



Acoustic System

SPECIFICATION GUIDE



Impact noise is a growing problem in New Zealand buildings.

“Building elements that are common between occupancies are required to be constructed to prevent undue noise transmissions from other occupancies.”

**COMPLIANCE DOCUMENT FOR NEW ZEALAND BUILDING CODE,
CLAUSE G6 AIRBORNE & IMPACT SOUND**

Minimising noise with Asaphonic Mat

Asaphonic Mat is an acoustic underlay that effectively reduces impact noise for all types of hard flooring. It provides IIC rated noise-absorption improvement, as measured by industry experts and backed by independent laboratory and field tests in a variety of floor-ceiling assemblies.

When laid in accordance with Bostik installation instructions, Asaphonic Mat provides users with a sound-deadening substrate for floor coverings by absorbing noise transfer through floors.

The underlay is available in 5mm and 10mm thickness and it is produced in 1m x 0.5m sheets, designed to be convenient to handle and install. Manufactured to industry design specifications and produced in NZ from 100% recycled rubber.

Asaphonic Mat is a preformed sheet of graded rubber particles bound together by a polyurethane binder. It provides a sound absorbing layer for covering concrete floors where impact noise isolation is required. It may be used for indoor or outdoor installations. Typical applications are unit blocks (including bathrooms, laundries and living areas), external decks and balcony areas.



FEATURES

- Reduces impact sound transmission
- Does not expand or extrude laterally when compressed
- Effective thermal insulator

RECOMMENDED USES

Acoustic attenuation when directly bonding tiles and hardwood floors to:

- Concrete
- Screed
- Compressed fibre cement sheeting

BOSTIK ACOUSTIC SYSTEM

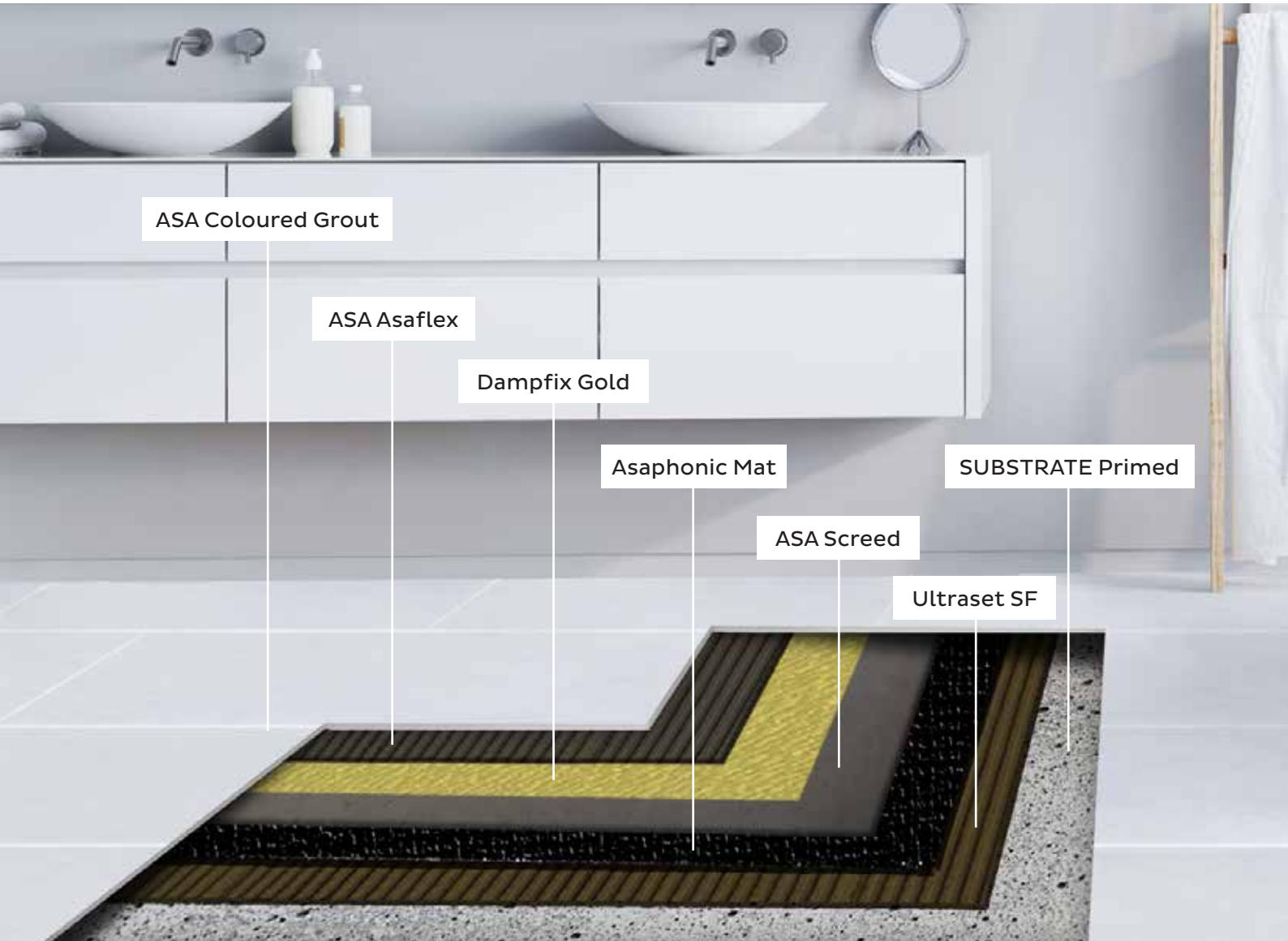
Dry area application





BOSTIK ACOUSTIC SYSTEM

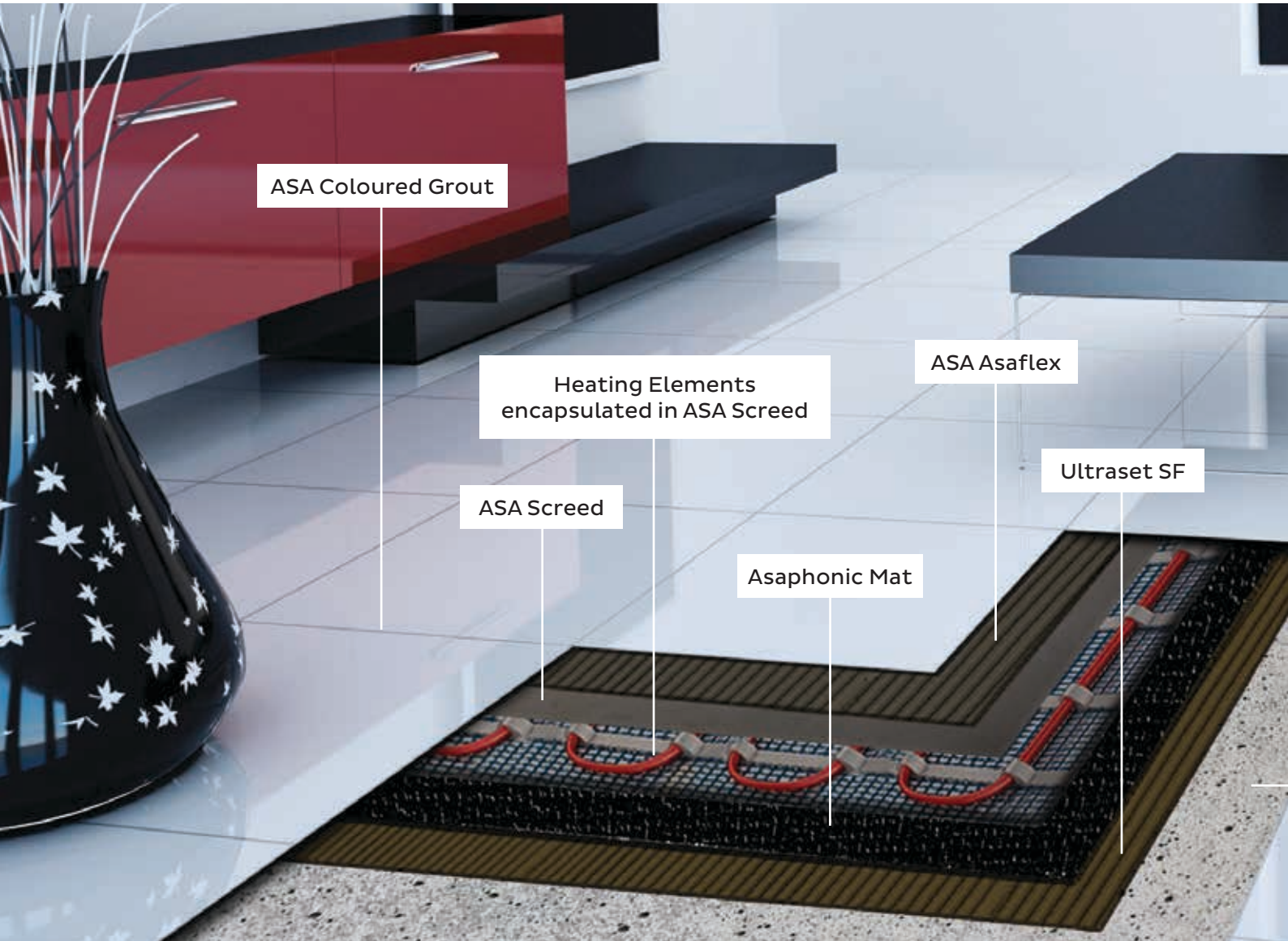
Wet area application

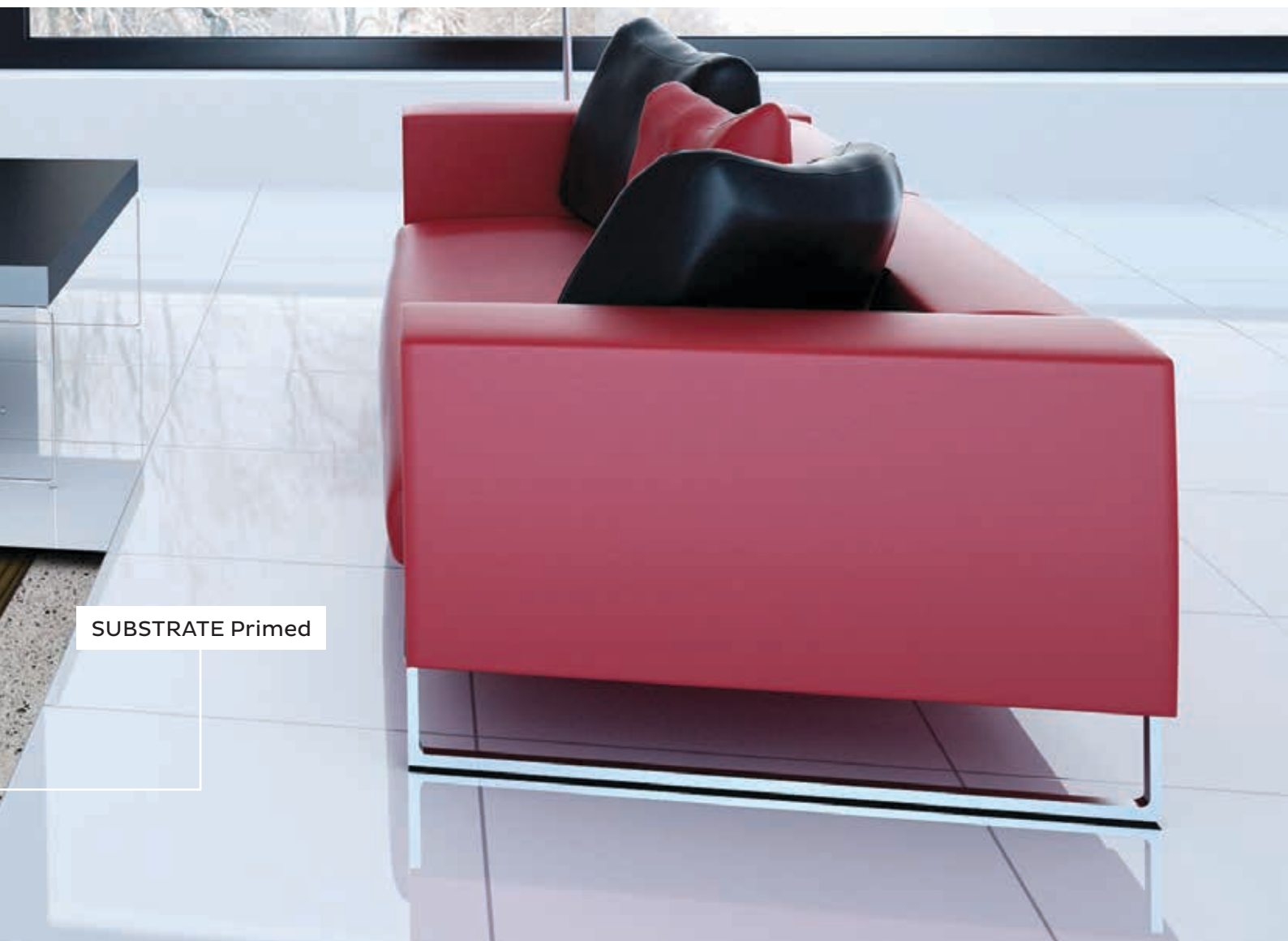




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Underfloor heating application





SUBSTRATE Primed

BOSTIK ASAPHONIC MAT UNDERLAY BELOW CERAMIC TILES

Ceiling		Floor					
		Average Concrete Thickness (refer to for construction options)					
		90 mm		120 mm		150 mm	
Thickness / layers	Cavity Absorption Present?	Impact Insulation Class	L' _{nT,w}	Impact Insulation Class	L' _{nT,w}	Impact Insulation Class	L' _{nT,w}
No plasterboard ceiling	N/A	IIC 34 (+15)	76 dB	IIC 38 (+14)	72 dB	IIC 41 (+13)	69 dB
1 x 10 mm plasterboard (100 mm cavity)	No	IIC 43 (+4)	67 dB	IIC 47 (+4)	63 dB	IIC 48 (+4)	62 dB
	Yes	IIC 53 (+12)	57 dB	IIC 57 (+10)	53 dB	IIC 59 (+8)	51 dB
1 x 13 mm plasterboard (200 mm cavity)	No	IIC 48 (+11)	62 dB	IIC 51 (+10)	58 dB	IIC 54 (+9)	56 dB
	Yes	IIC 56 (+19)	55 dB	IIC 60 (+17)	50 dB	IIC 62 (+16)	48 dB
2 x 13 mm plasterboard (200 mm cavity)	No	IIC 51 (+14)	59 dB	IIC 55 (+12)	55 dB	IIC 57 (+12)	53 dB
	Yes	IIC 56 (+18)	54 dB	IIC 60 (+18)	50 dB	IIC 63 (+16)	47 dB

A floor slab of less than 120 mm is not recommended where horizontal transmission is a concern.

The L'_{nT,w} has been calculated based on a receiving room volume of 50 m³. No allowance has been made for on-site flanking transmission.

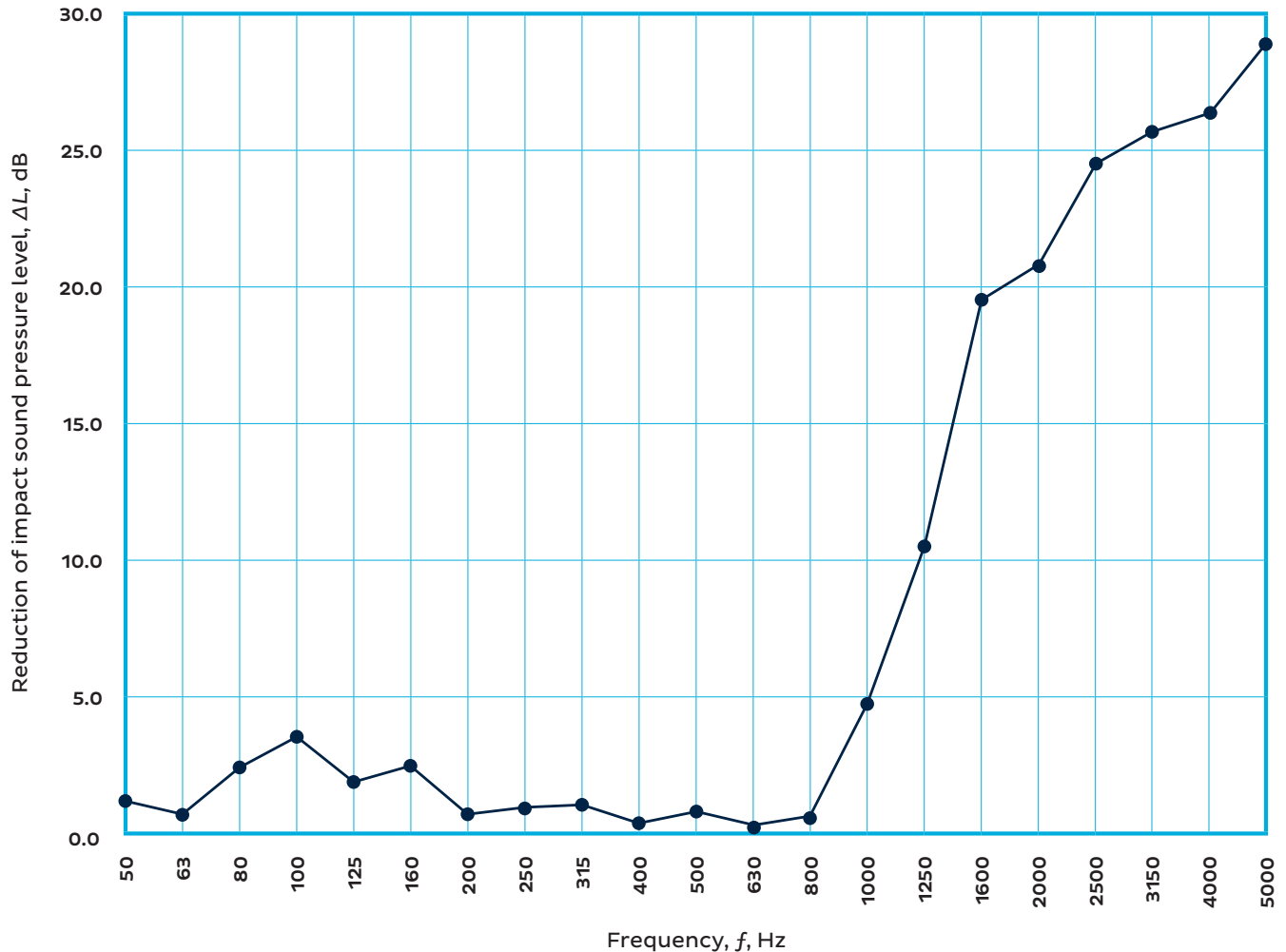
Improvement in IIC performance due to inclusion of Asaphonic Mat as compared to bare floor slab given in brackets.

ACOUSTIC MAT – PHYSICAL PROPERTIES

Colour	Black
Density	750kg/m ³
Maximum operating strain	15% recommended under long term loading
Compressive load	≥ 250kPa at 15% strain (i.e. it would take 2 tons to compress the mat under the 300x300mm tile)
Compression recovery	90% minimum at 1 hour
Compressive creep	1.3% (max) per decade of time at 15% strain
Thermal conductivity	0.11 to 0.14 W.m ⁻¹ .K ⁻¹
Extrusion	Compresses within itself and does not extrude sideways

REDUCTION OF IMPACT SOUND PRESSURE LEVEL according to ISO 10140-3

Laboratory measurements of the reduction of transmitted impact sound by floor coverings on a heavyweight reference floor.



Rating according to ISO 717-2:

$\Delta L_w = 13$ dB

$C_{1,\Delta} = 10$ dB

$C_{1,r} = -2$ dB

$C_{1,50-2500} = -1$ dB

These results are based on a test made with an artificial source under laboratory conditions (engineering Method) with the specified reference floor.

BOSTIK ACOUSTIC SYSTEM

Product Guide



Bostik Acoustic Sealant Water-based acoustic isolation sealant

Bostik Acoustic Sealant is a water-based, high solids, permanently flexible and dense sealant designed for acoustic isolation.

Key features	Recommended uses
<ul style="list-style-type: none">• Suitable for use on timber frame plasterboard walls which achieve performances up to STC 60• Stays flexible• Water clean up• Low VOC	<ul style="list-style-type: none">• Perimeter sealing around framing layers• Interior joint sealant ($\pm 10\%$ movement)



Bostik Ultraset SF Hardwood adhesive

Bostik Ultraset® SF is a one-part solvent-free polyurethane elastomeric adhesive formulated to adhere most types of hardwood floors.

Key features	Recommended uses
<ul style="list-style-type: none">• Zero VOC• Solvent-free formulation• Non-flammable• No mixing, ready to use• One component• Easy to spread• Remains flexible• Excellent bond strength• Will not re-emulsify when in contact with moisture• Remains flexible• Recommended adhesive by major timber manufacturers• Excellent acoustic properties• Tested to ASTM C794 for peel adhesion to various species of hardwood	<ul style="list-style-type: none">• Interior surfaces• Residential applications• Commercial applications• Industrial applications• Substrates:<ul style="list-style-type: none">- Hardwood flooring- Softwood flooring- Solid strip flooring- Engineered flooring



ASA Asaphonic Mat Acoustic Mat

Asaphonic Mat is a preformed sheet of graded rubber particles bound together by a polyurethane binder. It provides a sound absorbing layer for covering concrete floors where impact noise isolation is required. It may be used for indoor or outdoor installations. Typical applications are unit blocks (including bathrooms, laundries and living areas), external decks and balcony areas.

Key features	Recommended uses
<ul style="list-style-type: none"> • Reduces impact sound transmission • Does not expand or extrude laterally when compressed • Thermal insulator 	<ul style="list-style-type: none"> • Typical applications for excluding sound transmissions are unit blocks (including bathrooms, laundries and living areas), to external decks and balcony areas • Acoustic attenuation when directly bonding tiles and hardwood floors to: <ul style="list-style-type: none"> - Concrete - Screed - Compressed fibre cement sheeting



ASA Dampfix Gold Water-based polyurethane liquid waterproofing membrane

ASA® Dampfix® Gold is a one-part, highly elastic, Class 3, water-based polyurethane waterproofing membrane system. It is specifically formulated for application on graded substrates that provide positive falls to drainage outlets. This is a 2-coat system applied over primed porous & non-porous substrates.

Key features	Recommended uses
<ul style="list-style-type: none"> • Class 3, high elasticity • Fast drying • Recoat in 2 hours • Tile next day in most conditions • May be tiled directly using approved Bostik ASA® tile adhesives • Reinforced with clump free fibres. • No mixing • High resistance to detergents and bleach • Will not re-emulsify after curing • Does not embrittle with age • Can be applied to damp substrates, i.e. no free water 	<ul style="list-style-type: none"> • Interior surfaces • External surfaces • Residential applications • Commercial applications • Substrates: <ul style="list-style-type: none"> - As a waterproofing membrane under tile to internal wet area shower, bathroom, kitchen, laundry and toilet areas - As a waterproofing membrane under tile or other wearing surface systems to external balconies, rooftops and podium levels • Materials: <ul style="list-style-type: none"> - Concrete - Cement - Rendered masonry - Cement sheet (FC sheet) - Water resistant plasterboard - Structural plywood



Asaflex Commercial-grade tile adhesive

Two-part adhesive with exceptional flexibility and superb bond. Designed for jobs where flexibility is critical. Suitable for commercial and high traffic tiling and can be used outdoors. Best choice for tiling onto timber or acoustic mat. Grey colour.

Key features

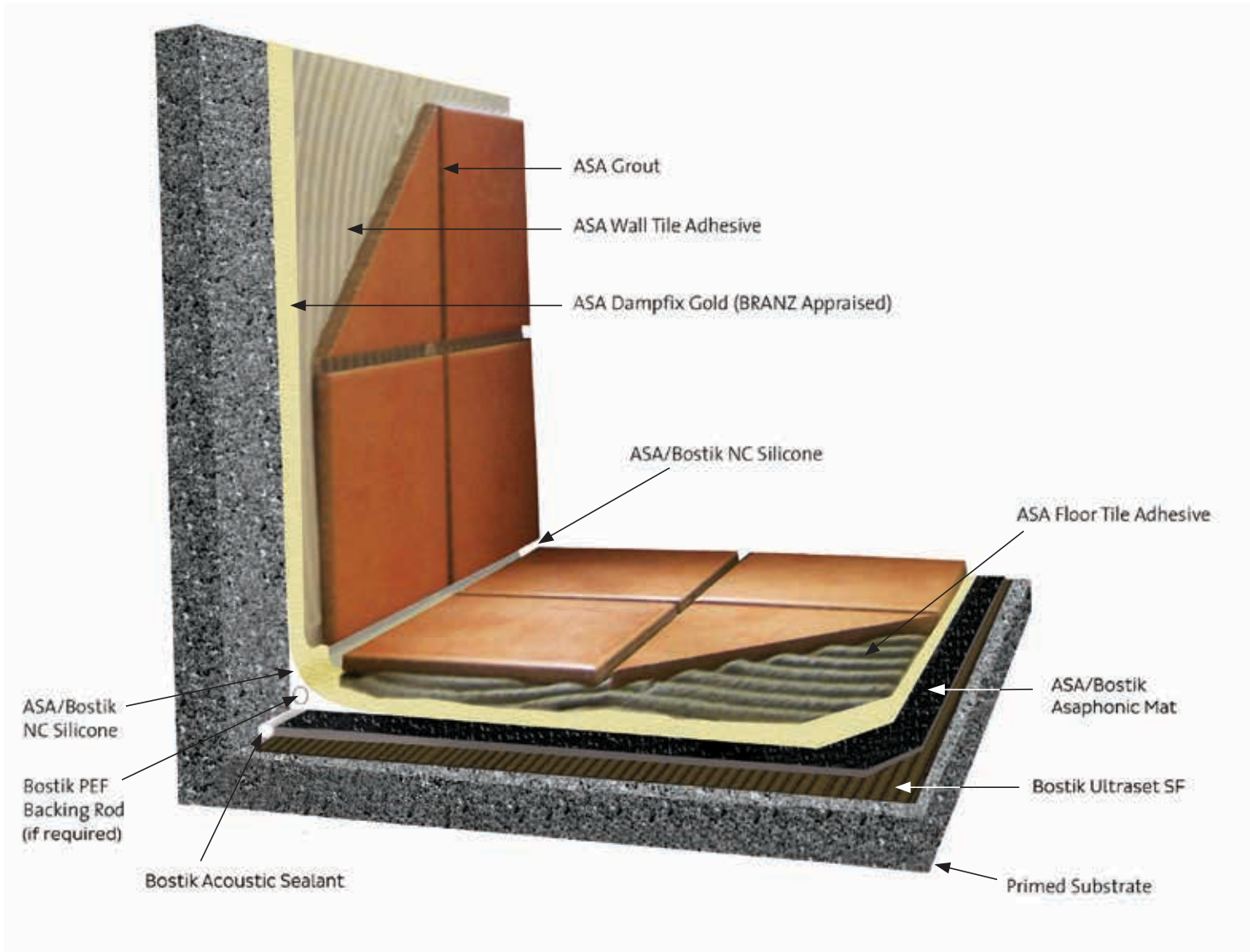
- Superb flexibility
- Excellent bond
- Good acoustic properties
- Superior water resistance

Recommended uses

- When flexibility is vital
- Indoors or outdoors (e.g. balconies)
- Tile on timber
- Apartments
- Recommended tile adhesive for Asaphonic acoustic system
- Suitable Substrates
 - Concrete
 - Render, early age (green); screed (1 day), concrete (7 days)
 - Fibre cement
 - Plasterboard
 - Acoustic mat
 - Dampfix Gold, Dampfix 3
 - Timber
 - Suitable Tiles
 - Wall & floor
 - High traffic
 - All moisture - stable tile types. Suitable tiles include porcelain, ceramic, terracotta, terrazzo, glass, stone.



TYPICAL ACOUSTIC SYSTEM based on wet area application





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