

WELL Building Standard[™]

Learn how Rockfon acoustic ceiling tiles, baffles, islands and wall panels contribute to WELL.



Human health depends on the environment that directly surrounds us everyday. One of the most important components determining our well-being is the indoor environment as we spend about 90% of our time indoors. At Rockfon we are proud that our products positively contribute to a healthy indoor environment – from improving air quality, to the acoustic and aesthetic performance of all building types, from offices to medical buildings and learning environments, such as schools and universities.

The WELL Building Standard™ focuses on the well-being and performance of the building occupant and aims to "[lead] the global movement to transform our buildings and communities in ways that help people thrive". The Standard is performance-based, involving measurement, certification, and monitoring. Rockfon supports the implementation of the thinking behind the current WELL Building Standard version 1 which consists of different concepts covering 105 features.

The WELL Building Standard^{$^{\text{IM}}$} is a leading global building rating system from the International WELL Building Institute^{$^{\text{IM}}$} (IWBI^{$^{\text{IM}}$}) and the standard is structured in the following concepts:



AIR

WELL promotes strategies to reduce or minimise sources of indoor air pollution.



WATER

WELL promotes high quality water and improved accessibility.



NOURISHMENT

WELL limits the presence of unhealthy foods and can encourage better food culture.



LIGHT

WELL promotes lighting systems designed to increase alertness, enhance experience, and promote sleep.



FITNESS

WELL encourages the integration of exercise and fitness into everyday life.



COMFORT

WELL creates distraction-free, productive and comfortable indoor environments.



MIND

WELL optimises cognitive and emotional health through design, technology and treatment strategies.



INNOVATION

WELL encourages innovation by allowing projects to submit ideas for new features under WELL concepts.



AIR concept

WELL features establish requirements in buildings that promote clean air and reduce or minimise the sources of indoor air pollution.

| Feature | Compliance | Rockfon's contribution |
|---|--------------|---|
| Q1 Air quality standards | Precondition | WELL intent: To ensure a basic level of high indoor air quality. Rockfon: Using our ceiling and wall products that carry best in class air emission labels enhances the indoor air quality. Check out our Product Sustainability Declarations to see the great achievements of our portfolio such as the Danish indoor climate label, the best Finish emission class M1 for building materials, the American Greenguard Gold label, the French A/A+ class, the German blue angel, and the Singapore Green Label. |
| 04 VOC reduction | Precondition | WELL intent: To minimise the effect of VOCs from building materials on indoor air quality. Rockfon: More than 90% of our ceilings and walls panels using our 2nd generation binder comply with the CDPH (California Department of Public Health Standard Method v1.1-2010) and VOC labels as proof of meeting this standard. |
| 06 Microbe and mould control | Precondition | WELL intent: To reduce mould and bacteria growth within buildings. Rockfon: Our ceiling and wall products resist the growth of mould and bacteria without having to add a specific biocide. Our Declaration of Performance (DoP) according to EN 13964:2014 show the performance "A – not susceptible to the growth of harmful micro-organisms". The property specific applied test standard is ASTM C 1338-96 (Standard Test Method for Determining Fungi Resistance of Insulation Materials and Facings). |
| 07 Construction pollution management | Precondition | WELL intent: To minimise the introduction of construction related pollutants into indoor air and protect building products from degradation. Rockfon: Our products are resistant to relative humidity up to 100% and to sagging as no deflection is visible in high humidity. The property specific applied test is the flexural tensile strength test, Annex F in EN 13964:2014. |
| 12 Moisture management | Precondition | WELL intent: To limit the potential for bacteria and mould growth within buildings from water infiltration and condensation. Rockfon: Our products can be installed prior to the building being enclosed. See performances under features 06 and 07. |
| 16 Humidity control | Optimisation | WELL intent: To limit the growth of pathogens, reduce off-gassing, and maintain thermal comfort by providing the appropriate levels of humidity. Rockfon: Our products can be installed prior to the building being enclosed. See performances under features 06 and 07. The products can be installed not just in changing rooms but also in showers. Specifically recommended is the Rockfon® HygienicTM product range. |
| 17 Direct source ventilation | Optimisation | WELL intent: To preserve air quality in occupied spaces through the isolation and proper ventilation of indoor pollution sources and chemical storage areas. Rockfon: Our products contribute to better indoor air and do not contain SVHCs (substance of very high concern) according to REACH (EU regulation for Registration, Evaluation, Authorisation and Restriction of Chemicals), nor substances on the BREEAM Norway A20 list, nor substances on RAL-UZ 132. |
| 25 Toxic material reduction | Optimisation | WELL intent: To minimise the impact of hazardous building material chemicals on indoor air quality and protect the health of manufacturing and maintenance workers. Rockfon: Our products are free of any chemicals of concern (per REACH, BREEAM NO A20 and RAL-UZ 132) eliminating exposure risks. Rockfon products do not contain any perfluorinated compounds (PFCs, feature 25 part 1), nor flame retardants (part 2), nor plasticizers (part 3), nor isocyanate-based polyurethane (part 4). In addition, more than 90% of our ceilings and walls panels using our 2nd generation binder comply with the urea-formaldehyde restriction (part 5). |
| 27 Antimicrobial activity for surfaces | Optimisation | WELL intent: To reduce occupant exposure to both harmful pathogens and hazardous cleaning agents. Rockfon: Our ceilings panels are not a high-touch surface. Specifically the Rockfon® MediCare® product range meet the stringent requirements for Clean Rooms and are tested according to ISO 14644-1 (Cleanrooms and associated controlled environments Part 1: Classification of air cleanliness by particle concentration). |



LIGHT concept

WELL features provide guidelines that minimise disruption to the body's circadian system, enhance productivity, support good sleep quality and provide appropriate visual acuity.

| Feature | Compliance | Rockfon's contribution |
|--|--------------|---|
| 53 Visual lighting design | Precondition | WELL intent: To support visual acuity by setting a threshold for adequate light levels and requiring luminance to be balanced within and across indoor spaces. Part 2: Brightness Management Strategies. Rockfon: Our ceiling and wall products with a high light reflection enhance the benefits of indirect lighting by improving overall lighting uniformity. For example Rockfon Blanka® has a best in class light reflection of 87%, compared to 75% of competitor products. The super white surface has a whiteness (L value) of 94.5 which is tested in accordance with ISO 7724. |
| 56 Solar glare control | Optimisation | WELL intent: To avoid glare from the sun by blocking or reflecting direct sunlight away from occupants. Rockfon: Our products with high light reflection spread light further into the space utilising it into the interior area. In addition our panels have a high light diffusion (> 99% for Rockfon Blanka®) which contributes to the implementation of WELL's daylight management strategies. The high diffusion is specifically important if interior light shelves or a film of micro-mirrors on the window, that both reflect sunlight toward the ceiling, are used. The deep matt surface is perfect in critical side-light and a gloss of 0.8 until a 85° angle (tested in accordance with ISO 2813) further improves the environment. |
| 57 Low-glare workstation design | Optimisation | WELL intent: To minimise visual discomfort by situating computer monitors in a way that avoids glare and luminance contrast. Rockfon: Our products with high light reflection spread light further into the space utilising it further into the interior workspace and they can diffuse light by more than 99% to aid in minimizing glare on computer screens. |
| 59 Surface design | Optimisation | WELL intent: To increase overall room brightness through reflected light from room surfaces and avoiding glare. Rockfon: Our products have the best in class light reflectance values (LRVs) and light diffusion as well. For example Rockfon Blanka® has a light reflection of 87% and light diffusion >99%. Higher LRVs mean that the surface reflects more light from the source, resulting in maximum light intensity and promoting alertness and activity. Choosing Rockfon products with high-end surfaces thus represents a good strategy for ensuring that a sufficient amount of light reaches the eye without increasing energy consumption or glare. |
| 61 Right to light | Optimisation | WELL intent: To promote exposure to daylight and views of varying distances by limiting the distance workstations can be from a window or atrium. Rockfon: Our products with a high light reflection spread light further into the space utilising it into the interior area. See performances under features 53 and 56. |
| 62 Daylight modelling | Optimisation | WELL intent: To support circadian and psychological health by setting thresholds for indoor sunlight exposure. Rockfon: Our products with a high light reflection contribute to luminance levels in simulation models. The high-end surfaces of Rockfon products provide exceptionally balanced light diffusion. |



COMFORT concept

WELL features establish requirements designed to create distraction-free, productive and comfortable indoor environments.

| Feature | Compliance | Rockfon's contribution |
|--------------------------------------|--------------|--|
| 75 Internally generated noise | Precondition | WELL intent: To reduce acoustic disruptions from internal noise sources and increase speech privacy. Rockfon: Our ceiling and wall products are made from stone wool which is by nature a highly sound-absorbent material. The products allow you to achieve high levels of acoustic comfort without having to use tiles with dimples, perforations or holes. Our dB product range provides enhanced room to room sound insulation in addition to the highest level of sound absorption (Class A). |
| 76 Thermal comfort | Precondition | WELL intent: To promote occupant productivity and ensure a sufficient level of thermal comfort. Rockfon: Our products are made from stone wool which is by nature not only a highly sound-absorbent, but also a highly thermal-insulating material. The thermal conductivity λ_D of products is 40 mW/mK and the products contribute to the thermal mass. |
| 78 Reverberation time | Optimisation | WELL intent: To help maintain comfortable sound levels by limiting reverberation times. Rockfon: Our products are highly sound absorptive, and therefore significantly contribute to the reduction in reverberation time and the increased speech intelligibility. The majority of our products fall into sound absorption class A and perform significantly better than industry average. The class A is according to ISO 11654 (Sound absorbers for use in buildings – Rating of sound absorption), and represents an α_w value between 0.9 and 1.0. |
| 80 Sound reducing surfaces | Optimisation | $\label{eq:weights} \textbf{WELL intent:} \ \ \text{To reduce sound reverberation and maintain comfortable} \\ \text{sound levels through absorptive ceilings and wall surfaces.} \\ \textbf{Rockfon:} \ \ Our products are highly sound absorptive, and therefore significantly contribute to the reduction in reverberation time and the increased speech intelligibility. Our products often have an α_w or NRC (noise reduction coefficient) of 1.0 or slightly below and are therefore above industry standard and more than fulfil the requirements in parts 1 through 3 of this feature. The sound absorption is measured in accordance with ISO 354.$ |
| 81 Sound barriers | Optimisation | WELL intent: To reduce sound transmission and acoustic disruptions through sound barriers. Rockfon: Our products are not only highly sound absorptive, but can also be highly sound blocking with the enhanced feature of our dB product range. Therefore they significantly contribute to the room to room sound insulation D _{n,f,w} , which is measured in accordance with ISO 10848-2. As communicated in the product performance section the D _{n,f,w} , for example for Rockfon Blanka dB can be 46. |



MIND concept

WELL features optimise cognitive and emotional health through design, technology and treatment strategies.

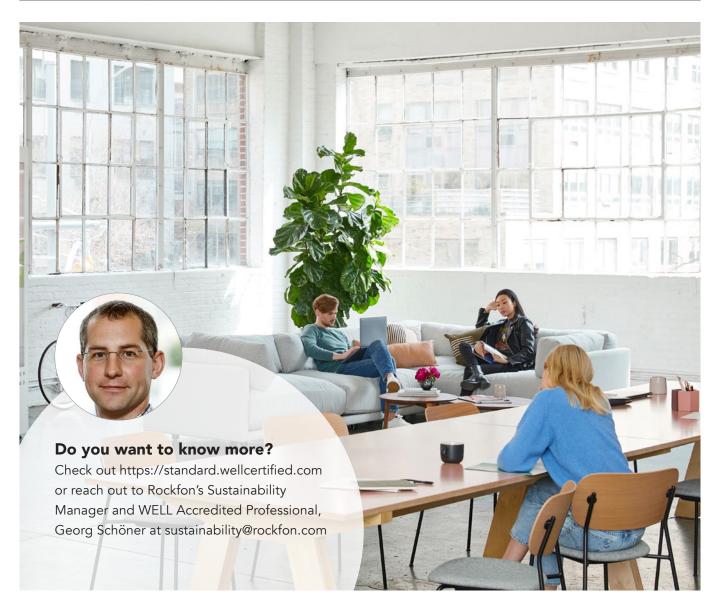
| Feature | Compliance | Rockfon's contribution |
|--|--------------|--|
| 85 Integrative design | Precondition | WELL intent: To facilitate a collaborative development process and ensure adherence to collective wellness goals. Part 2: Development Plan. |
| | | Rockfon: Our local colleague can provide you quantitative insights (from our so called insights wheel) how Rockfon solutions contribute to the building's health-oriented mission which can be added to the development plan. |
| | | WELL intent: To allow occupants to provide feedback to building owners and management, and help further develop the WELL Building Standard. |
| 86 Post-occupancy surveys | Precondition | Rockfon: The completion of the Occupant Indoor Environmental Quality (IEQ) Survey [™] from the Center for the Built Environment at UC Berkeley is a precondition. Usually acoustics is the area with the highest dissatisfaction in this survey. Our ceiling and wall products are key in creating a comfortable acoustic environment for the occupant that encourages productivity. |
| 87 & 99 Beauty and design I & II | Precondition | WELL intent: To thoughtfully create unique and culturally-rich spaces. |
| | | Rockfon: Our ceiling and wall products can be aesthetically appealing design solutions that inspire people. Colourful and elegant spaces of any form can be designed with our highly flexible products. For our flexible monolithic solution, please see Rockfon® Mono® Acoustic. |
| 88 & 100 Biophilia I (qualitative) & II (quantitative) | Optimisation | WELL intent: To nurture the innate human-nature connection within the project. |
| | | Rockfon: Nature can be brought inside with our solutions as they are available with natural surfaces and a great set of colours. In addition Rockfon® Mono® Acoustic can be shaped in unique natural forms. |
| 89 Adaptable spaces | Optimisation | WELL intent: To reduce distractions, mitigate stress and enable focused work by integrating a stimuli management program within the building. Part 2: Privacy. |
| | | Rockfon: Our products are key to provide a designated quiet space for focus, contemplation and relaxation. The best in class sound absorption levels our products provide increase speech privacy and contribute to sound reduction in order to create quiet space for relaxation and concentration. |
| 97 Material transparency | Optimisation | WELL intent: To promote material transparency along the supply chain. |
| | | Rockfon: Our products come with a Product Sustainability Declaration which includes a transparent material ingredients table. |
| | | WELL intent: To promote economic and social equity by requiring the adherence to and disclosure of fair and equitable business practices. |
| 98 Organisational transparency | Optimisation | Rockfon: Rockfon is part of the ROCKWOOL Group. The Group's performance on CO² emissions is regularly disclosed through international reporting platforms such as the Carbon Disclosure Project (CDP). Our Environmental Health & Safety performance was rated 'Prime' – the highest rating score – by leading sustainable investment rating agency ISS-oekom. The annually published sustainability report is informed by the Global Reporting Initiative (GRI) standards and can be found at www.rockwoolgroup.com/sustainability. |



INNOVATION concept

WELL encourages innovation by allowing projects to submit ideas for new features under WELL concepts.

| Feature | Compliance | Rockfon's contribution |
|---------------------------------------|--------------|---|
| 101 – 105 Innovation I to V | Optimisation | WELL intent: To promote the continuous evolution of the Standard by enabling projects to propose a new feature that addresses health and wellness in a novel way. Rockfon: Our products have the highest performace in the market and can enable projects to go above and beyond the current requirements of the existing WELL feature. In addition we are continuously innovating new applications that create the best spaces. Please reach out to us to scope and achieve an innovation together. |



Rockfon



