

Part of the ROCKWOOL group

# **Office spaces** Ceiling solutions to help people reach new heights

# Who we are

Create beautiful, comfortable and safe spaces with Rockfon<sup>®</sup> acoustic stone wool and metal solutions for ceilings.

As part of the ROCKWOOL group, Rockfon is a leading provider of acoustic stone wool ceiling solutions, metal ceiling panels and suspension systems. Providing a fast and simple way to protect people from noise, germs and the spread of fire is our way of making a constructive contribution toward a sustainable future. Our stone wool products are durable and easy to install, while offering aesthetic appeal.



# Office design and the challenges ahead

Collaborating with colleagues in today's open-plan offices can be both inspiring and challenging. Employees need workspaces that encourage efficiency and cooperation. This affects the way we design and build interior spaces. It forces us to innovate by using building materials that tackle specific challenges such as acoustics, indoor air quality and lighting.

Our Rockfon stone wool ceiling products allow you to bring your vision to life with uplifting solutions that help everyone be, do and achieve more.

Project - Central Atrium in Norway Product - Rockfon Tropic®

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# Acoustics

# The challenge: acoustics

The buzz of noisy activities in today's office environments is affecting workers' productivity and the bottom lines of businesses – and not in a good way. Trends in office building design feature more workers occupying increasingly less office space with no sound barriers between them. The days of private offices are for the most part a luxury of the past. Adaptive reuse of cavernous spaces, open collaboration layouts, large dining and recreation areas adjacent to work areas, and the constant sound of office equipment are all contributing to increased noise levels and difficulty concentrating. This is despite a longstanding body of research showing that noise negatively impacts people's productivity and health.

# A sound solution

Creating a good acoustic experience in the work environment is vital to maintaining concentration and improving overall well-being. With the disappearance of walls and sound barriers, high-performance ceiling panel materials and other types of overhead sound control, such as baffles and islands, have become the primary way designers achieve favorable acoustic conditions in oftentimes challenging conditions.

# Sound absorption (NRC): designing a better place to collaborate

To inhibit office noise from traveling through an open space and disturbing people, a highly sound-absorptive ceiling is typically required. A ceiling material's ability to reduce noise is measured by NRC (Noise Reduction Coefficient), and only certain materials can inherently achieve high NRC ratings. Due to its open porous structure, stone wool is one of those high-performing, soundabsorptive materials, providing Rockfon ceilings, baffles and islands with excellent noise reduction capabilities. Our products have been independently tested in certified laboratories, so you can be confident that you are getting it right with Rockfon.

# 50%

of employees said noise keeps them from being as productive as they could be in an open-plan office.

GSA Public Buildings Service, Sound Matters: How to achieve acoustic comfort in the contemporary office

# The importance of acoustics

After surveying 65,000 people over the past decade in North America, Europe, Africa and Australia, researchers at the University of California Berkeley report that more than half of office workers are dissatisfied with the level of "speech privacy," making it the leading complaint in offices everywhere (New York Times, May 2012).



# Sound isolation: achieving room-to-room confidentiality

While large open spaces are the majority, at times you still need to isolate a conference room or executive office for the sake of privacy. In these special situations, acoustic standards and guidelines require or advise enclosing the rooms with the appropriate wall constructions and doors. Using a suspended, modular ceiling system for sound isolation is a risky design approach because all of the noise leaks from recessed lights, open air grilles, loudspeakers, etc. greatly decrease room-toroom privacy.

# Speech intelligibility: can they hear the whole message loud and clear?

In rooms or areas where small to large groups of people gather to hear a presentation or videoconference with colleagues on another continent, having both sides of the conversation understand each other is important. Efficient communication can only be accomplished with low reverberance, lack of echoes and high speech intelligibility. In other words, sound control with high-performing, sound-absorptive ceilings. Rockfon ceiling solutions reach the highest class in sound absorption for optimum speech intelligibility.

# Indoor air quality

# The challenge: indoor air quality

With most Americans now spending up to 90% of their time indoors and primarily in an office environment, considering indoor air quality in office space design is a necessity. More studies are showing a drop in performance when indoor working environments decrease in size. Exposure to pollutants, contaminants and damp conditions put not only office workers at risk, but also the bottom line.

# Breathe easy, indoors

Rockfon ceilings provide a great line of defense against such health hazards. All of our Rockfon stone wool ceilings are GREENGUARD GOLD certified, and that's the kind of solution that lets everyone breathe easier.



# Volatile organic compounds (VOC)

VOCs are hydrocarbon compounds that have low boiling points, usually under 100°C (212°F), and therefore evaporate easily, even indoors. Many VOCs are considered harmful to your health and can be present in building materials. Choosing a low-VOC product like stone wool can improve the overall indoor air quality.



Studies by the U.S. Environmental Protection Agency (EPA) and others have shown that indoor environments can sometimes have levels of pollutants that are actually higher than levels found outside. They estimate that poor indoor air quality may cost the nation tens of billions of dollars each year in lost productivity and medical care.

# **Humidity resistance**

Humidity can weaken the structure of certain ceiling materials and cause them to sag over time. It can also expose people to harmful damp conditions. Our ceiling panels are dimensionally stable up to 100% relative humidity—even in naturally "wet" rooms like kitchens and sanitary areas—eliminating the risk of sagging.

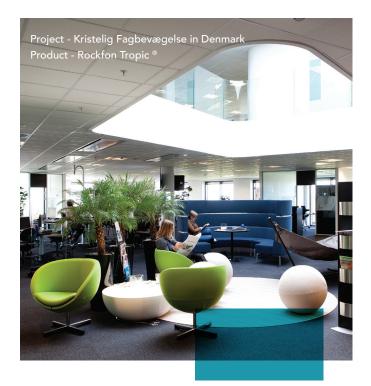
# Mold and bacteria resistance

Stone wool has no nutritional value, making it naturally resistant to harmful bacteria and molds that cause skin infections, pneumonia and other airborne illnesses. As a result, there is no need to incorporate fungicides or antimicrobials in stone wool, and in fact it can help achieve the best indoor air quality and health standard.

Improved indoor air quality can result in higher productivity and fewer lost workdays.

Environmental Protection Agency Report to Congress

# **Light reflection**



# The challenge: lighting

Light can have a profound impact on our well-being, performance and mood. Too much light can cause eyestrain and make it hard to focus. Too little can lead to headaches and drowsiness. Poor lighting can also lead to a decrease in performance especially if work relies heavily on computers (Parsons 2000, Nave 2004). Since this is now most often the case, the importance of proper lighting is vital in office environments.

# Shining a light on our ceilings

The right combination of direct versus indirect light, reflection and diffusion provides better overall lighting. The solution lies in Rockfon stone wool ceilings, which offer both the superior light reflection and diffusion needed to improve visual health and performance in today's working environments.

# Benefits of natural light vs. artificial

Direct light means an object is hit directly with the beam, whereas indirect light is the result of a reflection. Because the ceiling is the only surface in a room that is completely visible, the light reflection should be as high as possible to make effective use of both natural and artificial light. Health benefits of natural light include a more positive mood, improved productivity and lower absenteeism.

# High light reflectance

Our white ceilings reflect 83-86% of available light, dispersing natural light more effectively. They also diffuse light to limit hot spots and glare so that shining spots do not disturb the eye. And Rockfon ceilings have a homogenous surface without any visible holes or perforations.

# **Enhanced energy efficiency**

Because our ceilings have a high light reflectance, they play a significant role in enhancing energy efficiency. The better distribution of light means offices can potentially lower their light loads and reduce cooling costs. Maximizing the use of natural light also reduces the number of light fixtures required. Since lighting fixtures typically generate 23-29% of the total energy consumed in commercial buildings, this equals better savings (United States Department of Energy).

# Fire protection, by nature.

From how we work to how we feel, nothing comes close to the performance-enriching environments you'll create with a Rockfon ceiling. Our stone wool products provide many natural benefits. Along with absorbing sound and being humidity- and mold-resistant – stone wool also provides fire safety. Withstanding temperatures up to 2150°F (1177°C), stone wool does not melt, burn or create significant smoke. Choosing a Rockfon ceiling means you can help to improve overall fire safety and limit building damage.

# Aesthetics

# Aesthetics bring office spaces to life

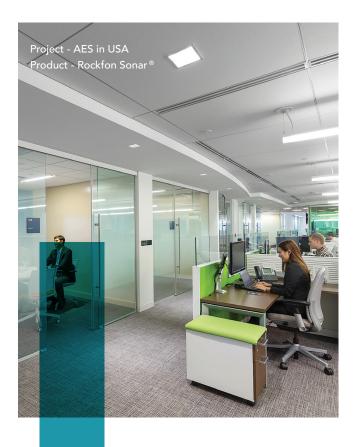
Design can influence the way people perform. The choices you make in surfaces, color, size and profiles have a profound impact on their workday.

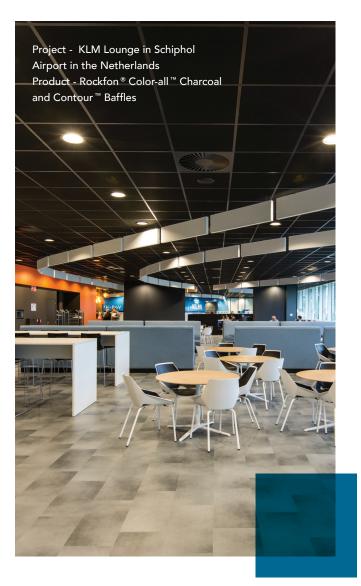
# Create vibrant shades of inspiration

With expansive color choices and themes, Rockfon provides a palette that makes a positive impact on the mood of a space. Establish harmony, infuse energy or add a touch of elegance with the Rockfon<sup>®</sup> Color-all<sup>™</sup> line. Whatever your design scheme demands, our colorful acoustic solutions are purposefully crafted to inspire and enhance.

# Bring great things to the surface

Create architectural interest with surfaces that lend a distinct look and feel to design. Our ceiling products offer two surface selections: microtextured or smooth matte surfaces, allowing you to add the right touch of character through visual weight, depth and light. Need a ceiling that's attractive and durable? Our enhanced impact-resistant surfaces provide an optimal solution that's easy to clean and maintain.





# Get that innovative edge

With a variety of edge options to select from, you can create a layout that lifts the whole performance of a room—and the people in it. Choose the concealed ceiling for a uniform, monolithic appearance, or create more structure with an exposed grid system. Baffles and islands can also work well for special design areas. From the subtle, special effect of the semiconcealed, to the minimalistic appeal of a concealed grid, you can deliver the most effective sustainable experience to meet the needs of those who occupy it.

# Find that perfect fit

Make the most of your flexibility and creativity with numerous choices in tiles, plank sizes and patterns. Available in standard 2x2 and 2x4 formats or larger, Rockfon ceilings can help you better define areas and functions in a particular space, or create a unique look by spanning planks across entire corridors.

# Sustainability

# Sustainability at work

Building a sustainable future requires a balanced approach to the environment, the well-being of people and economic prosperity. We're dedicated to improving lives—and the planet, as well. From sourcing to production to logistics—it shows in everything we do. So when you incorporate Rockfon ceilings into an office space, you are not only contributing to the health and safety of a building's occupants, you make a responsible choice for the planet.

### Raw material in abundance

Basalt rock is the primary raw material used to make Rockfon stone wool products. Each year, volcanic activity and plate tectonics produce 38,000 times more volcanic rock than we use in our products.

# **Regional sourcing for reduced impact**

To minimize our environmental impact, the majority of our facilities are strategically located in close proximity to extraction sites, reducing the production of greenhouse gases caused by transportation.

# **Reducing fossil fuel consumption**

Whenever possible, we implement practices that reduce our reliance on fossil fuels in areas such as production and transportation.

# Product certifications for a higher level of transparency

Rockfon Environmental Product Declarations (EPDs) help specifiers make informed decisions regarding the installation of sustainable building products. EPDs are available for select Rockfon panel products.

"Sustainability isn't just about energy consumption; it's also about creating a healthy work environment."

Gry Kjaer, associate at 3XN and project leader on UN City

### Waste not

Reducing waste. Safeguarding against pollutants. Conserving energy. Responsibly managing raw materials. These are the cornerstones of both Rockfon's and parent company ROCKWOOL's business models. Here are just some of the ways we're reducing our impact on the planet:



Whenever possible our plants are located close to both our mining operations and clients to minimize transport fuel costs.



The volume of waste from other industries used by ROCKWOOL is now **three times higher** than the volume we dispose of ourselves.



We support and finance sustainability projects around the world – from combating deforestation to improving air quality.



# 600K

ROCKWOOL factories receive 600,000 tons of waste material from other industries.

\$44M

Altogether, ROCKWOOL has invested more than \$44 million in recycling facilities over two years.

42% 10%

Our products contain up to 42% recycled content.

Over a five-year period, we've reduced our use of potable water in the production process by 10%.



Rockfon solutions can contribute to LEED® credits.

# Case study

# The opera office & Rockfon

Degutis Architecture Studio recently completed the OPERA OFFICE complex, located in Eastern Europe. Rafat Degutis, lead architect with Degutis Architecture Studio, talks about the project's expectations and architectural solutions.

# What was the project's objective?

The aim of the project was the creation of an office space which would be both aesthetically pleasing and functional, making it an attractive place of work to potential tenants.

### What was the inspiration?

The building is minimalist – simple, yet dynamic – with slanted façades and details like the lines of light on the glass façades. Less is more; that concept has been with us from the beginning of this project, and the National Opera House in Oslo was our inspiration.

# Why choose Rockfon products?

In Opera Office, we provide tenants with a choice of office configurations. Some companies prefer an open-plan layout, but there are others who prefer to divide their space. So we needed to use modular ceilings that wouldn't detract from the minimalist aesthetic and would provide good acoustics. For me, Rockfon products were an obvious element of the project as far as technical office space solutions are concerned. The specifications for these products are suitable for Class A offices.

# How did Rockfon help achieve your objectives?

1. Care

Their quality, and in particular details like the combination of 2x2 ft and 2x4 ft Rockfon Tropic<sup>®</sup> modules, allowed us to be creative in designing office spaces and hallways of the highest standard. They offer a variety of sound-absorbing solutions, so I usually just reach for the Rockfon catalogue. Plus, during construction, Rockfon was always there for us, which meant that the building was finished and commercialized on time, without any problems.

### Is opera office a success?

The building has a lot to offer: a great location, a product that's well suited to office space market needs and an interesting, attractive architecture, with which we wanted to show that offices of this type don't need to be boring and boxy. The fact that 100% of the space had been rental-contracted, while still at the construction phase, shows that the clients appreciated our efforts. Companies like Lloyd's, Raiffeisen Bank, Lufthansa, KPMG and others can't be wrong!

# Products

# Understanding industry ratings to find the right ceiling solution

Rockfon stone wool ceilings provide excellent sound absorption and isolation as well as light reflection. To help you compare the performance of different ceiling solutions, the following are definitions and guidelines on how to read industry ratings.

# Noise Reduction Coefficient (NRC):

NRC is important in areas where people converse in groups and where there is a high level of noise, such as open-plan offices, lobbies and meeting rooms. Most of our products have an NRC of 0.85 or above, which provides good sound absorption.

Rockfon stone wool ceiling tiles are UL/ULC certified for NRC.



# **NRC** categories:

BEST NRC 0.90

BETTER NRC 0.80

GOOD NRC 0.70

# AVOID NRC < 0.70

Rockfon stone wool ceiling tiles are UL/ULC certified for NRC.

# Light Reflection (LR)

Lighting is particularly important in work areas that rely heavily on computers. LR indicates the percentage that white ceilings reflect. The LR and diffusion of a ceiling should be as high as possible. Rockfon Alaska<sup>®</sup>, Rockfon Tropic<sup>®</sup> and Rockfon<sup>®</sup> Koral<sup>™</sup> offer the highest levels of light reflectance.



# **Rockfon Tropic®**

# Features & benefits:

- Smooth white surface
- Good sound absorption (NRC = 0.85)
- High fire performance

Rockfon<sup>®</sup> Koral<sup>™</sup>

Lightly textured white surface

• Good sound absorption (NRC = 0.85)

• Available in square lay-in and tegular

Features & benefits:

• High fire performance

- High light reflectance (LR = 0.86)
- Available in square lay-in and tegular

# **Applications:**

- Open-plan offices Single offices
- Classrooms
  Retail/shops





Applications: • Open-plan offices • Classrooms

• High light reflectance (LR = 0.86)

- Retail/shops
  Kitchens
- Food preparation Corridors
- Industrial areas
- Sanitary areas (bath, shower rooms)

# **Rockfon Alaska®**

# Features & benefits:

- Elegant smooth white surface
- High sound absorption (NRC = 0.90)
- High fire performance
- High light reflectance (LR = 0.86)
- Optimal design freedom thanks to a large selection of edges (lay-in, tegular and concealed)

Corridors

• Retail/shops

# **Applications:**

- Open-plan offices Single offices
- Classrooms
- Meeting rooms
- Waiting rooms
- Multifunctional rooms
- Foyers, lobbies and reception areas

# Products Feature products



# Rockfon Sonar®

# Features & benefits:

- Elegant lightly textured white surface
- High sound absorption (NRC = 0.70-0.95)
- High fire performance
- High light reflectance (LR = 0.85)
- Optimal design freedom thanks to a large selection of edges (lay-in, tegular, concealed)
- Available in a variety of sizes and formats, including planks

# **Applications:**

- Open-plan offices
- Single offices
- Classrooms
- Corridors
- Meeting rooms
- Foyers, lobbies and reception areas
- Retail/shops
- Waiting rooms
- Multifunctional rooms



# Rockfon Sonar<sup>®</sup> dB

# Features & benefits:

- Elegant lightly textured white surface
- Optimal acoustical comfort combining high sound insulation (CAC up to 43 dB) with good sound absorption (NRC = 0.85)
- High fire performance
- High light reflectance (LR = 0.85)

# **Applications:**

- Single offices
- Meeting rooms
- Executive and legal offices
- Healthcare offices and patient rooms



# Rockfon Alaska® dB

# Features & benefits:

- Elegant smooth white surface
- Combines high sound insulation (CAC = 35) with good sound absorption (NRC = 0.85)
- High fire performance
- High light reflectance (LR = 0.86)
- Available in square lay-in and tegular

# **Applications:**

- Single offices
- Meeting rooms
- Executive and legal offices
- Medical offices
- Patient rooms





# Features & benefits:

- 34 exclusive colors organized in 6 themes
- Smooth surface
- High sound absorption (NRC = 0.85-0.95)
- High fire performance
- Optimal design freedom due to the variety of edges (lay-in, tegular and concealed) and colors

# Applications:

- Foyers
- Auditoriums
- Restaurants, cafeteria
- Retail/shops
- Schools
- Waiting rooms
- Leisure
- Museums





# Rockfon<sup>®</sup> Contour<sup>™</sup>

# Features & benefits:

- Innovative and aesthetically pleasing frameless acoustical baffle
- High sound absorption contributes to acoustic comfort
- Fast and easy to install
- Ideally suited for acoustical corrections

### **Applications:**

- Restaurants and cafés
- Museums
- Call centers
- Open-plan offices
- Industrial

# Quality and customer service

# Dedicated to keeping your projects running smoothly

At Rockfon, we constantly seek new ways to satisfy existing customers and win new ones. This means constantly challenging ourselves and our ideas to improve our products and service, and reduce costs.

# Quality we stand behind

Produced with integrity and excellence, we're so confident in the quality and durability of our products, our stone wool panels come with a 30-year warranty.

# Flexibility to meet various needs

We understand that one size rarely fits all. That's why our solutions can be adapted to practically any space and our services tailored to your needs.



# **Rockfon<sup>®</sup> Island**<sup>™</sup>

# **Features & benefits:**

- Innovative and aesthetically pleasing frameless acoustical island
- Available in square and rectangular format
- High sound absorption contributes to acoustic comfort
- Fast and easy to install
- Ideally suited for acoustical corrections

# **Applications:**

- Restaurants and cafés
- Waiting rooms
- Call centers
- Open-plan offices

# Availability you can count on

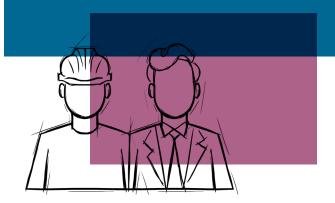
We strive to have a large selection of products available for fast delivery at all times.

# On-time delivery, every time

In the building industry, time lost is money lost. So when we commit to a deadline, we meet it so that you can deliver your projects on time.

# Expert advice and easy to work with

We put our passion, heart, design and engineering into our products and your projects, so you can be sure to get the expert advice you need and a total commitment.



Rockfon<sup>®</sup> is a registered trademark of the ROCKWOOL Group.

# Rockfon

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