

# Belgotex®

## BUILDING CODE COMPLIANCE GUIDANCE

LUXURY VINYL TILES AND LAMINATES



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### 2023

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USING BELGOTEX  
FLOORING PRODUCTS IN  
COMPLIANCE WITH THE  
NEW ZEALAND BUILDING  
CODE AND CLAUSES

# B.

A World of Choice



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# SCOPE

## APPLICATION

This acceptable and alternative solution guidance document is published for the purpose of compliance against the New Zealand Building Code (NZBC) and related clauses.

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This document is relevant for:

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- Freestanding uninhabited garages and buildings with a total floor area < 30m<sup>2</sup>
- Single family dwellings (houses), buildings and facilities as follows:
  - ▶ Where up to 300 people can congregate in one area
  - ▶ Day-care facilities with a capacity of up to 150
  - ▶ Primary school or secondary school facilities with a capacity up to 250
  - ▶ Colleges or adult education facilities with a capacity of up to 500
  - ▶ Healthcare facilities with a capacity of up to 50 resident patients but not having surgery or emergency treatment facilities
  - ▶ Multi-occupancy residential, commercial (including shops), industrial, office and retailing building designed to accommodate 5000 people and with a gross area up to 10,000m<sup>2</sup>
  - ▶ Public assembly buildings, theatres and cinemas up to 1,000m<sup>2</sup>

According to the NZBC 12.1 General, Interior linings are not a general requirement of the standard. C12.1 however states that linings may also provide in part for other NZBC provisions, such as fire safety, acoustic separation, interior moisture and hygienic surfaces, specified under compliance pathways including Acceptable solutions, alternative solutions, and verification methods addressed in this document. Refer to each specific building code clause following for specific details on compliance guidance.

## PRODUCTS

### LUXURY VINYL TILES

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Identity Express

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Identity Aspect

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Identity Virtue

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Matrix Acoustic

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Province

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Amtico First

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Primero II

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Ultimo II

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### HYBRID LVT

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Identity Spirit

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### LAMINATES

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Solido Elite WR

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# B2: DURABILITY

Flooring products as an individual building element, that are easy to access and replace in which failure would not impact a building's compliance with code must last not less than 5 years.

## B2/AS1

According to Acceptable Solutions and Verification Methods for New Zealand Building Code Clause B2 Durability the requirement for durability for floor coverings, nominated as "Floor Coverings – Protective or Acoustic Coverings" in Table 1: Durability Requirements of Nominated Building Elements is not less than 5 years.

*Note: The durability requirement applies to the nominated building element. In the case of Luxury Vinyl Tiles (LVT) or Laminate this would mean the whole floor covering system not just the topcoat of the flooring product.*

## EVIDENCE OF COMPLIANCE WITH B2/AS1

B2/VM1 1.1.1 In-service history.

Belgotex LVT and Laminate flooring systems have been installed in residential dwellings for more than 15 years in the New Zealand market.

Belgotex NZ have supplied LVT and Laminate flooring systems to thousands of New Zealand residences without any durability concerns when installed and maintained as per the specified systems guidelines and in conjunction with Floor NZ's best practice guides.

# C3: FIRE AFFECTING AREAS BEYOND THE SOURCE

The functional requirements of C3 are that buildings are designed and built with a low probability of injury to persons caused by the spread of fire.

## C3/AS1 ACCEPTABLE SOLUTION

According to performance criteria C3.4 (b) floor surface materials in the following areas of buildings must meet the performance criteria specified below:

AREA OF BUILDING	Minimum critical radiant flux when tested to ISO 9239-1:2010	
	<i>Buildings not protected with an automatic fire sprinkler system</i>	<i>Buildings protected with an automatic fire sprinkler system</i>
Sleeping areas and exitways in buildings where care or detention is provided	4.5 kW/m <sup>2</sup>	2.2 kW/m <sup>2</sup>
Exitways in all other buildings	2.2 kW/m <sup>2</sup>	2.2 kW/m <sup>2</sup>
Firecells accommodating more than 50 persons	2.2 kW/m <sup>2</sup>	1.2 kW/m <sup>2</sup>
All other occupied spaces except household units	1.2 kW/m <sup>2</sup>	1.2 kW/m <sup>2</sup>

## EVIDENCE OF COMPLIANCE WITH C3/AS1

All flooring products supplied by Belgotex NZ have been tested in accordance to ISO 9239-1:2010 and exceed the minimum requirements. Individual test reports on specific products are available.

# D1: ACCESS ROUTES

Access routes shall have adequate slip-resistance walking surfaces under all conditions of normal use.

## D1/AS1

According to D2.1.2 for level access routes expected to become wet with water in normal use, walking surfaces shall either:

Have an SRV classification of not less than 39 from the wet pendulum test method of AS 4586 Appendix A using the Slider 96 rubber or,

Use the materials listed in Table 2 as acceptable wet slip.

TABLE 2: SLIP RESISTANCE FOR WALKING SURFACES				
Walking Surface	Level Surface		Sloping Surface or Stairs	
	Acceptable dry slip resistance	Acceptable wet slip resistance	Acceptable dry slip resistance	Acceptable wet slip resistance
<b>Rubber Tiles/Sheeting</b>				
Smooth	Yes	Test	Yes	Test
Profiled	Yes	Test	Yes	Test
<b>Vinyl and Linoleum</b>				
Smooth or with imprinted pattern	Yes	Test	Yes	No
Profiled (studs or ribs)	Yes	Test	Yes	Test
Grit/flaked finish	Yes	Test	Yes	Test
<b>Carpet</b>				
Tufted or loop pile	Yes	Yes	Yes	Yes
Artificial turf	Yes	Yes	Yes	Yes
<b>Timber composites</b>				
Uncoated	Yes	No	Yes	No
Coated (paint, polyurethane etc)	Yes	No	No	No
Coated and sand/grit impregnated	Yes	Yes	Yes	Yes

## EVIDENCE OF COMPLIANCE

All Belgotex supplied LVT and Laminate products have a vinyl surface have been tested. Individual test reports on specific products are available.

# E3: INTERNAL MOISTURE

The performance requirements under E3 (E3.3.3 & E3.3.5) state that Floor coverings in open plan spaces within 1.5m of sanitary fixtures or an area likely to be splashed must be impervious and easily cleaned. The objectives of this performance criteria are to prevent illness/injury or damage through moisture accumulation of moisture, or damage caused by free water penetration.

## E3 ALTERNATIVE SOLUTION

E3 Verification method defines impervious as “That which does not allow the passage of moisture”. The requirement to be impervious and easily cleaned applies to spaces within 1.5m of sanitary fixtures or appliances such as in kitchens, bathrooms, laundries and toilet facilities. LVT and Laminates fall under other floor finishes which can satisfy the performance requirements under E3 for impervious and easily cleaned. Under the current E3 document there is no specified verification method for compliance with NZBC E3.

## ALTERNATIVE SOLUTION COMPLIANCE

**E3.1.1:** As there is no specified verification method for compliance Belgotex have conducted independent testing against the performance criteria nominated under E3.1.1 Floors for flooring installed within 1.5m of sanitary fixings and appliances. When installed according to Belgotex flooring products installation instructions, using the specified adhesives systems Belgotex testing to ISO 4760:2022 standard shows that no moisture penetrated the floor covering systems as required under the performance criteria stated under clause E3.1.1. Individual test reports on specific products are available.

OBSERVATIONS	Specimen 1	Specimen 2	Specimen 3
Migration of water along the upper surface	No	No	No
Migration of water to the underside	No	No	No

DISASSEMBLY OBSERVATIONS	Specimen 1	Specimen 2	Specimen 3
Migration of water along the upper surface	No	No	No
Migration of water to the underside	No	No	No

**E3.2.1:** Has a functional requirement that a building must be designed to avoid free water overflow allowing fungal growth, overflow in to adjoining tenancies, or damage to building elements caused by the presence of moisture. Belgotex floor coverings installed according to the Belgotex flooring products installation guide are shown through ISO 4760:2022 to be impervious to moisture. Also being manufactured from a synthetic material reduces the risk of fungal growth.





**24 HOURS WITH WATER**



**WET SWELL**



**RECOVERED SWELL**



**RECOVERED SWELL (DISASSEMBLED)**

## EVIDENCE OF COMPLIANCE

All Belgotex supplied LVT and Laminates have been independently tested for moisture penetration against ISO 4760:2022 standards. Independent test reports on specific products available.



# F2: HAZARDOUS BUILDING MATERIALS

The functional requirements of C3 are that buildings are designed and built with a low probability of injury to persons caused by the spread of fire.

## F2/AS1 ACCEPTABLE SOLUTION

The objective of this clause is to protect people from injury or illness caused by exposure to hazardous building materials.

## EVIDENCE OF COMPLIANCE

Environmental product statements and supporting testing available on specific products.

MATERIAL	MASS %
PVC: Polyvinyl Chloride	27.16%
DOTP	2.83%
Bio Plasticizer	10.32%
Ca-Zn	0.89%
Epoxidized Soybean Oil	0.95%
Calcium Carbonate	55.28%
TiO <sub>2</sub>	0.05%
Carbon Black	0.10%
UV Coating	0.19%
GF Vail	0.36%
Mg(OH) <sub>2</sub>	1.88%



# G6: IMPACT AND AIRBORNE SOUND

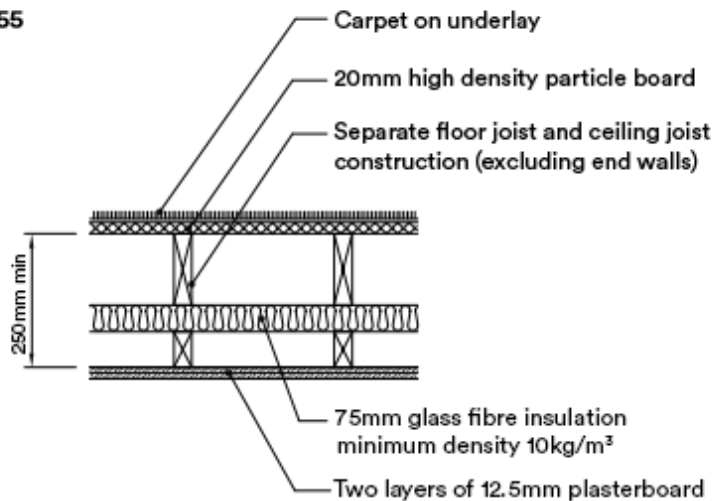
The objective of this clause is to safeguard people from illness, injury, or loss of amenity as a result of undue sound transmission

## G6/AS1

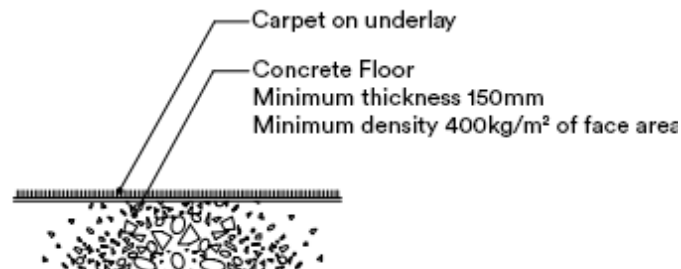
Sound transmission through building elements shall be minimised.

### Acceptable Floor/Ceiling Assemblies for Noise Control

#### DETAIL 5 STC55 IIC 55



#### DETAIL 6 STC55 IIC 55



## EVIDENCE OF COMPLIANCE

Belgotex floor coverings are one component of the flooring system. Acoustic testing is available on selected products showing its contribution to the overall system design.

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## **IDENTITY BY BELGOTEX – EXPRESS**

Technical Specifications  
Care & Maintenance  
Installation Recommendations  
Fire Test  
Slip Test  
Topical Moisture Resistance Test  
GreenTag Certificate  
Environmental Product Declaration

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## **IDENTITY BY BELGOTEX – ASPECT**

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Environmental Product Declaration

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## **IDENTITY BY BELGOTEX – VIRTUE**

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## **MATRIX ACOUSTIC**

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## **PROVINCE**

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Topical Moisture Resistance Test

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## **AMTICO FIRST**

Technical Specifications  
Care & Maintenance  
Installation Recommendations  
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Topical Moisture Resistance Test  
GreenTag Certification

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## **PRIMERO II**

Technical Specifications  
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GreenTag Certification

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## **ULTIMO II**

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## **IDENTITY BY BELGOTEX – SPIRIT**

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## **SOLIDO ELITE WR**

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Installation Recommendations  
Fire Test  
Slip Test  
Topical Moisture Resistance Test  
Blue Angel Certificate  
Greenguard Certification

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# REFERENCES

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**Acceptable Solutions and Verification Methods For New Zealand Building Code Clause B2 Durability**

*Amendment 12, 28/11/2019*

Ministry of Business Innovation & Employment

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**C/AS2 Acceptable Solution for Buildings other than Risk Group SH For New Zealand Building Code Clause C1-C6 Protection from Fire**

*Amendment 2 05/11/2020*

Ministry of Business Innovation & Employment

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**Acceptable Solution and Verification Methods For New Zealand Building Code Clause D1 Access Routes**

*Amendment 6 01/01/2017*

Ministry of Business Innovation & Employment

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**Acceptable Solutions and Verification Methods For New Zealand Building Code Clause E3 Internal Moisture**

*Amendment 7 05/11/2020*

Ministry of Business Innovation & Employment

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**Acceptable Solutions and Verification Methods For New Zealand Building Code Clause F2 Hazardous Building Materials**

*Amendment 3, 01/01/2017*

Ministry of Business Innovation & Employment

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**Compliance Document for New Zealand Building Code Clause G6 Airborne and Impact Sound**

*Amendment 2, 1/12/1995*

Department of Building and Housing

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**New Zealand Standard Timber-framed buildings NZS 3604:2011**

*February 2011*

Standards New Zealand

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