

## CORK ROLLS AND SHEETS WITH MICROBAN® ANTIBACTERIAL PROTECTION TECHNICAL SPECIFICATION

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### **CORK ROLLS/SHEETS WITH MICROBAN® ANTIBACTERIAL PROTECTION**

Cork underlay is a cost effective solution for reducing airborne and impact noise problems.

Due to the unique 40 million cells per cubic centimetre honeycomb structure of cork and the special nature of the resin binder, it performs outstandingly under floating and laminated floors, wooden floors, ceramic tiles, natural stone, linoleum and vinyl floors.

During the cork agglomeration process an antibacterial additive (Microban®) is added to deliver continuous antibacterial and antifungal protection.

Cork underlay can be used in domestic and commercial applications and contribute significantly to the acoustic performance of floors improving environmental comfort.

### **Advantages of Cork Underlay with Microban®**

- Safe and easy to handle and install;
- Effective reduction of impact and airborne sound;
- Increases the thermal comfort of the surface floor;
- Persistence of characteristics along time (lifetime);
- High fire resistance, without the release of toxic gases;
- Odourless;
- No harmful chemicals;
- Enhanced built-in lifetime antibacterial protection;
- Meets "Green building" requirements;
- Contains 90% (by weight) of post-industrial recycled content;
- Natural product, recyclable.

This specification applies to all references of cork rolls with Microban® for underlayment purposes

- GN-R2040M180
- GN-R2040M200
- GN-R0520M180
- GN-R0520M200
- GN-R1020B180
- GN-R1020B200

### **Definition**

Agglomerated cork made of cork granules of specified dimensions with the addition of a binder. During the cork agglomeration process an antibacterial additive (Microban®) is added to deliver embedded continuous antibacterial and antifungal protection.

Produced in agglomerated cork cylinders, with maximum dimensions of 950 mm (diameter) per 1270 mm (height), that are sliced in the required thickness and cut into rolls of the required dimension.

### **Materials**

- Granulated cork.
- Polyurethane cork binder.
- Microban® additive.

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### Product Requirements

Reference	Granules dimension / density	Density <sup>(1)</sup>
	mm / Kg/m <sup>3</sup>	EN 672 Kg/m <sup>3</sup>
GN-RM2040M180	2,0-4,0 / 70-80	190
GN-RM2040M200	2,0-4,0 / 70-80	210
GN-RM0520M180	0,5-2,0 / 70-80	190
GN-RM0520M200	0,5-2,0 / 70-80	210
GN-RM1020B180	1,0-2,0 / 45-55	190
GN-RM1020B200	1,0-2,0 / 45-55	210



(1) Average density is not less than the nominal. Individual values are not below 95% the nominal.

### Specification Requirements

Characteristic		Requirement	Test method
Roll Length		Nominal ± 1%	EN 426
Roll Width		Nominal ± 0,5%	EN 426
Overall thickness		Nominal ± 0,15 mm	EN 428
Mass per unit area		Nominal ± 10%	EN 430
Flexibility		PASS	EN 435 / A
Tensile strength			
Direction perpendicular to compression		≥ 350 kPa	ISO 7322
Direction to compression		≥ 250 kPa	
Moisture content		≤ 8 %	EN 12105
Impact noise reduction		DLw (chapter 5 EN ISO 717-2)	ISO 717-2
Average value		2.0 mm thickness - 18 dB 4.0 mm thickness - 19 dB	

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### Additional Properties

Characteristic		Requirement	Test method
Thermal Conductivity		Conductivity 0,05 W / (m.K)	EN 12664
Thermal Resistance		Resistance Thickness 2 mm - 0,04 m <sup>2</sup> .K/W 3 mm - 0,06 m <sup>2</sup> .K/W 4 mm - 0,08 m <sup>2</sup> .K/W 6 mm - 0,12 m <sup>2</sup> .K/W 8 mm - 0,16 m <sup>2</sup> .K/W	
Formaldehyde		Formaldehyde has not been added	
Compression		≤ 35 %	ISO 7322
Recuperation		≥ 75 %	ISO 7322
Resistance to boiling water		Does not disintegrate	ISO 7322
Durability		Lifetime	

### Dimensions

Cork rolls can be delivered in rolls of any thickness (> 1 mm), width (< 1.245 m) and length. (Standard thickness: 2; 3; 4; 5; 6 mm; standard width: 0.5; 0.6; 1; 1.2 m).

### Packing

Composition cork rolls shall be dispatched in packages that provide suitable protection, and which are sufficiently watertight to keep the moisture content of the cork as specified under normal storage conditions.

Packages shall be marked with identifying information by a label and/or inkjet printing.

Packages shall be stored shielded from direct sunlight and humidity.

### Typical uses

Due to the low thermal conductivity levels and effective sound insulation of cork, cork rolls are commonly used as an underlay for floating floors, wooden floors, ceramic tiles, natural stone, linoleum and vinyl floors.

Cork rolls can be used in domestic and commercial applications contributing significantly to the acoustic and thermal performance of buildings, improving environmental comfort and reducing energy costs.

The use of a natural and renewable raw-material and the possibility of total recycling of the product for other uses, make the agglomerated cork rolls a reference in terms of ecology and environmental sustainability.

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### Compliance with the building regulations

The sound insulation of floors is a necessary requirement of the Building Regulations. When used with appropriate structural floor and ceiling constructions, cork underlay can meet the performance requirements for sound insulation of most of the National Building Regulations.

### Normative references

EN 12103	Resilient floor coverings – Agglomerated cork underlays. Specification
EN 426	Resilient floor coverings – Determination of the width, length, flatness and straightness of sheet material.
EN 428	Resilient floor coverings – Determination of the overall thickness
EN 430	Resilient floor coverings – Determination of mass per unit area.
EN 435	Resilient floor coverings – Determination of flexibility
EN 672	Resilient floor coverings – Determination of apparent density of agglomerated cork
EN 12105	Resilient floor coverings – Determination of moisture content of agglomerated cork
EN 12664	Thermal performance of building materials and products - Determination of thermal resistance by means of guarded hot plate and heat flow meter methods.
EN ISO 717-2	Acoustics – Rating of sound insulation in buildings and of building elements – Part 2: Impact sound insulation.
ISO 7322	Cork – Composition cork – Test methods

### FSC Certification

Agglomerated cork rolls can be delivered certified FSC Controlled Wood – SA-CW-002408.

### Supplementary information



Agglomerated cork rolls are GREENGUARD® certified, meaning that they have low chemical emissions, improving the quality of the indoor air in the places where they are used.



To offer the consumer unmistakable guarantees about the quality and origin of this cork product, it holds the *Cork Mark*.



Product made on a production line certified ISO 9001.



Microban is built-in during the cork agglomeration process, delivering continuous antifungal protection that will last the useful life of the underlay.

Independent testing on the our product has found that the Microban® technology inhibits bacterial growth.



# Technical Specifications

## Impact Insulation Class (IIC)

Transmission of impact noise can be controlled by isolation. The ratings are greatly improved by using cork underlayment. The higher the IIC number the better the impact insulation:

## Sound Transmission Class (STC)

Measure of resistance of a building element such as a floor or wall to the passage of audible sounds. The higher the STC number the better the sound barrier:

## Delta (IIC)

Test for laboratory measurement of the effectiveness of floor coverings in sound transmission through concrete floors.

*The Florida Building Code requires a soundproofing of IIC 50 so you need a product with a delta factor of 18 db to comply with the law. Cork is designed to help with this sound reduction and it meets and/or exceeds the Florida Building Code Requirements and can be used in buildings with or without drop ceilings with outstanding results*

6mm Cork on 6" Concrete Slab With 6mm underlayment .....	IIC	STC
<b>Total</b>	<b>50</b>	<b>50</b>

**Delta (Test ASTM E 2179 – 03)                      21.0**

*Adding a suspended ceiling unit will increase the ratings significantly,*

*Acoustical Testing Provided By National Gypsum, Co, Buffalo, NY*

# 12mm

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### Impact Insulation Class (IIC)

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### Sound Transmission Class (STC)

Measure of resistance of a building element such as a floor or wall to the passage of audible sounds. The higher the STC number the better the sound barrier:

### Impact Noise Rating (INR)

has since been replaced by the IIC class described above.

12mm Cork on 6" Concrete Slab	IIC	STC
Fixed rating of concrete slab .....	27	27
With 12mm underlayment .....	47	48
<b>Total</b>	<b>74</b>	<b>75</b>
12mm Cork on 6" Concrete Slab	IIC	STC
with Suspended Ceiling(approx)*.....	14	14
Fixed rating of concrete slab .....	27	27
With 12mm underlayment.....	47	48
<b>Total</b>	<b>88</b>	<b>89</b>

*\*Adding a suspended ceiling unit will increase the ratings significantly, generally on an average of 14db depending on unit type*

*Acoustical Testing Provided By National Gypsum, Co, Buffalo, NY*