

HEALTH AND HEALING

THE ROCKFON ADVANTAGE



activeceilings®

ROCKWOOL
Rockfon®
ACTIVATE YOUR CEILING

ROCKFON INTRODUCES ...

MediCare

a range of products that ...

... is easy to clean and disinfect, specifically developed for use in health care

... with surfaces that meet different hygienic requirements

... whilst keeping Rockfon's strong basic properties (acoustics, fire behaviour, humidity resistance, ease of installation,...)

... supported by all required test reports from independent laboratories

MediCare Product Overview

MEDICARE STANDARD

MEDICARE PLUS

MEDICARE AIR

Airtightness

Resistant to diluted H₂O₂, chlorine and quaternary ammonium
 Disinfection by steam cleaning (documented)
 Steam cleaning resistant
 Enhanced resistance to finger marking
 High water repellance
 Sealed edges
 Corridor dimensions
 Concealed edge (X)

Resistant to diluted H₂O₂, chlorine and quaternary ammonium
 Disinfection by steam cleaning (documented)
 Steam cleaning resistant
 Enhanced resistance to finger marking
 High water repellance
 Sealed edges

Does not allow growth of MRSA
 Bacteriological Class B10-B5
 Low particle emission (ISO Class 5)
 Dry and damp cloth cleaning
 Fire safety (RtF A1)
 Acoustic (α_w = 0.85-0.95) - Class A

Does not allow growth of MRSA
 Bacteriological Class B1
 Low particle emission (ISO Class 4)
 Dry and damp cloth cleaning
 Fire safety (RtF A1)
 Acoustic (α_w = 1.00) - Class A

Does not allow growth of MRSA
 Bacteriological Class B5-B1
 Low particle emission (ISO Class 3)
 Dry and damp cloth cleaning
 Fire safety (RtF A1)
 Acoustic (α_w = 0.80) - Class B

MediCare Standard

- Dimensions: 600x600mm / 1200x600mm
- Thickness: 12 and 15 mm
- Edges: A/E
- Painted edges
- Alpha w: 0.85 (12 mm) – 0.95 (15 mm)
- Reaction to Fire: A1
- Bacteriological class (spread):
 - B5
 - B10
- Does not allow growth: MRSA
- Clean Room Classification: ISO Class 5
- Cleaning: vacuum cleaning, humid cloth

MediCare Plus

- Dimensions: 600x600mm / 1200x600mm / 1800x600mm / 2100x600mm / 2400x600mm
- Thickness: 20, 22, 25 mm
- Edges: A/E/X
- Sealed edges
- Alpha w: 1,00
- Reaction to Fire: A1
- Bacteriological class (spread):
 - B1
- Does not allow growth: MRSA
- Clean Room Classification: ISO Class 4
- Cleaning: vacuum cleaning, humid cloth. Resistant to diluted ammonia, H₂O₂, chlorine and quaternary ammonium. Steam cleaning resistant.
- Finger marking resistant
- Water repellent surface

MediCare Air

- Dimensions: 600x600mm / 1200x600mm
- Thickness: 25 mm
- Edges: A
- Sealed edges
- HPM membrane on backside
- Alpha w: 0,80
- Reaction to Fire: A1
- Bacteriological class (spread):
 - B1
 - B5
- Does not allow growth: MRSA, Aspergillus Niger
- Clean Room Classification: ISO Class 3
- Cleaning: vacuum cleaning, humid cloth. Resistant to diluted H₂O₂, chlorine and quaternary ammonium. Steam cleaning resistant.
- Finger marking resistant
- Water repellent surface
- Air-tight for rooms in over-/underpressure in combination with hold-on clips. Use of closed cells neoprene foam tape on the grid improves performance

MediCare

Hygiene and cleaning properties
Evidence-based development

Evidence based approach of MediCare concept has led to following specific tests on cleaning and hygiene:

- Clean Room Classification (particle emission)
- Bacteriological Class (Spread of micro-organisms)
- Resistance to steam cleaning
- Disinfection by steam cleaning
- Air pressure control (airtightness)

French norm NF S 90-351

NF S 90-351

- The French norm NF S 90-351 defines requirements to air treatment systems used in clean rooms and related healthcare facilities for the control of airborne contamination.
- NF S 90-351 defines 4 zones in Healthcare facilities (clean rooms and controlled areas) characterised by 3 main criterias:
 - Clean room classification in acc. with ISO 14644-1 (particle emission)
 - Bacteriological class: Class B100 to B1 (spreading of micro-organisms)
 - Kinetic of particle decontamination (min.): Class CP10 to CP 20 (time to obtain 90% decontamination) (test results not used by Rockfon – as not representative)

Zone 1	Zone 2	Zone 3	Zone 4
Minimal risk	Average risk	Severe risk	Very high risk
Halls Offices Administrative services Technical services Elderly homes	Corridors Elevators Stairways Waiting areas External consulting areas Functional re-education areas Maternities Long and mid-term areas Psychiatry areas Central sterilisations areas (washing zone) Pharmacies Laundries Toilets	Intensive care units "Small surgery" areas Wake-up rooms Delivery rooms Nursery Paediatrics Surgery Haemodialysis Radiology Central sterilisation areas (clean zone) Laboratories Post-mortem rooms Medical intervention images Oncology, Haemato-oncology, Haematology, Haemodynamics, Endoscopy.	Neonatology Operating theatres Urgencies Transplantation areas Victims of burns uniots

Designation of the zone	Particle class of the zone to be protected	Target level of kinetic of particle decontamination class at 0.5 µm	Target level of bacteriological class of the zone to be protected
Zone 4	ISO 5 < 3,500 particles ≥ 0.5 µm/m ³ of air	CP 10	B 10
Zone 3	ISO 7 < 350,000 particles ≥ 0.5 µm/m ³ of air	CP 20	B 10
Zone 2	ISO 8 < 350,000,000 particles ≥ 0.5 µm/m ³ of air	CP 20	B 100
Zone 1	No specific requirements		

Clean room classification – How clean is the air ?

- Clean room classification (ISO Class) is important in areas where control of airborne particle contamination is crucial e.g. healthcare, microelectronics, pharmaceuticals, food.
- The ISO Class assigned by the ISO 14644-1 characterises the air cleanliness of an environment.
- This standard has been adapted to characterise particle emission of building materials.
- The lower the ISO Class, the lower the particle emission, the lower the contribution of the ceiling on the indoor environment

Table 1 — Selected airborne particulate cleanliness classes for cleanrooms and clean zones

ISO classification number (M)	Maximum concentration limits (particles/m ³ of air) for particles equal to and larger than the considered sizes shown below (concentration limits are calculated in accordance with equation (1) in 3.2)					
	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

NOTE: Uncertainties related to the measurement process require that concentration data with no more than three significant figures be used in determining the classification level

Clean room classifications		
FED STD 209D / 209E	ISO 14644-1	ISO Class
English	Metric	
-	-	1
-	-	2
1	M1.5	3
10	M2.5	4
100	M3.5	5
1,000	M4.5	6
10,000	M5.5	7
100,000	M6.5	8
-	-	9

* US FED 209 D/ 209E are officially withdrawn but still used

Clean room classification – MediCare Results

- **MediCare** products have a low particle emission and live up to **ISO Class 5 to Class 3** requirements.
- The clean room classification of MediCare products fulfils the requirements of Zone 4 (very high risk) as defined in the NF S 90351:
 - Operation theatres, intensive care, transplantation, burn victims



Bacteriological class – spread of micro-organisms

- The purpose of this test is to verify if, in case of severe contamination, the product releases/spreads micro-organisms in the atmosphere / room
- The MediCare range have no or very limited contribution to spreading of the following micro-organisms in the atmosphere:
 - Methicilin Resistant Staphylococcus Aureus - MRSA (bacteria)
 - Candida Albicans (yeast)
 - Aspergillus Niger (mould)
- The **MediCare** range lives up to Bacteriological **Class B10 or better** (Max. concentration in number of particles per cubic metre of air (ufc/m³))
- The lower the index (1 – 100) the lower the spread of micro-organisms via the ceiling
- The bacteriological class of MediCare products fulfils the requirements of Zone 4 (very high risk) as defined in the NF S 90351: Operation theatres, intensive care, transplantation, burn victims



MediCare and steam cleaning

- Steam cleaning is an efficient alternative to methods using chemical detergents and disinfectants
- Steam cleaning has two effects:
 - Cleaning effect: Water vapour acts as a solvent (eliminates organic and inorganic soils) and a surfactant (releases soil from the surface). It is sprayed under pressure (4-6 bars) and bring a mechanical effect
 - Disinfecting effect: water combined with high level of heat kills bacteria
- Steam eliminates the “biofilm” left by chemical disinfecting methods. Biofilm can contribute to the growth of micro-organisms
- Steam is able to clean areas which are difficult to access
- Steam cleaning is an environmentally friendly cleaning/disinfecting method:
 - No chemicals: no risk of allergic reaction by users, no chemical waste in running water
 - No specific protection needed (e.g. gloves)
 - The quantity of water needed is low



Air-tightness of MediCare Air

- Differential pressure control is used in hospitals to prevent nosocomial infections also known as hospital-acquired infections
- Air pressure distribution between facilities/areas in hospitals can be in:
 - Overpressure (+) = Prevent airborne particles to enter into a room to protect patient/process (intensive care)
 - Under pressure (-) = Airborne particles are kept in one area (infectious isolation room)
- Most common differential pressure recommended: 10-15 Pa.

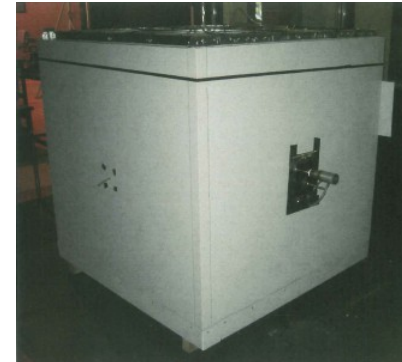
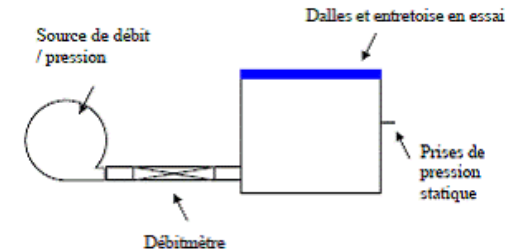
Table 6. Differential pressure control.

Area	Differential pressure
Infectious isolation room	Negative
Darkroom	Negative
Equipment sterilization room	Negative
Laboratory	Negative
Intensive care unit	Positive
Protective isolation room	Positive
Operating/surgical room	Positive
Delivery room	Positive
Pharmacy	Positive
Patient room	Equal

Negative pressure means the air pressure of the facility is lower than that of the adjacent areas.

Air-tightness test – MediCare Air

- To keep differential pressure between rooms, the ceiling system must be “airtight”
- MediCare Air due to its sealed edges and HPM at the back is “airtight”
- MediCare Air combined with hold-on clips provides an airtight ceiling system
- For higher requirements, neoprene foam tape (closed cells) or grids with pre-applied gasket seal placed on the grid can be used
- Air-tightness test made in an airtight chamber in overpressure
- Leakage rate ($\text{m}^3/\text{h}/\text{m}^2/\text{Pa}$) measured at pressure levels between $5\text{-}30 \text{ Pa} < 1 \text{ m}^3/\text{h}/\text{m}^2/\text{Pa}$





ROCKFON INTRODUCES ...

MediCare

Accessories

activeceilings™

ROCKWOOL
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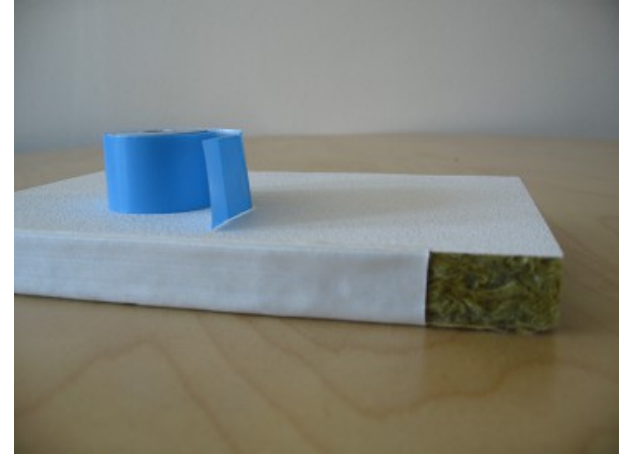
Clean room inspection hatch

- Dimension: 600x600 mm
- Ceiling tile thickness: 20 mm
- 2 square locks
- Ceiling tile glued in the hatch for a uniform ceiling surface. Only the locks are visible.
- Galvanised steel powder coated white
- Lay-in grid
- Airtight (documented)



Sealing tape for off-cuts

- Glass fibre cloth / acrylic adhesive tape with PE liner
- Good adhesion on stone wool
- Eliminate fibre emission/dust
- No drying time required as with edge paint
- Abrasion resistant
- Humidity resistant
- Airtight
- Good fire properties (flame retardant, low smoke emission)



Standard neoprene foam tape (closed cells)

For higher air-tightness performance with
MediCare Air





MediCare

Product Information

- Data sheets available online



MediCare range

- MediCare Standard
- MediCare Plus
- MediCare Air

The MediCare range comprises of three solutions developed to comply with the requirements of the different room types in healthcare facilities. MediCare ceilings are easy to clean and disinfect, while being aesthetically pleasing and offering the standard benefits of Rockfon ceilings.

activeceilings® **Rockfon**
ACTIVATE YOUR CEILING

MediCare Standard


MediCare Standard: "the ceiling panel for areas with essential hygiene and cleaning requirements"

MediCare Standard is the ideal choice for areas where hygiene and cleaning are essential. It is designed to be easy to clean and disinfect, while offering the standard benefits of Rockfon ceilings.

MEASUREMENT

Panel	Thickness	Weight	Acoustic Coefficient	Fire Rating	Standard
1000x1000x15	15	1.2	0.90	EN 13501-1 B2	MediCare S1
1000x1000x25	25	2.0	0.90	EN 13501-1 B2	MediCare S2
1000x1000x35	35	2.8	0.90	EN 13501-1 B2	MediCare S3

SOUND ABSORPTION
Sound absorption is measured in accordance with ISO 354 and ISO 10534-2. The sound absorption coefficient is calculated in accordance with ISO 11819.



MediCare Plus


MediCare Plus: "the ceiling panel that fulfills stringent hygiene requirements in healthcare environments"

MediCare Plus is the ideal choice for areas where hygiene and cleaning are essential. It is designed to be easy to clean and disinfect, while offering the standard benefits of Rockfon ceilings.

MEASUREMENT

Panel	Thickness	Weight	Acoustic Coefficient	Fire Rating	Standard
1000x1000x15	15	1.2	0.90	EN 13501-1 B2	MediCare P1
1000x1000x25	25	2.0	0.90	EN 13501-1 B2	MediCare P2
1000x1000x35	35	2.8	0.90	EN 13501-1 B2	MediCare P3

SOUND ABSORPTION
Sound absorption is measured in accordance with ISO 354 and ISO 10534-2. The sound absorption coefficient is calculated in accordance with ISO 11819.



MediCare Air

MediCare Air: "the ceiling panel specifically developed for use in rooms with clean air requirements"

MediCare Air is the ideal choice for areas where hygiene and cleaning are essential. It is designed to be easy to clean and disinfect, while offering the standard benefits of Rockfon ceilings.

MEASUREMENT

Panel	Thickness	Weight	Acoustic Coefficient	Fire Rating	Standard
1000x1000x15	15	1.2	0.90	EN 13501-1 B2	MediCare A1
1000x1000x25	25	2.0	0.90	EN 13501-1 B2	MediCare A2
1000x1000x35	35	2.8	0.90	EN 13501-1 B2	MediCare A3

SOUND ABSORPTION
Sound absorption is measured in accordance with ISO 354 and ISO 10534-2. The sound absorption coefficient is calculated in accordance with ISO 11819.



MediCare®

- Samples



- Health brochure



Health brochure

The healing environment

The creation of healing environments forms part of a holistic approach to architecture, that brings together an understanding of environmental, acoustic, technical and the societal issues of design to create optimal, patient-focused healing environments that support and enhance the care and treatment process. Patients, visitors and healthcare professionals are at the heart of the design process.

When designing a healthcare facility, designers need to understand how and why users can become immersed in their surrounding environment, and establish specific design considerations in the core concepts of the design.

Design

Ceilings contribute to creating healthcare environments more inviting.

One of the most essential considerations for healthcare architectural facilities is design. Rockwool products has been placed on enabling the creation of healthcare facilities to reflect the warmth and care that will be needed by the hospital visitors. As a general holistic approach to design, healthcare design has proven a benefit.

Healthcare design is moving far away from the harsh cold atmosphere facilities used to inspire, now they focus a warm atmosphere including the different elements of design, focusing on ambient sound and visual for ambience.

The art of public healing must begin with the environment in which patients, visitors and visitors must spend the majority of their time, making smart healthcare design essential.



ambience sound is the ceiling



working spaces are becoming like hotel lobbies



ambience patient visitors are more relaxed and welcomed



the use of white plays an important role in the wellbeing of staff, patients and visitors



The safe environment

More than in any other facility, safety is of paramount importance in healthcare facilities – in terms of hygiene, indoor air quality and risk of fire. Even the smallest of incidences must be prevented.

Hygienic safety

In most European countries, the number of nosocomial or hospital-acquired infections is growing year by year. A nosocomial infection is an infection acquired in a system where we will expect or investigate in the patient at the time of their admission to the hospital or other healthcare facility.

The light against these types of infections, caused by bacteria such as MRSA, helps the maintain antibacterials, alcohol, metal and others, is one of the most important of hygiene, facility managers and hospital directors.

All facility managers in healthcare agree that cleaning is the first line of defence to the fight against hospital-acquired infections. This means that the choice of building material must be based on its ease of cleaning, health at the same time not leaving its basic functional and aesthetic characteristics and the good hygienic properties of its surface.

Healthcare products are made from inert wood, an inorganic material that does not contribute to the growth of microorganisms, such as bacteria.

Healthcare products are made from inert wood, an inorganic material that does not contribute to the growth of microorganisms, such as bacteria.

Healthcare products	MediCare Standard Plus	MediCare Air

Optimal indoor air quality

Healthcare control the quality of the substrate, ensure the building's environment is maintained. What we can ensure is that our products will contribute positively to the indoor climate regardless of where they are installed. No growth of microorganisms, moisture, humidity and ensure including an acoustic the elimination of microorganisms such as mould, bacteria and other organic organisms, moisture, vibration etc. systems. The programs reduce and water resistance of the Rockfon stone wool core products maintain the growth of mould, has no nutritional value and therefore is not a substrate for harmful organisms. The Rockfon stone wool core products with respect to the most common types of bacteria, which is considered that stone wool does not cause this development.

Healthcare constantly working to ensure you with them meet indoor climate needs.

Lower emissions

All Rockfon products are classified as F1 products which guarantee that the products are below the lowest EU requirements for formaldehyde emission. A certain number of Rockfon products are certified class 0.5 in terms of the formaldehyde emission for the environment of boarding class rooms in regard to specific criteria. A considerable amount of Rockfon products is certified according to the strict French Indoor Climate label, M1, and the Danish Indoor Climate label (which goes beyond any legal requirements) ensuring the emission of volatile and substances in the indoor environment.

Chemical classifications			Industry application areas		
EN 13963 (2004)	EN 13963-2	EN 13963-3			
English	Metric	ICC/ICC			
1	M1-1	1	Class ambulance	Fluorescence	Thermally and acoustically
10	M2-2	4			
100	M3-3	5			
1.000	M4-4	6			
10.000	M5-5	7			
100.000	M6-6	8			
		9			



Classification of stone wool
All Rockfon stone wool is certified to be fire-retardant. The International Centre for Stone Research has classified that Rockwool stone wool has outstandingly good. The chemical composition of the Rockwool stone wool is certified through the European Certification Board (ECB).



- Web news text & flash animation



Rockfon HOME ROCKFON INFO CONTACT US LITERATURE & SAMPLES

PRODUCTS ACOUSTICS PERFORMANCE DESIGN INSTALLATION

Sympathetic Acoustic solutions for renovating existing buildings

New Sonar X edge an impressive and fully demountable concealed grid

Case Study: Futures Community College
Rockfon helps meet CDA and B970 guidelines

Trust-worthy tiles from Rockfon
Rockfon's Alaska (BOS) tiles secure an interest-free loan from the Carbon Trust.

Case Study: Walworth Academy, London
Framed ceiling islands make lasting impression

The MediCare range

- the Rockfon advantage

RENOVATE INNOVATE CAD

Download AutoCAD drawings for solutions to the most frequent challenges faced in renovation projects

NEW RISA APPROVED CPO

The latest RISA approved CPO from Rockfon, Safer Suspended Ceilings and Acoustic Solutions using Stone Wool, is designed to inform about all aspects of stone wool acoustic ceiling solutions. The 45 minute seminar covers sustainability, building regulations, key performance characteristics and the numerous design options for stone wool suspended ceilings.

The presentation includes a short video clip introducing the manufacturing processes involved in stone wool production and another demonstrating its excellent fire resistant properties. The seminar finishes with a brief summary of the Rockfon company and time for questions and answers.

For further information or to book your seminar,

ENVIRONMENT
Rockfon's commitment to sustainability

CONTACT US
Have any questions products and how to use them?
Please contact us

The new MediCare Range from Rockfon
Lower impact décor with smart, contemporary styling and style. From the best to the best.

The MediCare range

MediCare Standard

Non-flammable, fully in-situ, designed to be used in a wide range of applications. It is a fully demountable, easy to install, and easy to maintain solution. It is a fully demountable, easy to install, and easy to maintain solution.

MediCare Plus

Non-flammable, fully in-situ, designed to be used in a wide range of applications. It is a fully demountable, easy to install, and easy to maintain solution. It is a fully demountable, easy to install, and easy to maintain solution.

MediCare Air

Non-flammable, fully in-situ, designed to be used in a wide range of applications. It is a fully demountable, easy to install, and easy to maintain solution. It is a fully demountable, easy to install, and easy to maintain solution.