

BIOGUARD ACOUSTIC



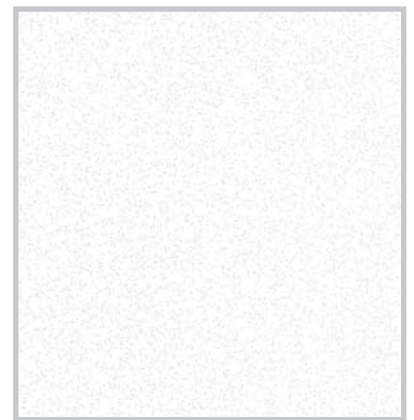
BIOGUARD Acoustic Square Lay In with Prelude XL 24mm Exposed Tee Grid

BENEFITS

- Anti-microbial performance to assist with infection control
- Clean Room performance
- Durable, Washable, Soil Resistant, Water Repellent
- High acoustic performance
- High light reflective finish
- Appealing smooth surface
- RH99 Humidity resistant
- Sustainable – Green Star contribution

APPLICATION AREAS

- Healthcare
 - Pharmaceutical Manufacturing
 - Food and Electrical Manufacturing
 - Laboratories, PC1 and PC2 Certified Facilities
- Education (Science Labs)
- Data centres / computer rooms



Inspiring Great Spaces™

Armstrong®
CEILING SYSTEMS

BIOGUARD ACOUSTIC



Clean Room



Washable



Hygiene / Anti-microbial



Water Repellent



Resistance to Disinfectants



Soil Resistant



RH99 Humidity Resistant



Product Handling Durability



Recycled Content EN ISO 14021



Light Reflectance



Acoustical Comfort

Panel Options	SQUARE LAY-IN	BEVELLED TEGULAR	BEVELLED TEGULAR	K2C2 EDGE
	Clean Room or Prelude 24mm Grid	Clean Room or Prelude 24mm Grid	Suprafine 15mm Grid Silhouette 15mm Grid	One Way / Modular Grid
600 x 600 x 19mm	H5186	H5192	H5190	—
1200 x 600 x 19mm	H5187	H5193	H5191	—
1200 x 400 x 19mm	*	*	*	*
1350 x 450 x 19mm	*	*	*	*
1500 x 500 x 19mm	*	*	*	*

— Not available

* Special items and other sizes available upon request



NRC: 0.70



CAC 41: 1200x600 items
CAC 40: 600x600 Tegular Items, CAC 39: 600x600 Square edge
CAC 40 Min: Other sizes



Sealed edge for clean room performance



RH99% at 0°C – 49°C



Conforms with BCA Spec. C1.10 and tested to AS/NZS 3837:1998 – Group 1, AS/NZS 1530.3, ISO 5660 – Group 1 –S



Thermal Insulation (R- Value)
0.40 m²K/W



4.9kgs/m²

Green Star: Potential contribution

MAN	IEQ			ENE	MAT and Mat. Calc.				
Waste Management	Daylight Factor	Noise Levels	Emissions	Energy	Modular & Design for Disassembly	Level A Certified Product	Product Stewardship	EMS to ISO 14001	Recycled Content
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Material

Wet-formed mineral fibre with durable acoustically transparent membrane

Surface and Edge Finish

Factory-applied acrylic latex paint with "BIOGUARD mould/yeasts/mildew/bacteria inhibitor". Edges are paint sealed for improved clean room performance

Backloading Recommendation

Contact your local Armstrong representative

Recycled Content

Plank items 75%. All other items 64%

Anti Mould / Mildew & Bacteria

"BIOGUARD Acoustic" contains a unique antimicrobial treatment, providing resistance against growth of mould/yeasts/mildew and Gram-positive and Gram-negative odour/stain causing bacteria. (Refer to bio-contamination data overleaf)

Suspension Systems

'Blue Tongue' Aluminium Clean Room Flat Faced Tee Grid & PeakForm Prelude Steel 24mm Tee above. Other 'Blue Tongue' Aluminium options upon request



SCAN* THIS CODE to learn more about Bioguard Acoustic

*Download a Free QR code reader app available from Apple store

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CEILING SYSTEMS



BIOGUARD ACOUSTIC: PERFORMANCE FOR HEALTHCARE ENVIRONMENTS



Acoustics

Patients and Healthcare Professionals require:

- Intelligibility – to hear and to be understood
- Privacy – to not be overheard
- Concentration – to not be disturbed.
- Lower ambient sound – providing a peaceful environment conducive to healing

Armstrong BIOGUARD Acoustic ceilings provide both excellent sound absorption (NRC 0.70) and attenuation (CAC 41), resulting in the optimum acoustic climate for healthcare premises



Anti-microbial performance: Protection against Bio-Contamination

Effective control of bio-contamination is essential in the healthcare sector, especially in hospitals and clinics, in an effort to reduce infection rates.

Probably the most stringent global standard relating to healthcare premises is the French norm NF S 90-351, which focuses on requirements related to the control of airborne contamination.

Armstrong has conducted testing to NF S 90-351 and has met the tough requirements laid down in this norm, achieving the following high level of performance:

- Armstrong BIOGUARD Acoustic provides active protection against bio-contamination and can be applied in Zone 4 “Very High Risk” areas: (achieves Bacteriological Cleanliness Class B1/5/10)
- The active Biocides in BIOGUARD Acoustic are tested to inhibit the growth of virulent strains of bacteria, mould and yeast, including MRSA, E-coli, Streptococcus Pneumoniae, Bacillus Cereus, Aspergillus Niger, Candida Albicans, Klebsiella Pneumoniae, Acinebacter Baumanii.
- The kill rate of these micro-organisms that land on the surface of the tile is 99.9% in less than 72 hours.
 - Bio-contamination performance is active during the life-time of the ceiling as long as the surface is intact.
 - The Biocides in BIOGUARD Acoustic are harmless to people, animals or plants.
 - BIOGUARD Acoustic is tested by CETEC to satisfy the low VOC requirements of Green Star IEQ.

Washable, Water Repellent and Resistant to Disinfectants

Healthcare premises require durable building products that can be washed and disinfected.

- BIOGUARD products can be cleaned with diluted disinfectants containing active agents such as Quaternary Ammonium, Hydrogen Peroxide and Chlorine.
- BIOGUARD Acoustic can be washed with a wet cloth or sponge.
- BIOGUARD products provide excellent water-repellency (min 30mins) allowing frequent cleaning (achieves 500 hundred wash cycles according to ASTM D-4828).



BIOGUARD ACOUSTIC: PERFORMANCE FOR CLEAN ROOM ENVIRONMENTS



Clean Rooms

A clean room is a space or a series of spaces where the concentration of particles is controlled in order to minimise the introduction, generation and retention of particles.

- Clean rooms are classified ISO 1 (cleanest) to ISO 9 depending on the number of particles measured.
- The performance is tested to ISO 14644-1 which determines the particle cleanliness class.

ISO Class	Maximum Number of Particles in Air (particles in each cubic metre equal to or greater than the specified size)					
	Particle size					
	> 0,1 µm	> 0,2 µm	> 0,3 µm	> 0,5 µm	> 1 µm	> 5 µm
ISO Class 1	10	2				
ISO Class 2	100	24	10	4		
ISO Class 3	1 000	237	102	35	8	
ISO Class 4	10 000	2 370	1 020	352	83	
ISO Class 5	100 000	23 700	10 200	3 520	832	29
ISO Class 6	1 000 000	237 000	102 000	35 200	8 320	293
ISO Class 7				352 000	83 200	2 930
ISO Class 8				3 520 000	832 000	29 300
ISO Class 9				35 200 000	8 320 000	293 000

The table above shows BIOGUARD Acoustic achieves ISO Class 4 – 5.

Healthcare Premises

In certain areas within hospitals, to maintain strict hygiene and infection control, it is essential to limit the number of airborne particles by creating a clean-room type environment.

Pharmaceutical and Food Industry

Pharmaceutical products such as medicine, vaccine, blood for transfusion or medical equipment should not carry any contaminant. Food and beverages shall not be contaminated during the production and conditioning process.

Manufacturing Industry

In industries such as Aerospace, Optics, Microelectronics, Nuclear, Nano Technology, eliminating the smallest particles is a key objective.

Laboratories, Data Centres & Computer Rooms

For environments containing highly sensitive equipment, it is essential to limit the number of airborne particles by creating clean-room conditions.

BIOGUARD Acoustic: Tested ISO Clean Room Performance

- BIOGUARD Acoustic has been tested and achieves the following Particle Cleanliness Classes: ISO 5, according to ISO 14644-1:1999, and Zone 4 according to NF S 90-351.
- BIOGUARD Acoustic is tested to achieve ISO 4 "As Built Operational State" Clean Room performance when used in conjunction with Armstrong Clean Room Grid. Note: Refer to the Armstrong Clean Room Grid Data Page for more information.
- The very smooth surface of BIOGUARD Acoustic limits the accumulation of dust and micro-organisms, achieving a CP 2 rating according to Kinetic of Decontamination test against NF S 90351.
- BIOGUARD Acoustic has been selected for use in PC1 and PC2 Facilities.



The Westmead Institute for Medical Research – PC2 Facility

Traçabilité : Qualité/Service Technique/Fiches/ F TECH 003 masque certifié de conformité Céra-Labo

CERTIFICATE

The company: **Céra-Labo**
21 de la Montagne de l'Aspre
30150 Roquemaure - France

Has carried out particle cleanliness tests in accordance with standards ISO 14644-1:1999

For the company: **Armstrong Building Products**
No.3816, HuQingPing Road, ZhaoXiang, QingPu
Shanghai 201703
People's Republic of China

The ceiling tile:

BIOGUARD ACOUSTIC
has been tested for particle sizes 0,2 ; 0,3 ; 0,5 and 5 µm,
Under a Micro-biological Safety Cabinet, calibrated to ISO 5.

The tests have determined the following particle classes:

ISO 5, according to standard ISO 14644-1: 1999
&
ZONE 4, according to standard NF S 90-351.

The results of these tests correspond to report nr 11 06 049 – ARMSTRONG China Bioguard Acoustic / 1 Ver.0 dated September 26th, 2011

The Managing Director

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