# Specialist products. Proven expertise.

Acoustic flooring systems to meet the 2010 Scottish Standards - Section 5

Uniclass L5395:N372 CI/SfB (23.9) X (P2)

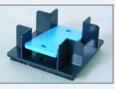




## The Danskin Range

### Products





Saddle Systems



# Reflex Bearers



Ethafoam 2222 Underlay



Regupol 4515 Multi

### Accessories

Park Bearers



Ethafoam Tape



Report





Acoustic Quilt

Flooring Boards

D3 Adhesive

Flanking Strip

Acoustic Sealant



Acoustic Pipewrap

Danskin has been a manufacturer and supplier of innovative high performance acoustic floor treatment products for over 40 years. Now part of an international group of companies we are able to supply not only the widest range of acoustic products but also provide the practical experience to help you achieve your noise control requirements. Many of our products are manufactured internally ensuring that we can meet the reliability and price competitiveness needs of the industry. Danskin pays particular regard to environmental considerations and was the first Scottish acoustic products manufacturer to gain full PEFC and FSC timber chain of custody. Our resilient layers are selected to ensure the minimum environmental impact and our products are manufactured to ISO 9001 standards.

Excessive noise levels cause stress, anxiety and general inconvenience and this is reflected in the continuing increases in sound insulation performance levels required by legislation. This brochure covers the entire range of flooring products which is likely to be needed to meet the new build requirements of Section 5 (Noise) of the 2010 Scottish Technical Handbooks. These revised Technical Handbooks came into effect on 1 October 2010 and include Example Constructions to assist compliance with the increased sound insulation standards. A full range of accessories is also provided to ensure easy and successful installation on site.

Specifiers and builders have to meet these legal requirements and in this brochure Danskin makes the process easier. By creating structures with better sound insulation Danskin will help to provide a more comfortable environment for your customers.

Product Selector For Scotland Section 5	Page	Ne	ew Build Example Constructions - Scotland				Ground Floors	
		1A	1B	2A	2B	3A	3B	
		In Situ Concrete	In Situ Concrete	Precast Plank	Precast Plank	Timber Joists	Timber I Joists	
Products - New Build								
Danskin Reflex Bearer FFT1	12		$\checkmark$		$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
Danskin Reflex Bearer FFT3	12		$\checkmark$		$\checkmark$			$\checkmark$
Danskin Park Bearer FFT3	13		$\checkmark$		$\checkmark$			$\checkmark$
Danskin Saddle System FFT2	13		$\checkmark$		$\checkmark$			$\checkmark$
Danskin Thermal Saddle System FFT2	13		$\checkmark$		$\checkmark$			$\checkmark$
Danskin Ethafoam 2222 Underlay	12	$\checkmark$		$\checkmark$				
Danskin Regupol 4515 Multi	12	$\checkmark$		$\checkmark$				
Accessories								
Danskin L Shaped Flanking Strip	14		$\checkmark$		$\checkmark$	$\checkmark$	$\checkmark$	
Regubond 100 Adhesive	14	$\checkmark$		$\checkmark$				
Danskin Acoustic Pipewrap	14	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	
Danskin Acoustic Sealant	14	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	
Danskin D3 Adhesive	14		$\checkmark$		$\checkmark$	$\checkmark$	$\checkmark$	
Danskin P5 Chipboard	14		$\checkmark$		$\checkmark$	$\checkmark$	$\checkmark$	
Ethafoam Tape	14	$\checkmark$		$\checkmark$				

Products for new build meet the minimum performance standards or product descriptors for the relevant Example Constructions.

# The 2010 Scottish Building Regulations Section 5 – a summary

Section 5 has been rewritten and now covers all dwellings and residential buildings. A new standard 5.2 covers sound insulation performance to internal walls and floors of dwellings and residential buildings.

## Section 5.1

It is now mandatory that every new build or conversion divided into more than one area of different occupation must be designed and constructed to limit the transmission of noise between separating walls and floors of normal domestic activities. This now includes attached dwellings, attached residential buildings, areas below roofs and access decks and also, where relevant, non-domestic buildings. For example, the provisions of revised standard 5.1 now apply to care homes, hotels and student residences.

## The design performance levels in the revised standard have been increased significantly. All constructions should be designed to the following levels:

	New build and conversions other than traditional buildings	Conversion of traditional buildings
Minimum airborne sound insulation (DnT,w ) (Floors & Walls)	56dB	53dB
Maximum impact sound transmission ( L`nT,w ) (Floors only)	56dB	58dB

# The definition of a traditional building is a building or part of a building of a type constructed before or around 1919:

- a) using construction techniques that were commonly in use before 1919; and
- **b)** with permeable components, in such a way that promotes the dissipation of moisture from the building fabric.

It should also be noted that site testing results will no longer be based on mean figures and so it will be necessary to design in such a way that the poorest performing floor or wall will meet these standards.

In order to assist designers revised Example Constructions for new build are provided in the Technical Handbooks showing one way of repeatedly achieving these acoustic requirements. These Example Constructions contain details of the minimum laboratory performance standards of acoustic products suitable for use in the constructions and show typical junctions between walls, floors, ceilings and roofs. Consideration must be given to the reduction of noise from services such as lifts, air conditioning and through pipes and ducts. It is highlighted that actual performance will be dependent on both workmanship on site, the quality of supervision throughout the build and the control of flanking noise.

Alternative constructions may also be used but may require additional acoustic testing to demonstrate their performance. Expert guidance is recommended where alternative constructions are considered or where conversions are being carried out.

On completion new buildings and conversions must be tested and the minimum number of tests is set out overleaf. The number of tests required for Example Constructions may be fewer than for alternative constructions depending on the size of the development. Testing will be phased in gradually based on the building warrant application date. The test guidance for flats and maisonettes will apply for applications from 1 May 2011 and for houses or conversions from 1 October 2011.

### The Recommended Post Completion Testing Regime for New Build is:

New Build	No. of attached dwellings	No. of tests for separating floors (flats or maisonettes)	No. of tests for separating walls (houses, flats or maisonettes)
Evample	2-20	2	2
Example	21-40	3	3
Constructions Over 40	Over 40	1 extra for every 20	1 extra for every 20
	2-10	2	2
Other	11-20	3	3
Constructions	21-30	4	4
_	Over 30	1 extra for every 10	1 extra for every 10

## Section 5.2

It is also now mandatory that noise transmitted within the same dwelling to a room which is capable of being used for sleeping must be controlled. The design performance of internal walls and floors should achieve Rw 43dB as tested under laboratory conditions. Generic internal constructions or alternative solutions can be used.



## Conversions



Older buildings were often constructed without sufficient consideration to the control of the transmission of sound between dwellings. In addition the level and types of

domestic and external noise sources have increased significantly. Therefore many buildings simply do not meet the requirements of both today's legislation and people's expectations of acceptable noise levels.

In a conversion project it will firstly be necessary to establish whether proposed dwellings will have separating walls and /or floors. It is wise to carry out pre-conversion sound tests to establish whether any existing floors and walls meet the performance requirements of Section 5. If they do and the floors/ walls are unaltered then these tests may provide evidence of compliance. If not, an acoustic consultant should be instructed to carry out a desktop assessment to recommend solutions for upgrading the performance of the construction. Danskin has a further range of products which can be used to help upgrade the acoustic performance of floors and walls in conversions. The design solution needs to account for all direct and indirect (flanking) sound paths. Good workmanship is essential and installation instructions for all our products are available.

## New Build Example Constructions

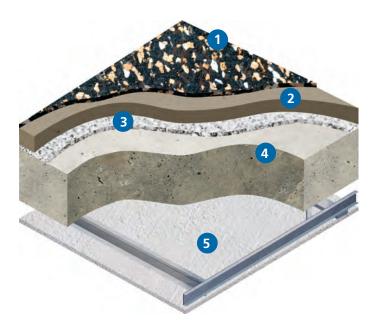


These are set out overleaf and offer a prepared solution which, when built correctly, taking into account flanking

elements, should meet the required sound performance levels.

Other solutions may be used but require expert guidance and the use of adequately tested products. Products available from Danskin which comply with the required standards have been substituted where relevant and are highlighted in bold type.

# **1A.** In-situ Concrete Slab with Isolated Screed and Bonded Resilient Cover (BRC)



### 1. Bonded Resilient Cover Danskin 3mm Regupol 4515 Multi bonded with Regubond 100 Adhesive

- 2. Screed Topping 65mm sand:cement screed
- 3. Isolating Layer Danskin 5mm Ethafoam 2222 lapped up at perimeter, overlapped and taped

### 4. Structural Floor

225mm (min.) in-situ concrete core (min. 2400kg/m<sup>3</sup>)

### 5. Ceiling System

100mm (min.) ceiling void; metal frame suspended ceiling; gypsum based board (min. 10kg/m<sup>2</sup>)

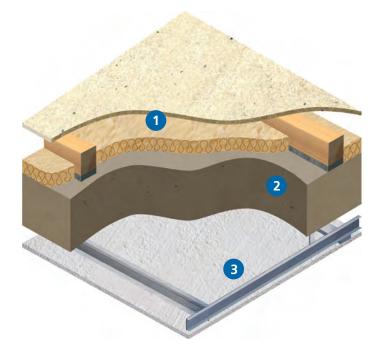
### Accessories

Regubond 100 Adhesive, Acoustic Sealant, Acoustic Pipewrap, Ethafoam Tape

Product Performance	Required	Actual
Danskin 3mm Regupol 4515 Multi	Min ∆Lw 17dB	∆Lw 18dB
Danskin 5mm Ethafoam 2222 (33kg/m <sup>3</sup> )	Min 5mm	5mm

For full product descriptions see page 12

# **1B.** In-situ Concrete Slab with Floating Floor Treatment (FFT)



### **1. Floating Floor**

- 18mm (min.) thick P5 t&g chipboard flooring
- Danskin Saddles with 41mm (min.) Support Bearers (FFT2) or Danskin 50mm (min.) Park Bearer (FFT3) or 53mm (min.) Reflex Bearer (FFT3)
- Danskin 25mm (min.) thick mineral wool quilt (19kg/m<sup>3</sup>)
- Danskin L Shaped flanking strip to perimeter

### 2. Structural Floor

225mm (min.) thick in situ concrete core (min. 2400kg/m<sup>3</sup>)

### 3. Ceiling System

100mm (min.) deep ceiling void; metal frame suspended ceiling; gypsum based board (min. 10kg/m<sup>2</sup>)

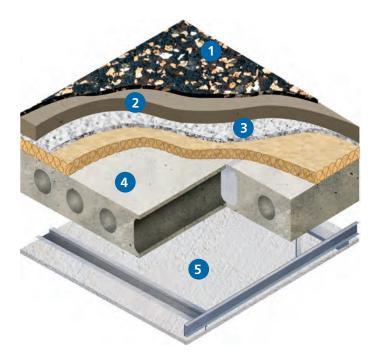
### Accessories

D3 Adhesive, Acoustic Sealant, Acoustic Pipewrap

Product Performance	Required Airborne	Required Impact	Actual Airborne	Actual Impact
	Min ∆Rw	Min ∆Lw	ΔRw	ΔLw
Danskin Saddle FFT2	5dB	22dB	5dB	22dB
50mm Park FFT3	5dB	22dB	8dB	26dB
53mm Reflex FFT3	5dB	22dB	5dB	24dB

For full product descriptions see pages 12 & 13

# **2A.** Pre-cast Concrete Slab with Isolated Screed and Bonded Resilient Cover (BRC)



### 1. Bonded Resilient Cover Danskin 3mm Regupol 4515 Multi bonded with Regubond 100 Adhesive

.....

2. Screed Topping 65mm sand:cement screed

### 3. Isolating Layer

**Danskin 5mm Ethafoam 2222**, lapped up at perimeter, overlapped and taped laid on 25mm (min.) mineral wool batt minimum 140kg/m<sup>3</sup> or 25mm expanded (SD grade) or extruded polystyrene insulation board. Also include 20mm (min.) perimeter isolating edge upstand of expanded or extruded polystyrene

### 4. Structural Floor

200mm (min.) precast concrete floor slab, 365kg/m<sup>2</sup> (min.) mass per unit area

### 5. Ceiling System

150mm (min.) ceiling void; metal frame suspended ceiling; gypsum based board (min. 10kg/m<sup>2</sup>)

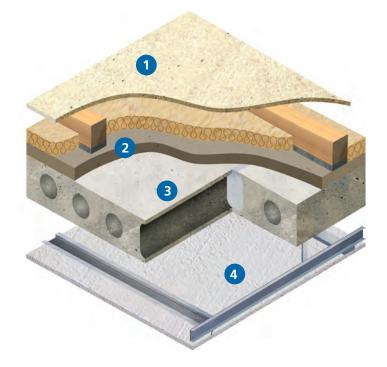
### Accessories

Regubond 100 Adhesive, Acoustic Sealant, Acoustic Pipewrap, Ethafoam Tape

Product Performance	Required	Actual
Danskin 3mm Regupol 4515 Multi	Min ∆Lw 17dB	∆Lw 18dB
Danskin 5mm Ethafoam 2222 (33kg/m <sup>3</sup> )	Min 5mm	5mm

For full product descriptions see page 12

# **2B.** Pre-cast Concrete Slab with Floating Floor Treatment (FFT)



### **1. Floating Floor**

- 18mm (min.) thick P5 t&g chipboard flooring
- Danskin 50mm (min.) Park Bearer (FFT3) or 53mm (min.) Reflex Bearer (FFT3) or Danskin Saddle System with 41mm (min.) Support Bearers (FFT2)
- Danskin 25mm (min.) thick mineral wool quilt (19kg/m<sup>3</sup>) between bearers
- Danskin L Shaped flanking strip to perimeter

### 2. Screed or Structural Topping

50mm (min.) screed or structural topping

### **3. Structural Floor**

200mm (min.) thick precast concrete floor slab, 365kg/m<sup>2</sup> (min.) mass per unit area

### 4. Ceiling System

150mm (min.) deep ceiling void; metal frame suspended ceiling; gypsum based board (min. 10kg/m<sup>2</sup>)

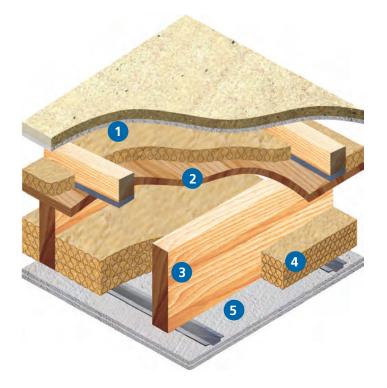
### Accessories

D3 Adhesive, Acoustic Sealant, Acoustic Pipewrap

Product Performance	Required Airborne	Required Impact	Actual Airborne	Actual Impact
	Min ∆Rw	Min ∆Lw	ΔRw	ΔLw
Danskin Saddle FFT2	5dB	22dB	5dB	22dB
50mm Park FFT3	5dB	22dB	8dB	26dB
53mm Reflex FFT3	5dB	22dB	5dB	24dB

For full product descriptions see pages 12 & 13

# **3A.** Timber Floor with Solid Joists with Floating Floor Treatment (FFT)



### **1. Floating Floor**

- 18mm (min.) t&g P5 chipboard flooring on gypsum based board min. 13.5kg/m<sup>2</sup>
- Danskin 78mm (min.) Reflex Bearer (FFT1)
- 60mm (min.) mineral wool quilt (density 10 36 kg/m<sup>3</sup>) between bearers
- Danskin L Shaped flanking strip to perimeter

### 2. Floor Decking

15mm (min.) timber deck

### 3. Joists

220mm (min.) solid timber joists at maximum 400mm centres

### 4. Absorbent Material between Joists

100mm (min.) mineral wool quilt insulation (density  $10 - 36 \text{ kg/m}^3$ )

### 5. Ceiling

Metal resilient ceiling bars meeting minimum acoustic specification fixed at 400mm centres at right angles to joists: Two layers of gypsum based board of min.12 kg/ m<sup>2</sup> per layer

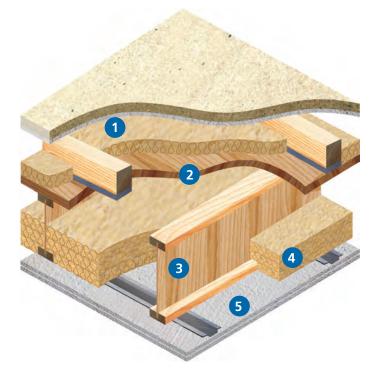
### Accessories

D3 Adhesive, Acoustic Sealant, Acoustic Pipewrap

Product Performance	Required Airborne	Required Airborne	Required Impact	Actual Airborne	Actual Airborne	Actual Impact
	Min ∆Rw	Min ∆Rw+Ctr	Min ΔLw	ΔRw	∆Rw+Ctr	ΔLw
Danskin Reflex 78mm	17dB	13dB	16dB	19dB	16dB	20dB

For full product descriptions see page 12

# **3B.** Timber Floor with I-joists with Floating Floor Treatment (FFT)



### **1. Floating Floor**

- 18mm (min.) t&g P5 chipboard flooring on gypsum based board min. 13.5kg/m<sup>2</sup>
- Danskin 78mm (min.) Reflex Bearer (FFT1)
- 25mm (min.) mineral wool quilt (density 19kg/m<sup>3</sup>) between bearers
- Danskin L Shaped flanking strip to perimeter

### 2. Floor Decking

15mm (min.) timber deck

### 3. Joists

240mm (min.) timber I-Joists at maximum 480mm centres

### 4. Absorbent Material between Joists

100mm (min.) mineral wool quilt insulation (density  $10 - 36 \text{ kg/m}^3$ )

### 5. Ceiling

Metal resilient ceiling bars meeting minimum acoustic specification fixed at 400mm centres at right angles to joists: Two layers of gypsum based board of min.12 kg/ m<sup>2</sup> per layer

### Accessories

D3 Adhesive, Acoustic Sealant, Acoustic Pipewrap

Product Performance	Required Airborne	Required Airborne	Required Impact	Actual Airborne	Actual Airborne	Actual Impact
	Min ∆Rw	Min ∆Rw+Ctr	Min ΔLw	ΔRw	∆Rw+Ctr	ΔLw
Danskin Reflex 78mm	17dB	13dB	16dB	19dB	16dB	20dB

For full product descriptions see page 12

# **Product** Details

## Danskin Ethafoam 2222 Underscreed Layer



### Description

Danskin Ethafoam 2222 Underscreed Layer is a closed cell polyethylene foam 5mm thick designed for use as a resilient acoustic insulation layer in concrete floor structures. The nominal density is 33kg/m<sup>3</sup>. In use, overlap joints by 150mm (min.) and seal with Ethafoam tape.

### **Roll size**

1.5m wide x 75m

### Accessories

Ethafoam tape

### Benefits

- Use in new build
- Lightweight easy to install
- Minimal moisture retention
- Ageing resistant
- ► GWP (Global Warming Potential) of less than 5

### Danskin Regupol 4515 Multi



### Description

Danskin 3mm Regupol 4515 Multi is a tough, bonded resilient floorcovering (BRC) manufactured from a combination of PUR foam and cork granules. It is quick and easy to install using Regubond 100 Adhesive to bond the material to the subfloor. Due to no rubber content it does not cause plasticizer migration, an effect which can cause problems with vinyl, linoleum and light coloured carpets.

#### **Standard Roll Dimensions**

3mm thick x 1000mm wide x 18m long

#### Impact Sound Insulation ΔLw 18dB

### Accessories

Regubond 100 Adhesive

### **Benefits**

- Use in new build
- Offers long term performance without collapse or "bottoming out" under point loads
- ▶ 100% recycled and recyclable
- Suitable for use with underfloor heating and all floor finishes including ceramic / stone tiles
- ► GWP (Global Warming Potential) of 0

### **Danskin Reflex Bearers**





### Description

Danskin Reflex Bearers are acoustic battens incorporating a unique "double density" fibre resilient layer to produce an exceptional level of impact sound performance. The softwood timber will have PEFC accreditation as standard or FSC on request. They are suitable for use on either concrete or timber Example Construction separating floors.

#### **Standard Unloaded Dimensions**

FFT1 - 45mm (w) x 2400mm (l) x 78mm (h); FFT3 - 45mm (w) x 2400mm (l) x 53 / 62mm (h)

### Accessories

Danskin L Shaped Flanking Strip, Danskin Chipboard Flooring, Danskin Acoustic Quilt, Danskin D3 Adhesive

### **Benefits**

- Use in new build or conversions
- Exceptional impact sound performance on concrete or timber frame floors
- Full PEFC / FSC Chain of Custody
- Complies with product performance requirements of Section 5 Example Constructions
- Permits service runs in the floor void
- ► GWP (Global Warming Potential) of resilient layer is 0

# **Product** Details

### **Danskin Park Bearers**





### Description

Danskin Park Bearers are an economical acoustic batten featuring a special, closed cell polyethylene foam layer on the underside. The softwood timber has either PEFC accreditation as standard or FSC on request. They provide effective impact sound insulation on concrete separating floors when used in Example Constructions.

### **Standard Unloaded Dimensions**

FFT3 - 45mm (w) x 2400mm (l) x 50mm (h)

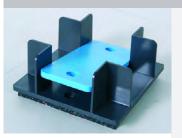
### Accessories

Danskin L Shaped Flanking Strip, Danskin Chipboard Flooring, Danskin Acoustic Quilt, Danskin D3 Adhesive

### Benefits

- Use in new build or conversions
- Good impact sound performance on concrete floors with minimal deflection
- ► Full PEFC or FSC Chain of Custody
- Permits service runs in the floor void
- Complies with product performance requirements of Section 5 Example Constructions
- GWP (Global Warming Potential) of resilient layer is 0

### Danskin Acoustic Saddle System





### Description

The Danskin Acoustic Saddle System uses resilient saddles, packers, optional elevating blocks and strength graded timber support bearers to provide an easily levelled understructure for supporting chipboard, plywood and hardwood flooring. The timber support bearers have PEFC accreditation as standard or FSC on request. The system qualifies as an FFT2 floor when specified at the correct minimum height in Example Constructions 1B and 2B.

#### **Standard Unloaded Dimensions**

FFT2 - Saddle 11mm high Support bearers 41/45/52/61mm high x 45mm (w) x 2400mm (l) Colour Coded Interlocking packers 3/4/5/10mm high or Contract packers 2/3/5mm high Elevating Blocks 15mm/30mm high

#### Accessories

Danskin L Shaped Flanking Strip, Danskin Chipboard Flooring, Danskin Acoustic Quilt, Danskin D3 Adhesive

### Benefits

- Use in new build or conversions
- Easy, accurate levelling
- Good impact sound performance on concrete floors with minimal deflection
- Full PEFC or FSC Chain of Custody for timber components
- Permits service runs in the floor void
- Complies with product performance requirements of Section 5 Example Constructions
- GWP (Global Warming Potential) of resilient layer is 0

## Danskin Thermal Saddle System





#### Description

Danskin has produced an adapted resilient saddle which can support rigid insulation panels or underfloor heating panels in a system which provides an easy method of installing a level floating floor. The system can provide an acoustic floor containing underfloor heating in the floor void or can form a thermal floor above uneven concrete ground floors. Alternatively it can be used on upper floors with an exposed soffit. 'U' value tables showing thermal performance are available on request. Other than the adapted saddle the components and accessories are as described in the Acoustic Saddle System.

#### Accessories

Danskin L Shaped Flanking Strip, Danskin Chipboard Flooring, Danskin Acoustic Quilt, Danskin D3 Adhesive

#### Benefits

- Use in new build or conversions
- Supports insulated panels with minimal gaps while permitting easy levelling
- Good impact sound performance on concrete floors with minimal deflection
- Full PEFC or FSC Chain of Custody for timber components
- Complies with product performance requirements of Section 5 Example Constructions
- GWP (Global Warming Potential) of resilient layer is 0

# Enhanced Flooring Systems

### The Danskin Thermal Saddle System with Underfloor Heating



Combining the proven acoustic performance of the Danskin Saddle System with water based underfloor heating, the Danskin Thermal Saddle System can isolate and level the floor while integrating seamlessly with rigid insulation emitter panels.

These panels can be linked to renewable energy technologies such as heat pumps or biomass systems. By utilising the floating floor void to install the underfloor heating system space is maximised in each dwelling.

## The Danskin Saddle System with Trisonic Support Bearers



The Danskin Saddle System incorporating Trisonic Support Bearers is ideal for the refurbishment of timber joisted floors where the floor needs a significant amount of levelling.

The Trisonic Support Bearer is a composite bearer consisting of two layers of 22mm thick engineered plywood with a 12mm thick layer of rebonded foam glued between, this patented Support Bearer provides enhanced impact sound performance. A suitable resilient ceiling is generally also needed and the system is intended for domestic loadings.

Please contact the Danskin sales office on **01698 356 000** for more information on any of these products.

# Accessories

A range of ancillary products is an essential part of achieving the performance requirements of the regulations. Some of these are standard products, others more specialist. Where appropriate all these products meet the requirements of 2010 Section 5.

	Ethafoam Tape				
	Ethafoam tape is a high tack tape for sealing the underscreed layer at overlaps and joins.				
	Regubond 100 Adhesive				
Magagar Brigidand 199	Regubond 100 adhesive is a solvent free, low VOC, high performance water based acrylic dispersion with very good bond strength. Supplied in 12.5l/15kg tubs.				
	Danskin L Shaped Flanking Strip				
	This is placed at the perimeter of FFT1, FFT2 and FFT3 floors. The 6mm preformed 'L' shaped acoustic foam is supplied in strips 1.8m long and packed in bags containing 100 linear metres.				
1	Danskin Acoustic Sealant				
Access Ac	Designed to combine effective noise reduction for low movement joints in walls and partitions with up to 4 hours fire resistance. It is tested to BS476 Part 20/EN1366-4 (2006) for fire and BS EN ISO 140/3 for acoustics. Also tested for air permeability to EN13141-1. Colour – White. Supplied in 900ml cartridges.				
	Danskin Acoustic Pipewrap				
	Designed to reduce sound emission from service pipes running between adjacent dwellings. Composed of an encapsulated mineral wool wrap with two self-adhesive fixing strips. Standard dimension: 110mm diameter x 2500mm long. Supplied in packs of 10.				
	Danskin Acoustic Quilt				
	For use between acoustic battens on most Example Constructions, Danskin Acoustic Quilt is 25mm thick with a density of 19kg/m <sup>3</sup> . Roll size: 1.2m x 22.5m.				
	Danskin Chipboard Flooring				
	Danskin can supply 18mm or 22mm P5 Grade t&g chipboard flooring with protective or decorative layers where necessary. In addition Danskin D3 adhesive is sold in 1 litre bottles.				
<u> </u>	D3 Adhesive				
Wood	Danskin D3 adhesive is a high quality, resin based wood adhesive which provides a high strength impact resistant bond. It conforms to the international standard EN 204 (D3) and BS 4071 for creep resistance. It is supplied in 1 litre bottles.				

# **General Information**

### Installation

To ensure correct installation of the products featured in this brochure the manufacturer's detailed fixing instructions must be obtained and followed.

### Storage

All components should be stored inside, under cover and in dry conditions.

### Delivery

Danskin products are generally supplied on curtainside vehicles for forklift off loading by site.

#### Disclaimer

Every care has been taken to ensure that all descriptions and specifications are correct at date of publication. The policy of Danskin is one of continuous improvement and product development, and the right is reserved to alter the product specifications and detailed fixing instructions without notice. This publication contains manufacturers' product information which is reproduced in good faith based on the latest knowledge available. Whilst every effort has been made to ensure that the information is current and correct Danskin cannot accept responsibility for the application and performance levels of the products featured. Neither can we accept responsibility where the manufacturer's instructions have not been followed.

Danskin's employees or agents are not authorised to make any representations or give any advice or recommendations concerning any goods or services unless confirmed by Danskin in writing.



Danskin1 Netherton Road, Wishaw ML2 0EQT: 01698 356000F: 01698 372222E: enquiries@danskin.co.ukwww.danskin.co.uk