

# Acoustic Solutions for Data Centers

Durable, easy-to-install stone wool acoustic ceiling tiles that meet strict safety standards







## What will future data centers look like?

The importance of data centers has been highlighted in recent years in ensuring the operation of IT companies and in our daily lives. 5G data, the Internet of Things (IoT) and Edge Computing will all have a significant impact on data centers in the coming years.

For a new data center build or retrofit project, stone wool acoustic ceiling tiles are a durable and high-performance material choice supported by a 30-year warranty. Rockfon's low-emitting stone wool ceiling solutions are fire-resilient and resistant to mold, bacteria and humidity to support a healthy, safe and efficient indoor environment.

**30**  
YEAR  
WARRANTY



# Key trends in data centers design

**Data centers have become a vital part of modern life.**

Data centers are the backbone supporting increased internet traffic, offering collaborative software for businesses and maintaining data security. Over the past few years, the world has seen an increase in remote working and learning. The industry is going through an exciting transition as it adjusts to this new normal and responds to rapidly changing technology demands due to the need for immediate information access.





## Plug and play

For data centers, rapid change is inevitable as facility owners react, adapt or respond to fast-paced tech cycles. As a result, the design needs to be adjustable, adaptable and especially scalable. Data centers need to be built in a prototypical, modular fashion that enables them to grow and change out efficiently.

### How can Rockfon help?

Rockfon's dedicated range of acoustical ceiling tiles is designed to meet the demanding requirements of modern data centers. It allows them to be installed, demounted, sized or resized with ease. Rockfon offers full creative freedom and flexibility to future-proof your data center.



## Safety built in

Data centers are the central nervous system of the economy, and the facilities must be prepared for risks. There are many things that can go wrong and cause a data center to fail. These can include cyber incidents, hardware degradation due to acoustic vibration, heat threat, high humidity levels, static electricity and risk of fire.

### How can Rockfon help?

Apart from having 60 years of experience in delivering high-end solutions, Rockfon also designs its products with safety in mind. Made from stone wool, Rockfon products are naturally humidity- and fire-resistant and withstand various methods of cleaning and disinfection.

## Sustainability

The data center of the future is undoubtedly becoming greener, with property developers demanding more efficient and environmentally considerate data centers. As a result, this shines a brighter spotlight on product materials and their durability.

### How can Rockfon help?

Rockfon's products are made from naturally sourced stone wool that is guaranteed to last at least 30 years. By using Rockfon products, which are supported by a comprehensive range of UL GREENGUARD Gold certifications, HPDs (Health Product Declarations), EPDs (Environmental Product Declarations), and Declare Labels, you can leave a positive impact on people's wellbeing and the planet.



## Embodied Carbon

Embodied carbon is increasingly recognized as a pivotal factor in data center construction. As the industry evolves, there is a growing awareness of how emissions significantly affect a facility's total carbon footprint. This highlights the need for comprehensive sustainability strategies from the onset of design.

### How can Rockfon help?

Aligned with these industry shifts, Rockfon's approach includes offering a portfolio of stone wool ceiling solutions that help data centers reduce their overall environmental impact. These products are intentionally designed with sustainability in mind, featuring properties that enhance both the longevity and functionality of data centers. This also contributes to a reduced need for material replacements, thereby decreasing the total embodied carbon associated with construction.

# Server room

## Ensuring safety when designing a server room

### Proper environmental controls and venting

Server rooms are enclosed areas that store servers for the entire data center. Network connectivity and power, room temperature control and ventilation, room and rack security, and fire and seismic protection must all be considered when designing these settings.

### Maximize efficiency, minimize downtime

The components of a server room must be safeguarded from the detrimental effects of—for example, extreme temperatures, fire, humidity, etc.—for it to function properly. Installing the proper ceiling solution is critical to maximizing a data center's efficiency, ensuring minimal downtime.



## Recommended ceiling tiles for server rooms

### Rockfon Sonar® - DC

Rockfon Sonar® - DC acoustical ceiling tiles are made from stone wool and feature excellent sound absorption & anti-static performance. With a low carbon footprint, stone wool's inherent capabilities of excellent fire performance, sag, mold & mildew resistance are delivered in an elegant, lightly textured white surface. Sealed edges prevent the spread of particulates. The top lacquer used on the surface provides enhanced cleaning properties and resistance to scratches and marks.

#### Key Features

**Visible Side:** Lightly Textured White

**NRC:** 0.95

**Fire Performance:** Class A - FSI 0, SDI 0 per ASTM E84 & FSI 10, SDI 5 per CAN/ULC S102

**Cleaning:** Vacuum, damp cloth, slightly alkaline detergent cleaning

#### Thermal Insulation:

Panel Thickness: 1 Inch (I-P), 25.4 mm (SI)

Thermal Resistance (R-value): 3.47 h.ft<sup>2</sup>.°F/Btu (I-P), 0.61 m<sup>2</sup>.K/W (SI)

**Mold & Mildew Resistant:** Inherent, tested per ASTM D3273 and ASTM C1338 (see more on p.9)

**Humidity & Sag Resistant:** Inherent, tested per ASTM C367 (see more on p.9)

#### Embodied Carbon:

Global Warming Potential (GWP) kg of CO<sub>2</sub>-eq (per functional unit) from Stages A1-A3: 4.15 kg CO<sub>2</sub>-eq (per 1m<sup>2</sup>) / 0.386 kg CO<sub>2</sub>-eq (per 1ft<sup>2</sup>)

**Sustainability Documents:**

- UL GREENGUARD Gold
- Environmental Product Declaration
- 3rd-Party Verified Health Product Declaration

### Rockfon Alaska® - DC

Rockfon Alaska® - DC acoustical ceiling tiles feature high sound absorption with an NRC of up to 0.90, due to its stone wool core. With a low carbon footprint, stone wool's inherent capabilities of excellent fire performance, sag, mold & mildew resistance are delivered in a smooth white finish. Anti-static properties support overall safety.

#### Key Features

**Visible Side:** Smooth White Surface

**NRC:** 0.90

**Fire Performance:** Class A - FSI 0, SDI 5 per ASTM E84 & FSI 5, SDI 0 per CAN/ULC S102

**Cleaning:** Vacuum

#### Thermal Insulation:

Panel Thickness: 3/4 Inch (I-P), 19 mm (SI)

Thermal Resistance (R-value): 2.6 h.ft<sup>2</sup>.°F/Btu (I-P), 0.46 m<sup>2</sup>.K/W (SI)

**Mold & Mildew Resistant:** Inherent, tested per ASTM D3273 and ASTM C1338 (see more on p.9)

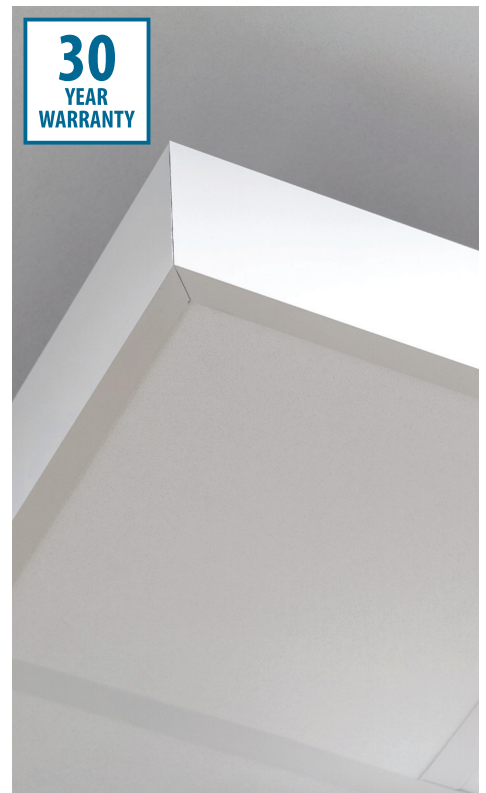
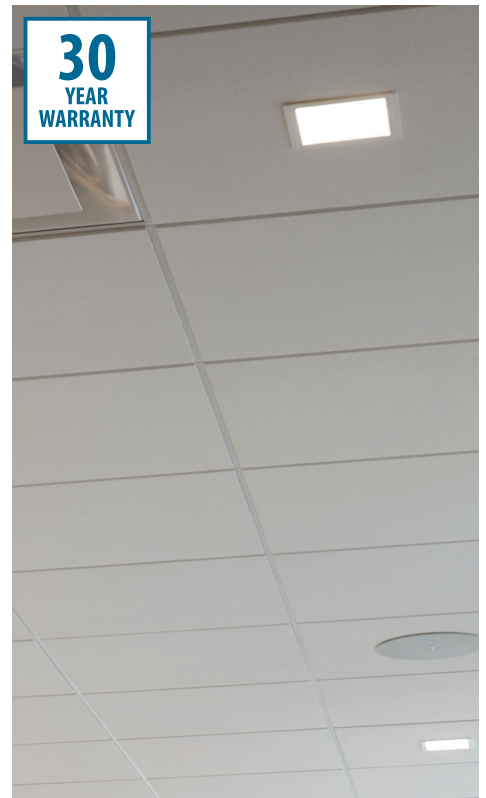
**Humidity & Sag Resistant:** Inherent, tested per ASTM C367 (see more on p.9)

#### Embodied Carbon:

Global Warming Potential (GWP) kg of CO<sub>2</sub>-eq (per functional unit) from Stages A1-A3: 3.49 kg CO<sub>2</sub>-eq (per 1m<sup>2</sup>) / 0.325 kg CO<sub>2</sub>-eq (per 1ft<sup>2</sup>)

**Sustainability Documents:**

- UL GREENGUARD Gold
- Environmental Product Declaration
- 3rd-Party Verified Health Product Declaration
- Declare Label





## Rockfon Tropic® - DC

Rockfon Tropic® - DC acoustical ceiling tiles are made from stone wool and feature an NRC of up to 0.85. With a low carbon footprint, stone wool's inherent capabilities of excellent fire performance, sag, mold & mildew resistance are delivered in a smooth white finish. Anti-static properties support overall safety.

### Key Features

**Visible Side:** Smooth White Surface

**NRC:** 0.85

**Fire Performance:** Class A - FSI 0, SDI 5 per ASTM E84 & FSI 5, SDI 0 per CAN/ULC S102

**Cleaning:** Vacuum

#### Thermal Insulation:

Panel Thickness: 5/8 Inch (I-P), 15.9 mm (SI)

Thermal Resistance (R-value): 2.17 h.ft<sup>2</sup>.°F/Btu (I-P), 0.38 m<sup>2</sup>.K/W (SI)

**Mold & Mildew Resistant:** Inherent, tested ASTM D3273 and ASTM C1338 (see more on p.9)

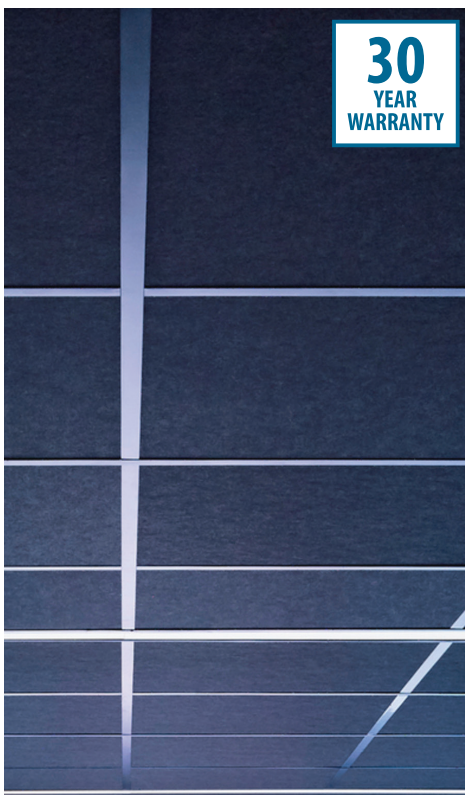
**Humidity & Sag Resistant:** Inherent, tested ASTM C367 (see more on p.9)

#### Embodied Carbon:

Global Warming Potential (GWP) kg of CO<sub>2</sub>-eq (per functional unit) from Stages A1-A3: 2.04 kg CO<sub>2</sub>-eq (per 1m<sup>2</sup>) / 0.190 kg CO<sub>2</sub>-eq (per 1ft<sup>2</sup>)

**Sustainability Documents:**

- UL GREENGUARD Gold
- Environmental Product Declaration
- Health Product Declaration
- Declare Label



## Rockfon® Cinema Black™ - DC

Rockfon® Cinema Black™ - DC acoustical ceiling tiles can be used to create a black ceiling, enhancing the aesthetics of spaces while providing excellent sound absorption. With a low carbon footprint, the inherent performance properties of stone wool include sag, humidity, and fire resistance, delivered in a smooth black finish. Anti-static properties help support overall safety.

### Key Features

**Visible Side:** Factory Painted Black Glass Scrim

**NRC:** 0.85

**Fire Performance:** Class A - FSI 5, SDI 0 per ASTM E84, & FSI 15, SDI 5 per CAN/ULC S102

**Cleaning:** Vacuum

#### Thermal Insulation:

Panel Thickness: 5/8 Inch (I-P), 15.9 mm (SI)

Thermal Resistance (R-value): 2.17 h.ft<sup>2</sup>.°F/Btu (I-P), 0.38 m<sup>2</sup>.K/W (SI)

**Mold & Mildew Resistant:** Inherent, tested ASTM D3273 and ASTM C1338 (see more on p.9)

**Humidity & Sag Resistant:** Inherent, tested ASTM C367 (see more on p.9)

#### Embodied Carbon:



Global Warming Potential (GWP) kg of CO<sub>2</sub>-eq (per functional unit) from Stages A1-A3: 2.43 kg CO<sub>2</sub>-eq (per 1m<sup>2</sup>) / 0.226 kg CO<sub>2</sub>-eq (per 1ft<sup>2</sup>)

**Sustainability Documents:**

- UL GREENGUARD Gold
- Environmental Product Declaration



# Product overview

Performance	Rockfon Sonar® - DC	Rockfon Alaska® - DC	Rockfon Tropic® - DC	Rockfon® Cinema Black™ - DC
 Sound Absorption	0.95	0.90	0.85	0.85
 Reaction to Fire	Class A per ASTM E84 Flame Spread Index - 0 Smoke Developed Index - 0 CAN/ULC S102: E84 Flame Spread Index - 10 Smoke Developed Index - 5	Class A per ASTM E84 Flame Spread Index - 0 Smoke Developed Index - 5 CAN/ULC S102: Flame Spread Index - 5 Smoke Developed Index - 0	Class A per ASTM E84 Flame Spread Index - 0 Smoke Developed Index - 5 CAN/ULC S102: Flame Spread Index - 5 Smoke Developed Index - 0	Class A per ASTM E84 Flame Spread Index - 5 Smoke Developed Index - 0 CAN/ULC S102: Flame Spread Index - 15 Smoke Developed Index - 5
 Humidity and Sag Resistance	Stone wool ceiling tiles are tested to ASTM C367 (Standard Test Methods for Strength Properties of Prefabricated Architectural Acoustical Tile or Lay-In Ceiling Panels) and won't sag or warp even in 100% RH			
 Hygiene	Stone wool ceiling tiles are tested to ASTM D3273 (Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings) achieving Level 10 (no mold growth) results and ASTM C1338 (Standard Test Method for Determining Fungi Growth Resistance of Insulation Materials and Facings) passing the test with no fungal growth results			
 Cleaning	<ul style="list-style-type: none"> <li>Vacuum</li> <li>Damp Cloth</li> <li>Diluted Chemical Solution (Ammonia, Chlorine, Hydrogen Peroxide)</li> </ul>	Vacuum	Vacuum	Vacuum
 Clean Room	ISO Class 5	-	-	-
 Light Reflection	0.85	0.86	0.86	0.04
 Sustainability	<ul style="list-style-type: none"> <li>UL GREENGUARD Gold</li> <li>Environmental Product Declaration (Product Specific, Type III)</li> <li>3rd-Party Verified (3PV) Health Product Declaration</li> </ul>	<ul style="list-style-type: none"> <li>UL GREENGUARD Gold</li> <li>Environmental Product Declaration (Product Specific, Type III)</li> <li>3rd-Party Verified (3PV) Health Product Declaration</li> <li>Declare Label</li> </ul>	<ul style="list-style-type: none"> <li>UL GREENGUARD Gold</li> <li>Environmental Product Declaration (Product Specific, Type III)</li> <li>Health Product Declaration</li> <li>Declare Label</li> </ul>	<ul style="list-style-type: none"> <li>UL GREENGUARD Gold</li> <li>Environmental Product Declaration (Product Specific, Type III)</li> </ul>
 Environment	Refer to product datasheet for recycled content available at <a href="http://rockfon.com">rockfon.com</a>			
 Embodied Carbon	Global Warming Potential (GWP) kg of CO <sub>2</sub> -eq (per functional unit) from stages A1 - A3: 4.15 kg CO <sub>2</sub> - eq (per 1m <sup>2</sup> ) / 0.386 kg CO <sub>2</sub> - eq (per 1ft <sup>2</sup> )	Global Warming Potential (GWP) kg of CO <sub>2</sub> -eq (per functional unit) from stages A1 - A3: 3.49 kg CO <sub>2</sub> - eq (per 1m <sup>2</sup> ) / 0.325 kg CO <sub>2</sub> - eq (per 1ft <sup>2</sup> )	Global Warming Potential (GWP) kg of CO <sub>2</sub> -eq (per functional unit) from stages A1 - A3: 2.04 kg CO <sub>2</sub> - eq (per 1m <sup>2</sup> ) / 0.190 kg CO <sub>2</sub> - eq (per 1ft <sup>2</sup> )	Global Warming Potential (GWP) kg of CO <sub>2</sub> -eq (per functional unit) from stages A1 - A3: 2.43 kg CO <sub>2</sub> - eq (per 1m <sup>2</sup> ) / 0.226 kg CO <sub>2</sub> - eq (per 1ft <sup>2</sup> )

# Rockfon is your partner towards sustainable development

Sustainability sits at the heart of Rockfon's research and development. It's why Rockfon uses natural stone, constantly working towards a lower carbon footprint in its manufacturing

Many property developers have started to choose building materials that can contribute to sustainable construction. Building certifications like LEED, BREEAM or WELL are growing in popularity, and Rockfon products adhere to their requirements.

The Rockfon product portfolio is well-placed to tackle many of today's biggest sustainability and development challenges, and Rockfon offers carefully designed, innovative sustainable solutions for your comfort, safety and for the benefit of the environment.





Rockfon® is a registered trademark of ROCKWOOL Group.

## Rockfon is committed to global change

Rockfon is part of ROCKWOOL Group, the world leader in stone wool manufacturing, transforming volcanic rock into safe, sustainable products. Rockfon is committed to enriching the lives of everyone who experiences its products and services, and to helping customers and communities tackle many of today's biggest sustainability and development challenges. ROCKWOOL's actions contribute to 11 out of 17 United Nations Sustainable Development Goals (SDGs), also in 2020, ROCKWOOL signed up to the Science Based Targets initiative (SBTi) and committed to a verified and approved plan for an ambitious one-third reduction of its lifecycle greenhouse gas emissions by 2034, using 2019 as the baseline.

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