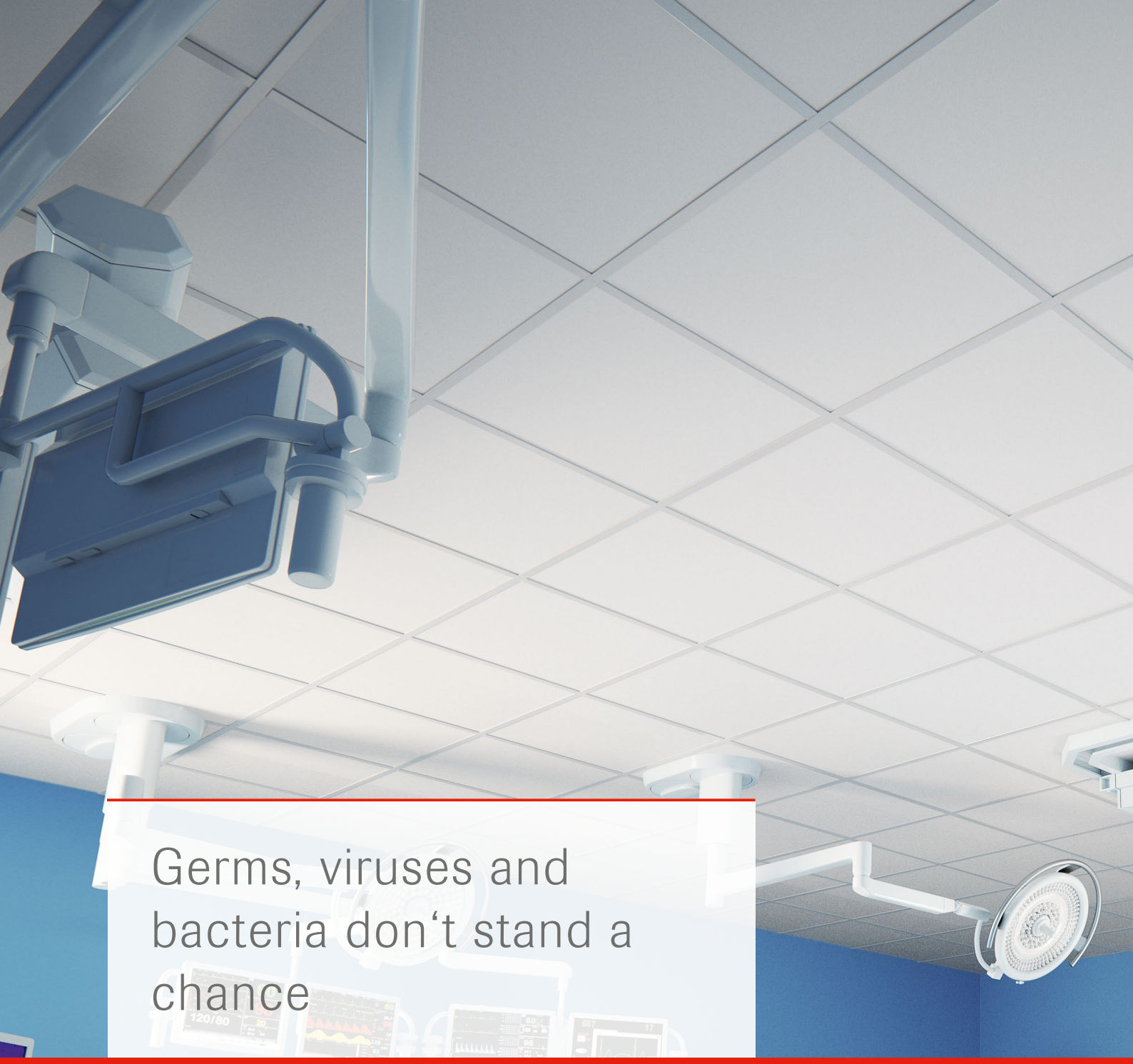
Ceilings for hygiene areas, clean rooms and high humidity areas

Ceiling systems for the highest demands

OWAlifetime collection

OWA



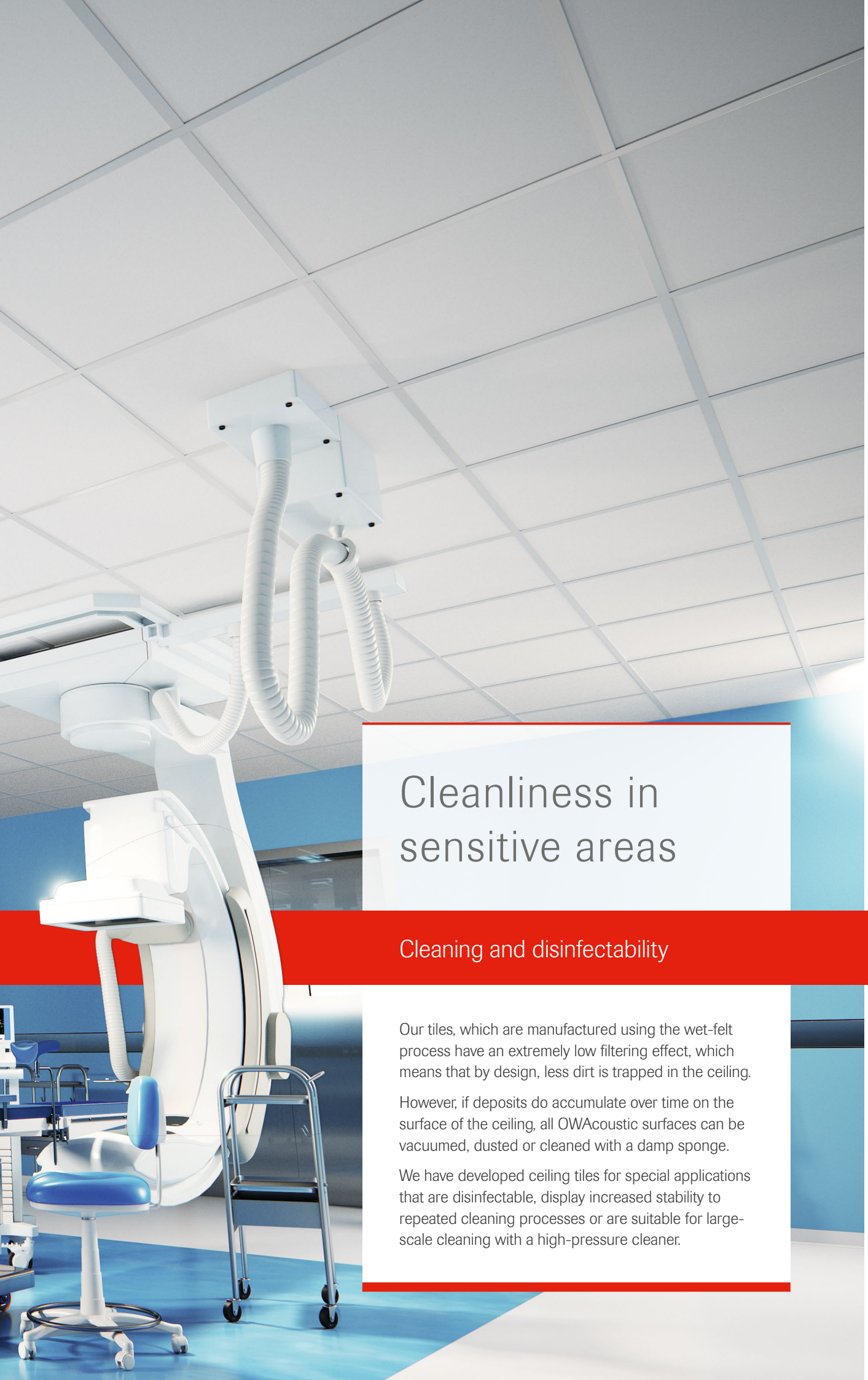
Germs, viruses and bacteria don‘t stand a chance

Hygiene

For applications in areas that are particularly sensitive in terms of hygiene, we offer ceiling tiles with different hygienic properties depending on the requirements and specific design, e. g.:

- clean room suitability up to ISO 1 (no particle emission)
- disinfectability
- preventing the growth of fungi and spores as well as bacteria and viruses

We have put our Sanitas 02 | Plain and Humancare ceiling tiles through the most stringent series of tests currently required worldwide. The tests are in accordance with NF S 90-351. Following the successful test, both surfaces are suitable for the highest risk areas (level 4) in the healthcare sector.



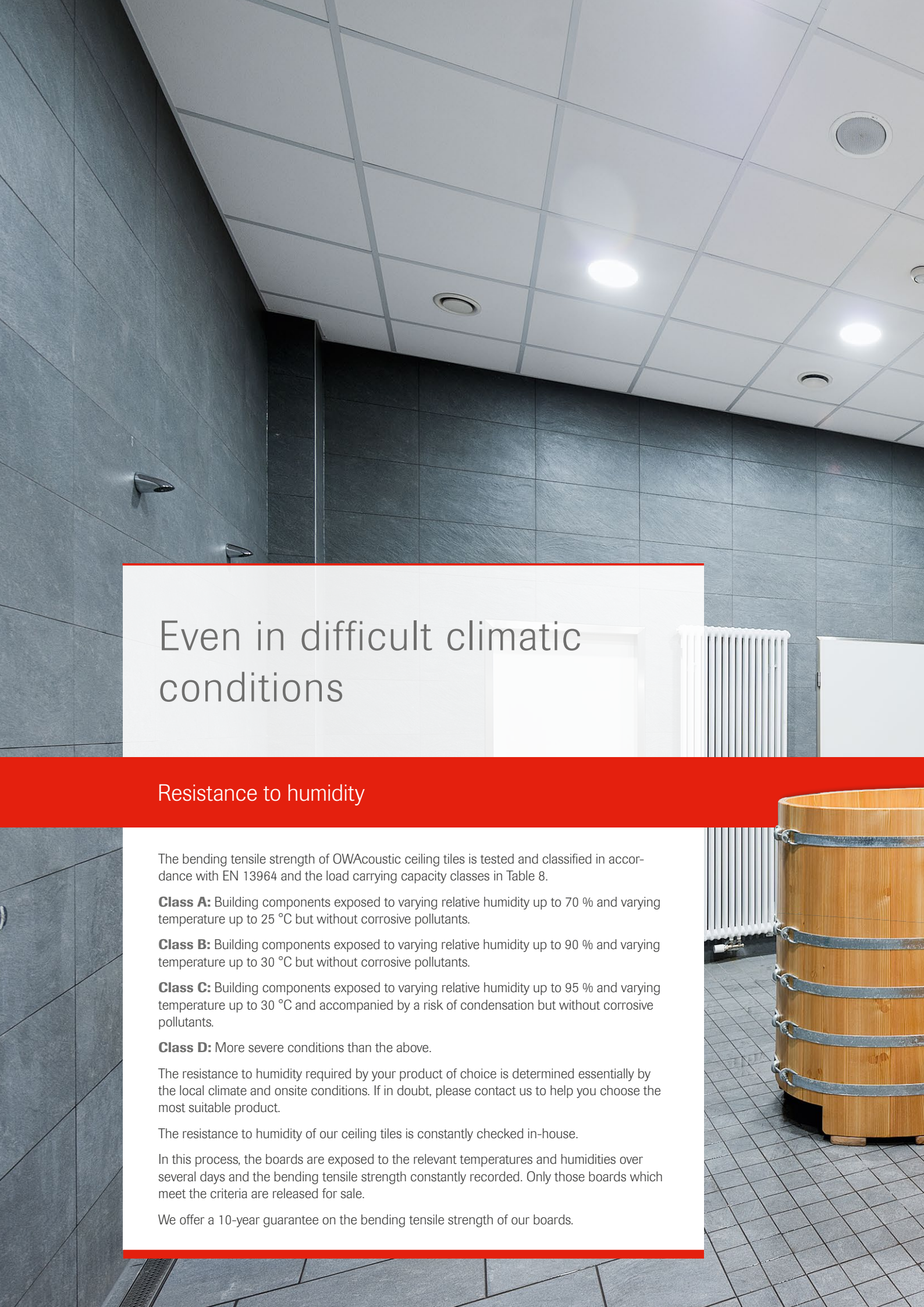
Cleanliness in sensitive areas

Cleaning and disinfectability

Our tiles, which are manufactured using the wet-felt process have an extremely low filtering effect, which means that by design, less dirt is trapped in the ceiling.

However, if deposits do accumulate over time on the surface of the ceiling, all OWAcoustic surfaces can be vacuumed, dusted or cleaned with a damp sponge.

We have developed ceiling tiles for special applications that are disinfectable, display increased stability to repeated cleaning processes or are suitable for large-scale cleaning with a high-pressure cleaner.



Even in difficult climatic conditions

Resistance to humidity

The bending tensile strength of OWAcoustic ceiling tiles is tested and classified in accordance with EN 13964 and the load carrying capacity classes in Table 8.

Class A: Building components exposed to varying relative humidity up to 70 % and varying temperature up to 25 °C but without corrosive pollutants.

Class B: Building components exposed to varying relative humidity up to 90 % and varying temperature up to 30 °C but without corrosive pollutants.

Class C: Building components exposed to varying relative humidity up to 95 % and varying temperature up to 30 °C and accompanied by a risk of condensation but without corrosive pollutants.

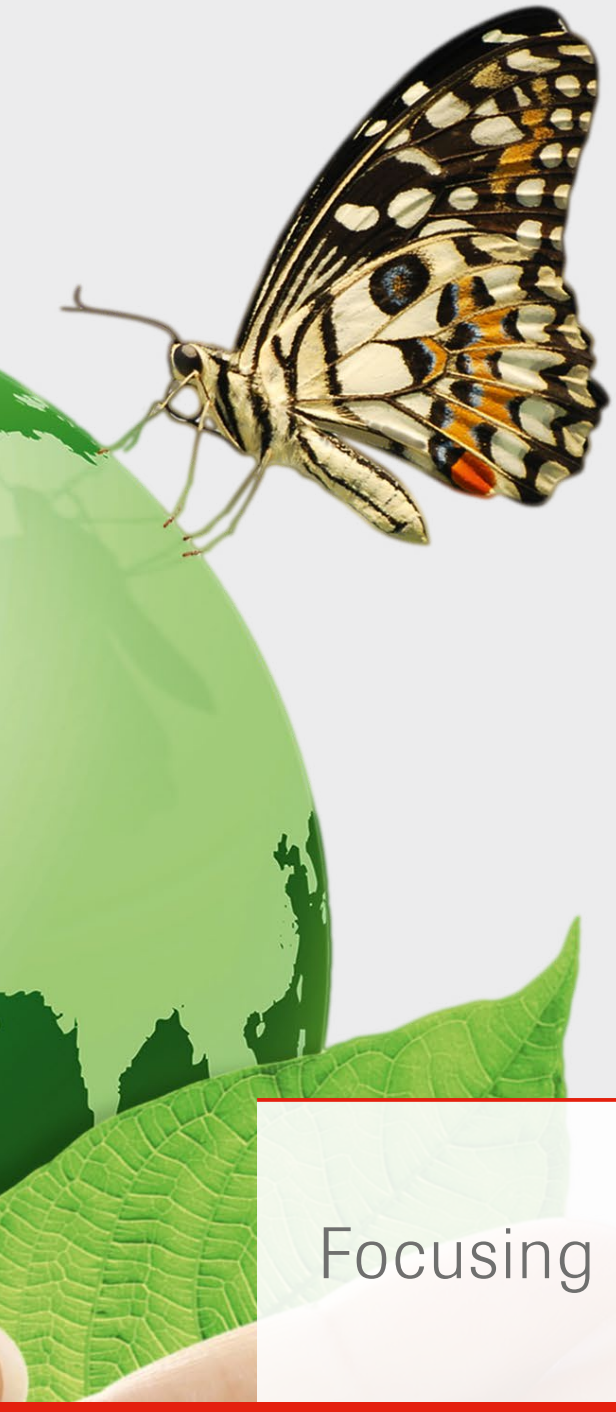
Class D: More severe conditions than the above.

The resistance to humidity required by your product of choice is determined essentially by the local climate and onsite conditions. If in doubt, please contact us to help you choose the most suitable product.

The resistance to humidity of our ceiling tiles is constantly checked in-house.

In this process, the boards are exposed to the relevant temperatures and humidities over several days and the bending tensile strength constantly recorded. Only those boards which meet the criteria are released for sale.

We offer a 10-year guarantee on the bending tensile strength of our boards.



Focusing on the future

Sustainability and recyclability

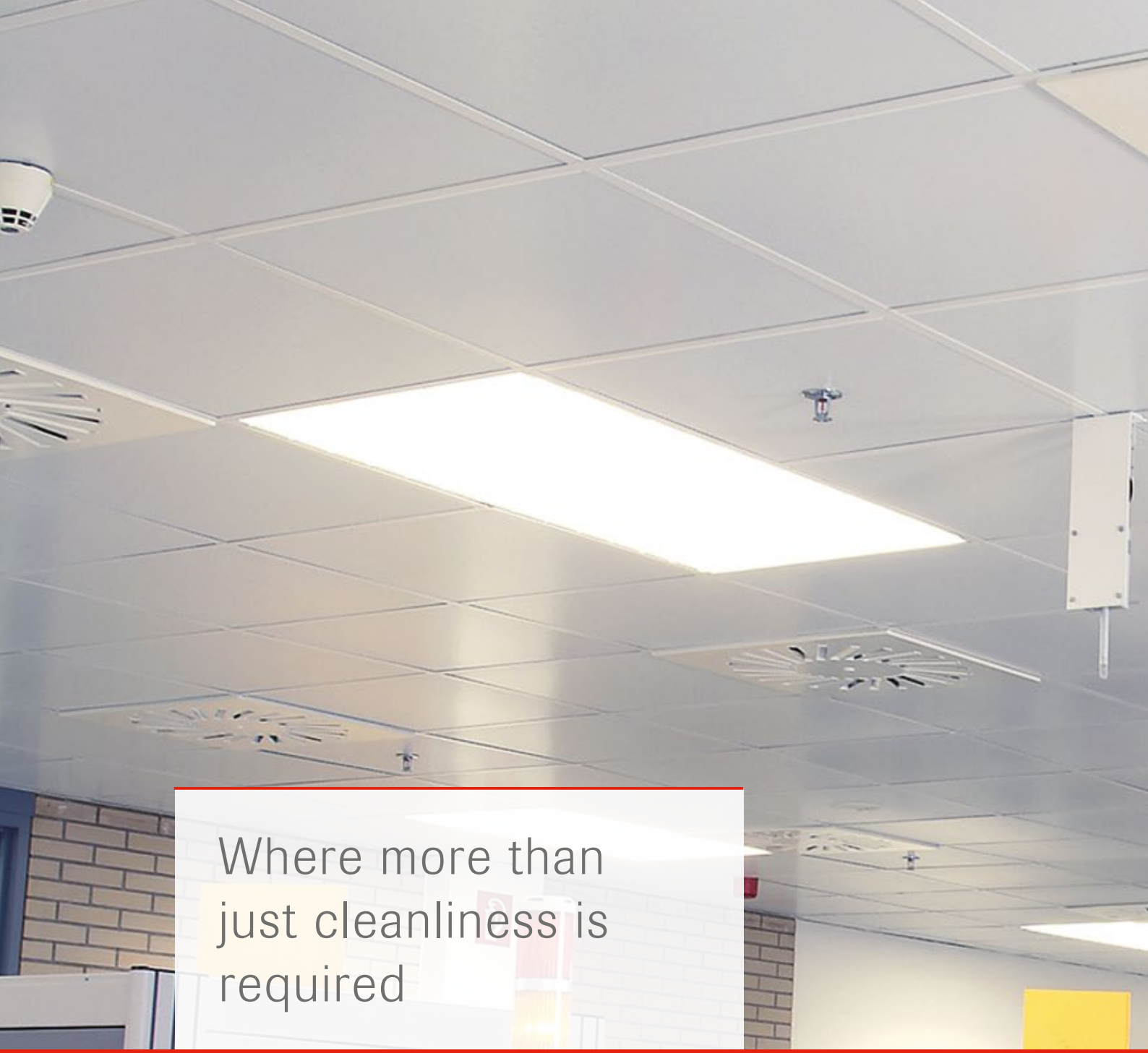
OWA ceiling tiles are made of a biodegradable mixture, which is produced from natural sources and recycled materials in varying proportions:

- biodegradable mineral wool 30 % – 60 %
- organic binding agent 5 % – 10 %
- solvent-free emulsions 0 % – 5 %
- natural fillers (clay and perlite) 20 % – 40 %
- recycled cellulose 0 % – 2 %

Sustainable production means designing the entire supply chain in accordance with ecological criteria. This is the basis of how we choose who is allowed to supply us with raw materials, energy and consumables.

All OWA ceiling tiles manufactured after 01-10-1997 are 100 % recyclable. These can be fed into the OWA green circle, our own recycling system, regardless of a new order.

For more information about the environment and sustainability, please visit our website at https://www.owa.de/en/company/environment-recycling/



Where more than just cleanliness is required

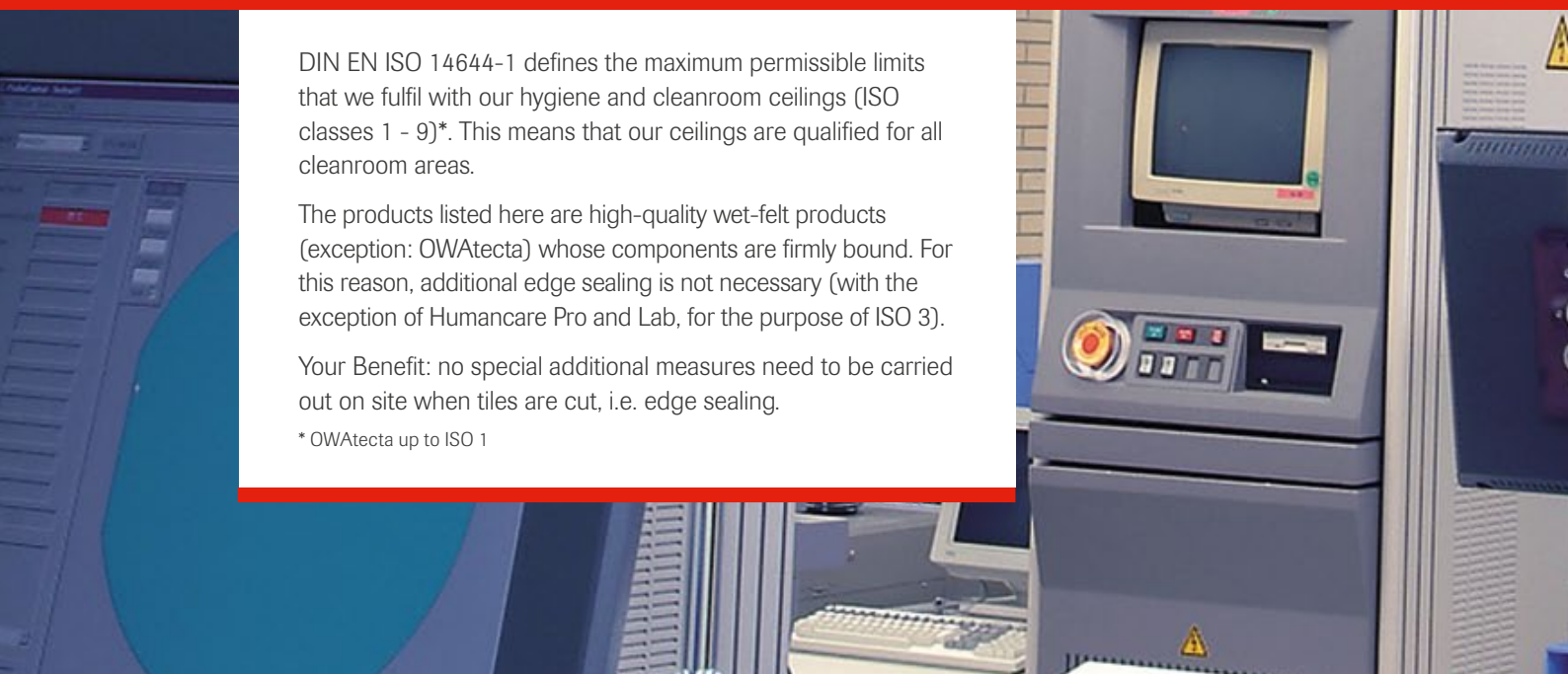
Air purity in clean rooms

DIN EN ISO 14644-1 defines the maximum permissible limits that we fulfil with our hygiene and cleanroom ceilings (ISO classes 1 - 9)*. This means that our ceilings are qualified for all cleanroom areas.

The products listed here are high-quality wet-felt products (exception: OWAtecta) whose components are firmly bound. For this reason, additional edge sealing is not necessary (with the exception of Humancare Pro and Lab, for the purpose of ISO 3).

Your Benefit: no special additional measures need to be carried out on site when tiles are cut, i.e. edge sealing.

* OWAtecta up to ISO 1

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Ceilings for hygiene areas, clean rooms and high humidity areas

	Hygienic equipment*	Tested according to hygiene standard	Disinfectability	Particulate emissions (EN 14644-1) °	Over/-negative pressure suitability
Humancare Pro α_w = 0.95 | NRC = 0.95	ACTIVE	NF S 90-351:2013 ASTM D3273 ASTM E2180-07	wipe-disinfectable spray disinfectable	low (ISO 3)	
Humancare Plus α_w = 0.90 | NRC = 0.90	ACTIVE	NF S 90-351:2013 ASTM D3273	wipe-disinfectable spray disinfectable	moderate (ISO 4)	
Humancare Lab α_w = 0.70 | NRC = 0.70	ACTIVE	NF S 90-351:2013	wipe-disinfectable spray disinfectable	low (ISO 3)	✓
Humancare | Sinfonia α_w = 0.85 | NRC = 0.85	ACTIVE	NF S 90-351:2013 JIS Z 2801	spray disinfectable	moderate (ISO 4)	
Humancare | Sinfonia Silencia α_w = 1.00 | NRC = 1.00	ACTIVE	NF S 90-351:2013 JIS Z 2801	spray disinfectable	moderate (ISO 4)	
Humancare | Sinfonia c α_w = 0.70 | NRC = 0.70	ACTIVE	NF S 90-351:2013 JIS Z 2801	spray disinfectable	moderate (ISO 4)	
Sanitas® 02 | Plain α_w = 0.15 | NRC = 0.15	ACTIVE	NF S 90-351:2013 JIS Z 2801	wipe-disinfectable spray disinfectable	moderate (ISO 4)	
Ocean α_w = 0.95 | NRC = 0.95				moderate (ISO 4)	
OWAlux | white α_w = 0.15 | NRC = 0.15			by means of commercially available surface disinfectants	moderate (ISO 4)	
OWAtecta L0		JIS Z 2801 Prof. Mutters	disinfectable (DGHM method) chemical resistance according to ISO 2812-1 and ISO 4628-1 and -6	S 22: none (ISO 1) S 33: very low (ISO 2)	✓

* Tiles with a hygienic finish prevent the growth of bacteria, germs and viruses. Further information can be found on the respective product pages.
° Tested with system S 3, butt-jointed

	Dry cleaning ▲	Damp cleaning ▲	Wipe scrubbing ▲	High-pressure cleaning** ▲	Humidity resistance	Recommended areas of application	Page
	✓	✓	✓		100 % RH	hygiene sensitive areas in medical practices / hospitals	12 - 13
	✓	✓	✓		100 % RH	hygiene sensitive areas in medical practices / hospitals	12 - 13
	✓	✓	✓		100 % RH	commercial kitchens (< 100°) laboratories positive / negative pressure rooms operating theatre / intensive care unit	12 - 13
	✓				95 % RH	retirement/nursing homes treatment rooms patient rooms food distribution schools, nursery or equivalent	14 - 15
	✓				95 % RH	retirement / nursing homes treatment rooms patient rooms food distribution schools, nursery or equivalent	14 - 15
	✓				95 % RH	corridor areas entrance areas for hygiene-sensitive buildings	14 - 15
	✓	✓	✓		95 % RH	laboratories sterile and hygiene areas	16 - 17
	✓				100 % RH	rooms with high permanent humidity (no thermal brine baths)	18 - 19
	✓		✓	✓	95 % RH	production areas with low particle emissions production areas with open food products commercial kitchens (< 50° vaporisation)	20 - 21
	✓	✓	✓		70 % RH (S 33e: 95 % RH)	commercial kitchens laboratories operating theatre / intensive care unit positive / negative pressure rooms (S 22)	22 - 23

** Installation with sealing tape, compression spring and sealing required.
▲ For further information, please see pages Seite 26 and Seite 27.

Hygienic ceilings at the highest level

Humancare Pro, Plus and Lab

The products in the Humancare product family have a hygienic finish that prevents the growth of bacteria, fungi and germs. Even MRSA pathogens don‘t stand a chance. Humancare can be wipe-disinfected, is antibacterial, has a fungicidal effect and is available for various ceiling systems. Thanks to its very high acoustic performance, it is also suitable for use in rooms where not only hygienic but also acoustic requirements for well-being need to be met.

Humancare Pro, Plus and Lab

Humancare Pro, Plus, Lab

Material	Mineral tile, fleece covered
Reaction to fire	A2-s1,d0 in accordance with 13501-1
Thickness	20 mm nom.
Colour	White
Light reflection	Approx 84 (ISO 7724-2, ISO 7724-3)
Moisture resistance	up to 100 % RH
Cleanroom class°	ISO 3 or 4 (ISO 14644-1)

* Dependent on system, soffit and other factors
° Tested with OWAconstruct system S 3

Humancare Pro
$D_{n,f,w}$ = 24 dB*, CAC = 24 dB*
α_w = 0.95 | NRC = 0.95
up to REI 45 (DIN 13501-2)
ISO 3

Humancare Plus
$D_{n,f,w}$ = 28 dB*, CAC = 30 dB*
α_w = 0.90 | NRC = 0.90
up to REI 60 (DIN 13501-2)
ISO 4

Humancare Lab
$D_{n,f,w}$ = 34 dB*, CAC = 34 dB*
α_w = 0.70 | NRC = 0.70
up to REI 60 (DIN 13501-2)
ISO 3

For details see:

Humancare data sheet
System sheet S 3
System sheet S 3a

Performance features

tested in accordance with **NF S 90-351** and **ASTM D3273/ASTM E2180**

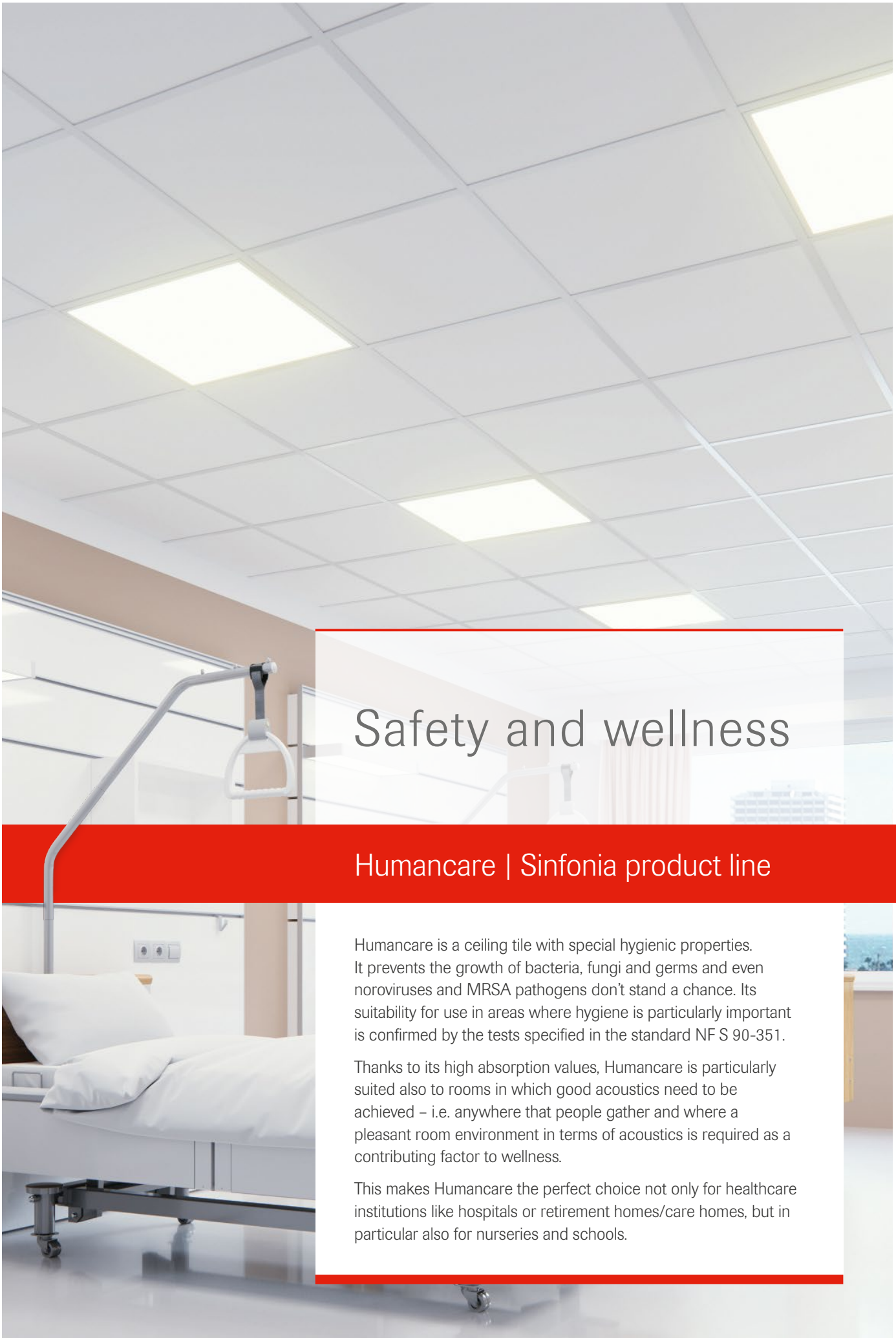
wipe-disinfectable

dirt and water-repellent surface

Advantages:
- fulfilment of test standard NF S 90-351 according to the stricter classification criteria of the current revision 2013-04
  - cleanroom class ISO 3 or 4 according to ISO 14644-01
  - decontamination class $CP_{(0.5)}$ 5
  - bacteriological cleanliness class M10
  - → **suitable for all rooms up to the highest risk zone 3**
- fulfils the internationally recognised JIS-Z-2801 standard (reduction rate of up to 7 log levels)
- does not give even multi-resistant hospital germs (MRSA) and Murin-Noro viruses a chance
- 100 % recyclable as part of the OWA greenc circle

Disinfectability:
Humancare prevents the growth of bacteria, viruses and fungi even without additional measures. However, where additional disinfectability is required, you can treat the panels with wipe disinfection (EN 16615 and ISO 15883) or spray disinfection*. You are welcome to request the relevant test reports from us.

* Two sprays (commercially available hand sprayer) with e.g. a 10 % ACTICIDE®-BAC-50-M solution or Meliseptol® (44 % ethanol solution).



Safety and wellness

Humancare | Sinfonia product line

Humancare is a ceiling tile with special hygienic properties. It prevents the growth of bacteria, fungi and germs and even noroviruses and MRSA pathogens don't stand a chance. Its suitability for use in areas where hygiene is particularly important is confirmed by the tests specified in the standard NF S 90-351.

Thanks to its high absorption values, Humancare is particularly suited also to rooms in which good acoustics need to be achieved – i.e. anywhere that people gather and where a pleasant room environment in terms of acoustics is required as a contributing factor to wellness.

This makes Humancare the perfect choice not only for healthcare institutions like hospitals or retirement homes/care homes, but in particular also for nurseries and schools.

Surface example | Humancare | Sinfonia

Material	Mineral tile, fleece covered
Reaction to fire	A2-s1,d0 in accordance with 13501-1
Thickness	15 mm nom. (Sinfonia, Sinfonia c) 20 mm nom. (Sinfonia Silencia)
Colour	White
Light reflection	Approx. 87 (ISO 7724-2, ISO 7724-3)
Moisture resistance	up to 95 % RH
Cleanroom class°	ISO 4 (ISO 14644-1)

* Dependent on system, soffit and other factors
° Tested with OWAconstruct system S 3

Humancare | Sinfonia
$D_{n,f,w}$ = 27 dB*, CAC = 29 dB*
α_w = 0.90 | NRC = 0.90
up to REI 60 (DIN 13501-2)

Humancare | Sinfonia Silencia
$D_{n,f,w}$ = 24 dB*, CAC = 24 dB*
α_w = 1.00 | NRC = 1.00
up to REI 45 (DIN 13501-2)

Humancare | Sinfonia c
$D_{n,f,w}$ = 34 dB*, CAC = 34 dB*
α_w = 0.70 | NRC = 0.70

For details see:

Sinfonia data sheet
System sheet S 3
System sheet S 3a
System sheet S 2p
System sheet S 6

Humancare Sinfonia c only suitable for system S 2p and S 6a.

Performance features

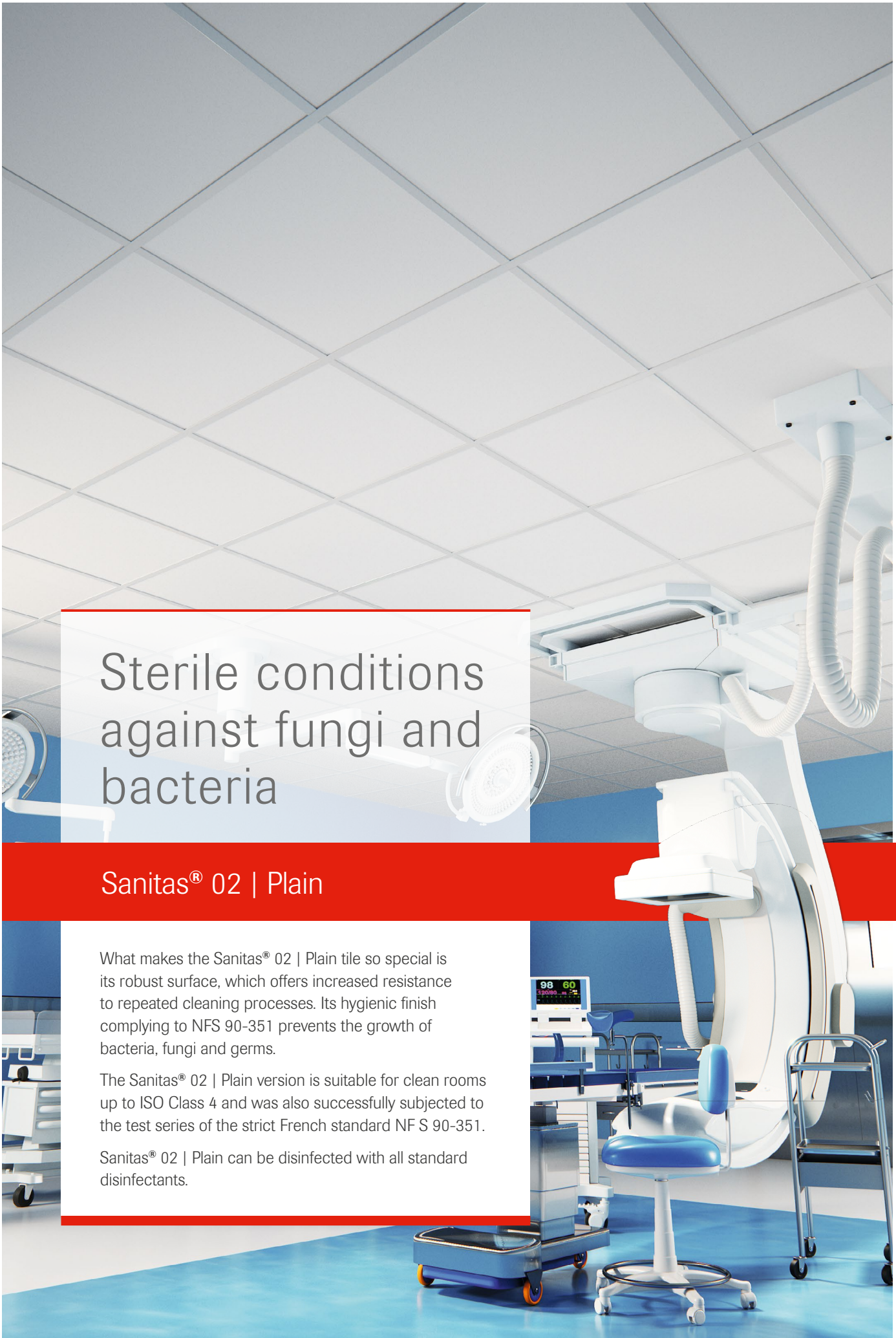
tested in accordance with NF S 90-351 and JIS Z 2801

disinfectable

Benefits:
- compliance with test standard NF S 90-351 in accordance with the stricter classification criteria of the current revision 2013-04
  - clean room class ISO 4 in accordance with ISO 14644-01
  - decontamination class CP(0.5) 5
  - bacteriological purity class M1 or M10
  - → **suitable for all rooms up to the highest risk zone 4**
- compliance with the internationally recognised JIS-Z-2801 standard (up to 5-log reduction)
- even multi-resistant hospital germs (MRSA) and murine noroviruses don't stand a chance
- 100 % recyclable as part of OWA green circle

Disinfectability:
Humancare prevents the growth of bacteria, viruses and fungi, even without additional measures. But for applications requiring additional disinfectability, you can also treat the tiles with spray disinfection*. Please feel free to request the corresponding test report (according to NFS 90 351) from us.

* Two spray applications (standard commercially available handheld spraying device) with e.g. 10 % ACTICIDE®-BAC-50-M solution or Meliseptol® (44 % ethanol solution)



Sterile conditions against fungi and bacteria

Sanitas® 02 | Plain

What makes the Sanitas® 02 | Plain tile so special is its robust surface, which offers increased resistance to repeated cleaning processes. Its hygienic finish complying to NFS 90-351 prevents the growth of bacteria, fungi and germs.

The Sanitas® 02 | Plain version is suitable for clean rooms up to ISO Class 4 and was also successfully subjected to the test series of the strict French standard NF S 90-351.

Sanitas® 02 | Plain can be disinfected with all standard disinfectants.

Sanitas® 02 | Plain

Sanitas 02 | Plain

Material	Mineral tile
Reaction to fire	A2-s1,d0 in accordance with 13501-1
Thickness	15 mm nom.
Colour	White
Light reflection	Approx. 91 (ISO 7724-2, ISO 7724-3)
Sound reduction*	$D_{n,f,w}$ = 35 dB, CAC = 37 dB
Sound absorption	α_w = 0.15 | NRC = 0.15
Moisture resistance	up to 95 % RH
Reaction to fire*	up to REI 180 (13501-2)
Cleanroom class°	Up to ISO 4 (ISO 14644-1)

* Dependent on system, soffit and other factors
° Tested with OWAconstruct system S 3

For details see:

Data sheet Sanitas 02 | Plain
System sheet S 3

Performance features

Prof. Dr. R. Mutters
Institute for Medical Microbiology and Hospital Hygiene, Philipps University Marburg

Dr. Weßling Laboratorium GmbH
Lebensmittel-Labor

tested in accordance with NF S 90-351 and JIS Z 2801

Benefits:

- compliance with test standard NF S 90-351 in accordance with the stricter classification criteria of the current revision 2013-04
  - clean room class ISO 4 ISO 14644-01
  - decontamination class CP(0.5) 2
  - bacteriological purity class M1 or M10
  - → **suitable for all rooms up to the highest risk zone 4**
- even multi-resistant hospital germs (MRSA) and murine noroviruses don't stand a chance
- protects against factors from the ceiling cavity
- 100 % recyclable as part of OWA green circle

Cleaning/suitability for wipe-cleaning:

The surface can be dusted, vacuumed or cleaned with an sponge with no loss of efficacy. Increased resistance to repeated cleaning processes (500 washing cycles following the "Gardner Test"). For abrasion resistance (dry or wet) according to ASTM D2486 and washability according to ASTM D4828, an expert opinion (No. 815_160A) is available from Stonebridge Coatings Laboratory.

Disinfectability:

Disinfectable with all standard alcohol-based and aldehyde-based disinfectants. A report from the Institute for Medical Microbiology and Hospital Hygiene in Marburg in accordance with the guidelines of the DGHM* is available.

* Deutsche Gesellschaft für Hygiene und Mikrobiologie, German Association of Hygiene and Microbiology

Response to microbial contamination:

Protection from microbial growth confirmed on the outer and inner surface. An expert opinion from Dr. Weßling Laboratorien GmbH is available.

Keeping a handle on humidity

Ocean

These new ceiling tiles with excellent sound absorption properties retain their dimensional stability even under extreme conditions and can be damp-wiped or vacuumed.

Ocean

Ocean

Material	Mineral tile, fleece covered
Reaction to fire	A2-s1,d0 in accordance with 13501-1
Thickness	20 mm nom.
Colour	White
Light reflection	Approx. 78 (ISO 7724-2, ISO 7724-3)
Sound reduction	$D_{n,f,w}$ = 28 dB, CAC = 30 dB
Sound absorption	α_w = 0.95 | NRC = 0.95
Moisture resistance	up to 100 % RH
Reaction to fire*	up to REI 60 (13501-2)
Cleanroom class°	ISO 4 (ISO 14644-1)

* Dependent on system, soffit and other factors
° Tested with OWAconstruct system S 3

For details see:

Ocean data sheet
System sheet S 3
System sheet S 3e

Further information

Construction:
We recommend using the corrosion-protected OWAconstruct System S 3e in accordance with the requirements and room-climate conditions of the intended application area.

Note:
If the conditions at the intended site may promote condensation at the surface of the tiles, then we recommend the use of closed metal tiles from our OWAtecta range.

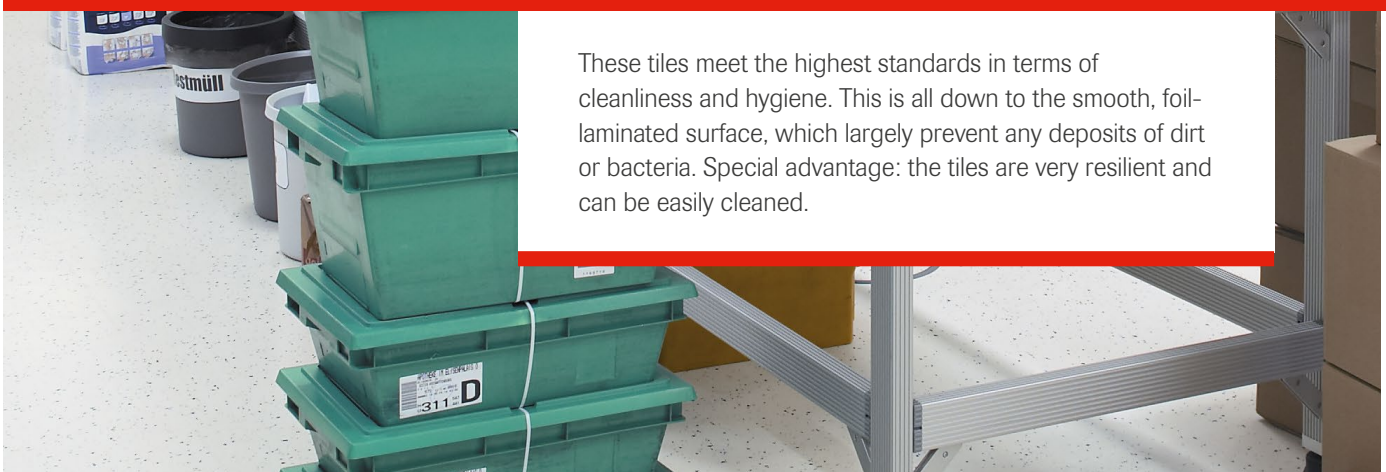
Important:
Avoid spray water to prevent spots from forming.

For information on planning see also OWA installation guide 9801 e: sections 2.5, 3.2, 4.1 and 6.2.

Focusing on smooth surfaces

OWAlux

These tiles meet the highest standards in terms of cleanliness and hygiene. This is all down to the smooth, foil-laminated surface, which largely prevent any deposits of dirt or bacteria. Special advantage: the tiles are very resilient and can be easily cleaned.



OWAlux

Material	Mineral tile, film laminated
Reaction to fire	A2-s3,d0 in accordance with 13501-1
Thickness	15 mm nom.
Colours	White
Light reflection	Approx. 86 (ISO 7724-2, ISO 7724-3)
Sound reduction*	$D_{n,f,w}$ = 35 dB, CAC = 37 dB
Sound absorption	α_w = 0.15 | NRC = 0.15
Moisture resistance	up to 95 % RH
Reaction to fire*	up to REI 60 (13501-2)
Cleanroom class°	ISO 4 (ISO 14644-1)

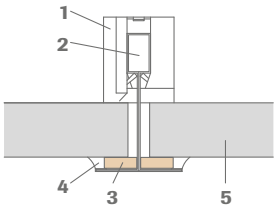
OWAlux

* Dependent on system, soffit and other factors
° Tested with OWAconstruct system S 3

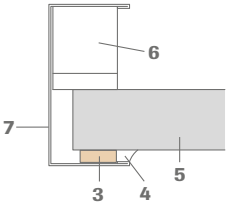
For details see:

Data sheet OWAlux
System sheet S 3

Construction example:



Wall trim:



1 Hold down clip no. 819
2 Main tee and cross tee from the S 3 system
3 Permanently elastic foam compression strip no. 8900, if required
4 Silicone rubber (or equivalent), if required
5 Mineral tile, laminated
6 Wall spring clip no. 5210
7 Wall angle no. 57

Dr. Weßling
Laboratorium GmbH
Lebensmittel-Labor

Performance features

Cleaning:
All OWAlux surfaces can be vacuumed, dusted or wiped clean with a damp sponge. Increased resistance to repeated cleaning processes (500 washing cycles following the “Gardner Test”).

High-pressure cleaning:
OWAlux tiles are suitable for large-scale cleaning with a high-pressure cleaner – with a maximum water temperature of 38°C and a maximum operating pressure of 40 bar. The cleaning jet is predefined by a flat nozzle. The nozzle spraying angle is 30°, the minimum distance is 40 cm. For this type of cleaning, **installation with a seal** is required (see above). If the tiles are dirty or covered with aggressive media (alkaline solutions, acids, fat/grease etc.), it may not be possible to preserve the high-quality appearance after cleaning.

Temperature resistance: up to 50°C in the area of the ceiling tile

Disinfectability:
According to an expert opinion from Dr. Weßling Laboratories in Altenberge, OWAlux | white tiles can be classified as having very good disinfectability. (surface disinfectants: Antifect N liquid, Buraton® rapid, Buraton® 10F)

Test passed: suitable for clean rooms
OWAlux is certified for clean room class **ISO 4** (ISO 14644-1). This makes it suitable for use in clean rooms. We will be glad to send you a test certificate to verify this.

Metal ceilings, the perfect all-rounder

OWAtecta L0

The high-tech production of our industrialised society would be unthinkable without specially adapted rooms for manufacturing. Modern, hygienic interior concepts are also crucial in the healthcare sector. OWA has developed, specified and tested its OWAtecta metal ceiling system for both areas. With success. OWAtecta metal ceiling systems are suitable for many special applications in production, hospital, care and hygiene areas.

OWAtecta L0

Material	Galvanised sheet steel approx. 0.5 - 0.6 mm (depending on version)
Reaction to fire	A2-s1,d0 in accordance with 13501-1
Colours	White (similar RAL 9003)
Light reflection	Approx. 76 (ISO 7724-2, ISO 7724-3)
Sound reduction*	$D_{n,f,w}$ = 30 dB, CAC = 32 dB
Sound absorption	α_w = 0.05 | NRC = 0.05
Moisture resistance	bis 70 % RH (S 33e: 95 % RH)
Cleanroom class°	ISO 1 resp. 2 (ISO 14644-1)

OWAtecta L0

* Dependent on system, soffit and other factors
° Tested with OWAconstruct system S 33 or S 22

For details see:

System sheet S 33
System sheet S 22

Performance features

Fraunhofer TESTED® DEVICE OWAtecta L0 Report No. OW 0107-246

Prof. Dr. R. Mutters
Institut lékařské mikrobiologie a nemocniční hygieny univerzita Philipps Marburg

Pressurised/depressurised ceilings:

The pressure tightness of the S 22 ceiling system was determined in accordance with DIN EN 1026 and DIN EN 12207 by the Fraunhofer IPA in Stuttgart with a positive pressure of up to +80 Pa and a negative pressure of up to -50 Pa. The ceiling system fulfils the required pressure tightness with an air permeability of 'Class 4'.

Chemical resistance:

Robust, the chemical resistance of OWAtecta metal cassettes to ten representative reagents has been confirmed by the Fraunhofer IPA. The determination was carried out using the immersion method in accordance with ISO 2812-1 and ISO 4628-1 and -6.

Result: Proof of the resistance of OWAtecta metal cassettes to the following representative test reagents, regardless of the quantity and duration of the exposure time:
- Formalin (37 %) - White spirit
- Ethanol (100 %) - Ajax concentrated
- Hydrogen peroxide (30 %) - Meister Proper concentrated
- Isopropanol (70 %) - Microbac Food (4 %)
- Elma clean 100 (10 %)

Disinfectability according to DGHM method:

The active groups representative for surface disinfection in hospitals were tested. This ensures that other disinfectants from the VAH list can also be used. The measured values resulted in a reduction of 6 log levels for all tested germ types. The result exceeds the reduction of at least 5 log levels required by the professional associations for disinfectant reprocessing as specified by Prof. Dr R. Mutters.

Test passed: suitable for cleanrooms

The OWAtecta System S 22 has passed the qualification 'Class 1 according to DIN EN ISO 14644-1'.
The OWAtecta System S 33 achieves the qualification 'Class 2 according to DIN EN ISO 14644-1'.

Air purity in clean rooms

The contamination of products and production processes due to airborne particles is monitored to a certain, appropriate level in clean rooms and in corresponding clean room areas. Particularly in the fields of aerospace, microelectronics, pharmaceuticals and the food industry, these types of clean room are used in sensitive production processes.

Construction materials for clean rooms are therefore subject to special requirements in terms of air purity – and this is expressed in minimal emissions of airborne particles. EN ISO 14644-1 defines maximum permissible limits, meaning that our ceiling systems are qualified for all cleanroom areas. The following overview helps to explain this:

Comparison of EN ISO 14644-1 classification with other standards and codes

The table below shows a comparison between EN ISO 14644-1 and the EC GMP guidelines as well as the US Federal Standard 209E. The US standard was withdrawn in 2001 and is provided as a guide only.

Nomenclature				Maximum permitted particle count according to EN ISO 14644-1 based on different particle sizes	
EN ISO 14644-1	**EG-GMP „at rest“**	**EG-GMP „in operation“**	**US Fed. Standard 209E***	**0.5 µm** Pro m^3	Pro cbf*
1					
2				4	0.1
3				35	1
			1	35	1
4				352	9.9
			10	353	10
5				3.520	100
	A			3.520	100
		B		3.520	100
			100	3.530	100
6				35.200	997
			1.000	35.300	1.000
7				352.000	9.972
	C			352.000	9.972
		B		352.000	9.972
			10.000	352.000	10.000
8				3.520.000	99.716
	D			3.520.000	99.716
		C		3.520.000	99.716
			100.000	3.520.000	100.000
9				35.200.000	997.167

* Cubicfoot

Notes on use in kitchen areas

The Humancare range is basically an acoustically effective mineral tile with a bactericidal and fungicidal fleece on the visible side. In areas with very high requirements - intensive exposure to greasy vapours, high temperatures > 100 °C - we only recommend a smooth metal tile OWAtecta L0, as these also have a corresponding resistance to these loads.

Ceiling areas where this high level of stress is not to be expected can be fitted with products from the Humancare range. The rated sound absorption coefficients αw (from 0.70 to 0.95 depending on the version) lead to a significant reduction in reverberation time and a simultaneous reduction in noise in the room, depending on the surface used.

Sealing measures for system S 3 – high-pressure cleaning or pressurised/depressurised ceilings

The tile contact surface areas, ceiling mounting parts and connections to adjacent components must be sealed in accordance with the requirements. The foam compression strip used should be a closed-cell, crosslinked polyethylene foam compression strip in white no. 8900, size 3 x 9 mm, which is self-adhesive on one side. All tiles are to be equipped with hold down clips no. 819 on the rear. The wall trim should be executed with the wall angle C-shaped no. 57, wall spring clip no. 5210 and the seal described below.

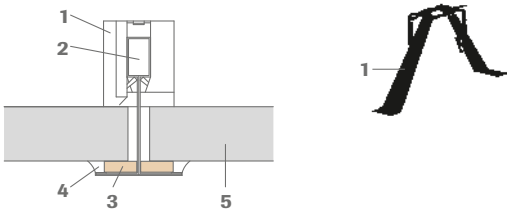
In the event of a potential pressure load on the ceiling, the permanent negative pressure or overpressure must not exceed 40 Pa. The suspension is to be made pressure-resistant with nonius hangers no. 17/45, nonius extension no. 16/... and with 2 x safety cotter pins no. 76 for pressure resistance. The quality of the sealing measures depends on the care of the person performing the work.

Note:
The use of sealing materials can result in a change in the building material classification in accordance with 13501-1.
The type of sealing system used should be adapted to suit the usage needs of the relevant clean room.

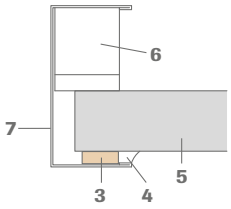
The compression strip and the acrylic gasket can be omitted in the case of exposure solely for particulate emission behaviour.

Construction example for system S 3 with a seal

Cross-section:

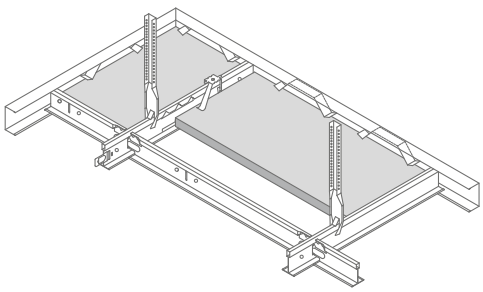


Wall trim:



1 Hold down clip no. 819
2 Main tee and cross tee from the S 3 system
3 Permanently elastic foam compression strip no. 8900, if required
4 Silicone rubber (or equivalent), if required
5 Mineral tile
6 Wall spring clip no. 5210
7 Wall angle no. 57

System S 3:



For cleaning ceiling tiles in exposed systems, it can be expedient to use hold down clips (e.g. #819). These ensure that the surface layers are secured in the suspended ceilings during cleaning work. If necessary, we recommend removal of the respective OWAcoustic tile from the suspended ceiling when cleaning without fixed tiles.

OWAlifetime collection	
Humancare | Pro	A, B, C, E, F, G
Humancare | Lab	A, B, C, E, F, G
Humancare | Plus	A, B, C, E, F, G
Humancare | Sinfonia	A, C, G
Humancare | Sinfonia Silencia	A, C, G
Humancare | Sinfonia c	A, C, G
Sanitas® 02 | Plain	A, B, C, E, F, G
Ocean	A, C
OWAlux® | white	A, B, C, D, F
OWAtecta L0 - unperforated	A, B, C, E, F

A Vacuuming

Tool: Standard commercially available vacuum cleaner with a filter attachment (dust prevention) and flat brush attachment.
Procedure: Operate the vacuum cleaner at moderate power. Applying slight pressure, extensively vacuum the surfaces. Please take great care not to loosen the surface layers from the structure when cleaning (adjust the cleaning pressure, risk of injury). In the event of serious soiling, and of frequent cleaning operations, it is advisable to secure the OWAcoustic tiles from lifting (e.g. with hold down clips no. 819 or no. 44).

B Wiping

Tool: Damp cloth or sponge
Procedure: Soak the cleaning sponge in clean water and then wring it out well. Basic dirt (fingerprints, etc. - no lubricating impurities) can be removed by wiping gently (***B1**). In case of heavy soiling, a neutral and mild detergent (colourless) can be used. To ensure the tolerability of a detergent, we recommend testing the surface beforehand on an area that is not visible (***B2**). Make sure that the edges and the back of the tile are not exposed to moisture. Please take great care not to loosen the surface layers from the structure when cleaning (adjust the cleaning pressure, risk of injury). In the event of heavy soiling or of frequent cleaning cycles, it is advisable to secure the OWAcoustic tiles from lifting (e.g. with hold down clips no. 819 or no. 44). Finally, wipe with a clean, white microfibre cloth to remove excess liquid and allow the surface to dry after cleaning.

C Dusting

Tool: Duster, vacuum cleaner
Procedure: Move the duster or vacuum cleaner over the surface, applying moderate pressure (see A).
Please note: The use of cleaning cloths (dry or damp) may lead to discolouration (degree of gloss, streaking, etc.). Please also look at the note under *B2.

D High-pressure cleaning

Tool: High-pressure cleaner with a flat nozzle.
Procedure: Max. water temperature 38 °C, operating pressure < 40 bar. The cleaning jet is predefined by a flat nozzle (nozzle spraying angle 30°, minimum distance 40 cm). When in direct contact with water, the surface layer must be sealed in the structure (for the seal design, see installation instructions 9801 e under point 6.6).

E Wipe scrubbing

Increased resistance against cleaning processes (ASTM 4828 and „Gardner Test“ with min. 250 cycles).
Tool: Damp cloth or sponge
Procedure: There is increased resistance to wipe scrubbing. These products have a high level of robustness.
Cleaning instructions: See points B and C.

F Disinfecting – wipe disinfection

The tiles can be disinfected with all common disinfectants. An expert opinion with representative disinfectants (e.g. Schülke antifect N liquid, Ecolab Incidin Rapid, Bode Mikrobac forte) in combination with TORK Premium non-woven special wipes is available.

G Disinfecting – spray disinfection

Even without additional measures, the tile actively combats bacteria, viruses and fungi. But for applications requiring additional disinfectability, you can also treat the tiles with spray disinfection. To do so, apply two spray applications (standard commercially available handheld spraying device) with e.g. 10 % ACTICIDE®-BAC-50-M solution or Meliseptol® (44 % ethanol solution) to each tile.

Note

If the tiles are dirty or covered with aggressive media (alkaline solutions, acids, fat/grease, etc.), it may not be possible to preserve a high-quality appearance after cleaning.

Ceiling systems for special tasks

Technical consulting:

OWAconsult Team: +49 9373 201-444

Do you have any questions about our products and solutions?
Contact form

Certified Management Systems

The information in this brochure is up-to-date at the time of publication. Subject to alterations. Please contact our OWAconsult team for specific advice. Our experts will be happy to answer your questions using the following contact details: tel: +49 9373 201-444 or e-mail: info@owaconsult.de

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