricated and installed
- Available pre-cut to drawings or templates

APPLICATIONS

- Under Carpet in two story domestic and commercial applications
- Control of footfall noise in inter tenant living
- Reduction of airborne noise from radio, TV, home entertainment or human voice
- Upper and mid decks floor covering, under carpet in marine applications.
- Bulkheads of boats, trucks, buses and construction machinery

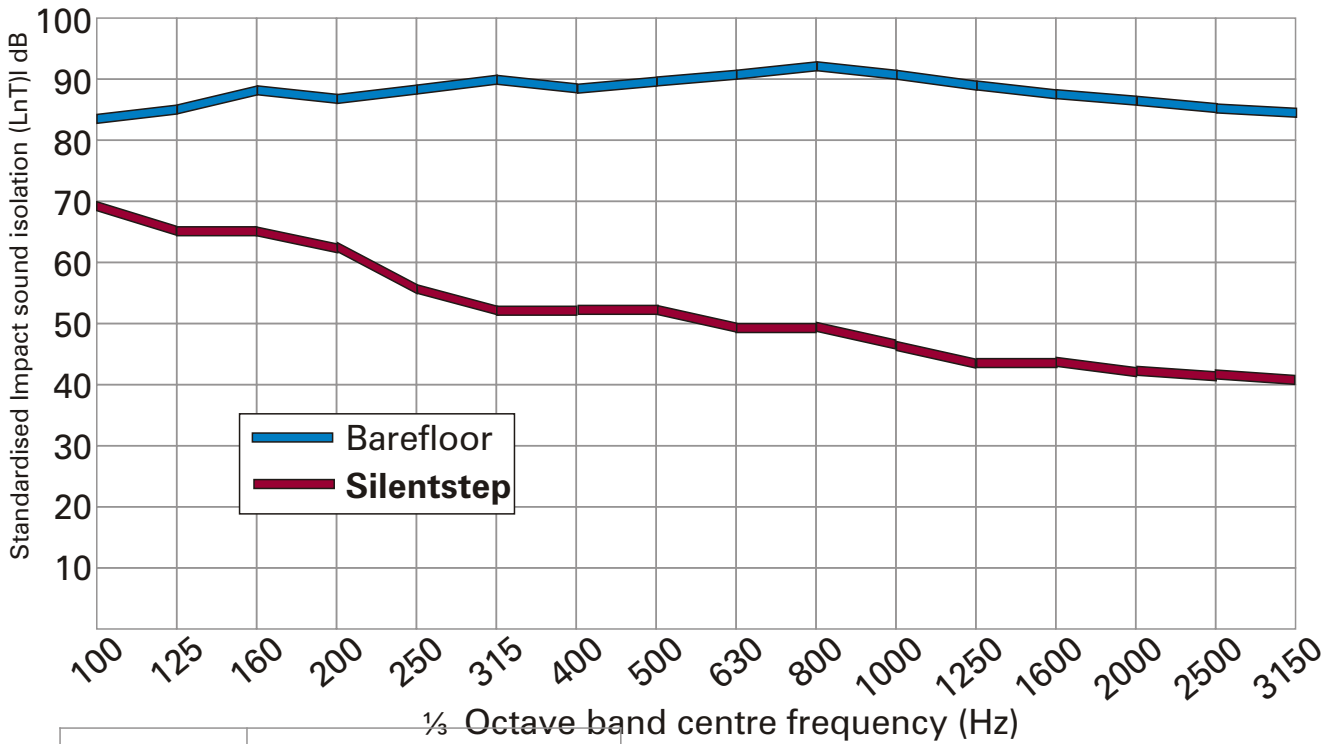
BENEFITS

- Maximum performance in critical 1kHz to 4kHz octave band.
- Long service life.
- Maximises noise control by providing superior air borne noise transmission loss and excellent impact noise reduction.
- Can be retro fitted or installed prior to laying carpet.
- Gives a plush feeling under carpet.
- Easily fitted manufactured to the same thickness as common carpet underlays
- Replaces existing carpet underlay

STANDARD PRODUCT	Product Thickness (mm nominal)	ROLL LENGTH (Metres)	ROLL WIDTH (Metres)
Silentstep	11	5.0	1.35
MATERIAL	BARRIER SPECIFIC GRAVITY		FOAM DENSITY (kg/m³)
Silentstep	4kg/m ²		120

MATERIAL	L_{n,r} T_w + C_i	L_{n,w}	C_i	IIC
Silentstep	<56	<56	-0.3	>54

Impact results bare timber versus Silentstep covered timber



1/3rd Octave Band (Hz)	Standardised level difference (LT) dB	
	Baretimber floor	Silentstep
100	81	67
125	82	63
160	86	64
200	85	62
250	86	55
315	87	51
400	86	51
500	87	50
630	89	47
800	90	47
1000	89	46
1250	87	45
1600	86	46
2000	85	44
2500	84	43
3150	83	42

Comments from Report nss21031
 Conducted and compiled by Ken Scannell MSc
 MAAS MIOA - Noise and Sound Services

"The floor covering tested met the requirements of BCA from impact generated sound. It is predicted that using the floor covering tested in combination with a correctly constructed floor structure in dwellings between habitable rooms would meet at least AAAC 4 Star rating. The improvement in the floor covering tested, over the bare timber floor, was at least 36 dB for frequencies centred on 315 Hz." (When compared to a bare timber floor as per test report)

MISCELLANEOUS PROPERTIES

COLOUR	RECOMMENDED TEMPERATURE RANGE	THERMAL CONDUCTIVITY (K)*
GREY FACING	-20°C to +80°C	0.036W/mK

* Foam only

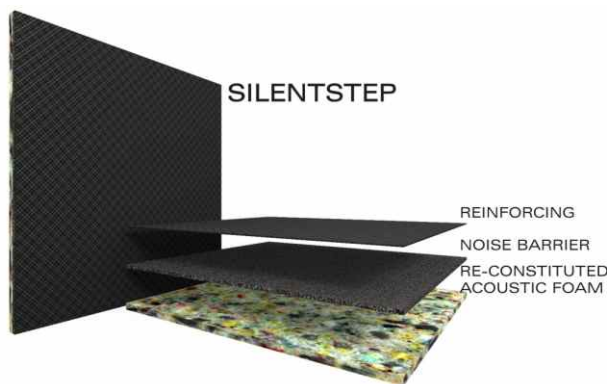
**The thermal conductivity is enhanced further by the addition of the barrier.

FLAMMABILITY PROPERTIES

MATERIAL	FMVSS-302	SAE J369a
SILENTSTEP	SE*	SE*

Installation Instructions

Silentstep is an inexpensive high performance acoustic carpet underlay that offers excellent support for all types of carpet and provides significant reduction in transfer of air-borne and impact noise between floors, when laid on most types of flooring. It is especially well performed on lightweight flooring materials such as timber, fibreglass and composite panel materials.



Silentstep may take a little longer to install than non-acoustic grades of carpet underlay but the small time impost will be more than recovered by the benefits experienced from the vastly improved acoustic performance of the floor.

- 1: Use standard Domestic Carpet Gripper unless otherwise directed.
- 2: Lay the foam side of the Silentstep onto the deck or floor surface.
- 3: Butt the edges of the Silentstep together – Join each sheet with good quality underlay tape.
- 4: Silentstep has sufficient internal weight to remain in position during the fitting of the carpet. Bonding and stapling will reduce the acoustic performance of the material.
- 5: Cut the Silentstep in as per normal rubber underlay installation.
- 6: Make certain the carpet is firmly attached to the leading gripper pins.
- 7: Bolster the carpet between the far side gripper edge and skirting board.



NOTES: Specifications are subject to change without notice.

The data listed in this data sheet are typical or average values based on tests conducted by independent laboratories or by the manufacturer. They are indicative only of the results obtained in such tests and should not be considered as guaranteed maximums or minimums. Materials must be tested under actual service to determine their suitability for a particular purpose.

The conclusions drawn from acoustic test results are as interpreted in writing by qualified independent testing authorities. Even so always seek the opinion of your own acoustic engineer as to the meaning of any data presented by the manufacturer as it is applied to any given project or use.

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AUSTRALIA 1300 136 662 +61(0)2 8868 2088	CHINA +86(0)755 8601 6449 HONG KONG +852 2548 4443	DUBAI +971 (50) 624 9254	CZECH REPUBLIC +420 516 527 195 +420 725 373 966	NEW ZEALAND 0800 226 878 427 +64(0)9 272 2056	TAIWAN +886 6 313 1267	UK +44 (0) 1908 561155	USA +1 509 926 6211
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