

ROCKWOOL® is the registered trademark of ROCKWOOL Group.



ROCKWOOL VentRock DD

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RW-CNVRDD-BRO/06-2022/Z/EN



Improve Energy Efficiency
Reduce Carbon Footprint
Ensure Sustainable Development



ROCKWOOL Group

We are the world leading stone wool manufacturer, with innovative products and systems, committed to protecting the environment and improving people's life.

ROCKWOOL Group is a global leader in thermal insulation, providing world-class firesafe and thermal insulation products and solutions for building structures. Our products help secure fire safety and reduce energy consumption of buildings, coupled with excellent performance in sound absorption, noise reduction and indoor comfort. ROCKWOOL provides green solutions for the horticulture industry, special engineered stone wool fiber for the manufacturing industry, as well as effective insulation solutions for refining and processing industries, marine and offshore industries and other areas. We also have acoustic and vibration reduction system for modern infrastructure construction.

ROCKWOOL Group has a major market share in Europe, but we have also actively expanded our market in Russia, North America, India and East Asia, with more production, sales and service activities operating locally. ROCKWOOL Group's global network helps promote our products and systems around the world.

Headquartered in Denmark, ROCKWOOL group is a listed company of NASDAQ OMX Nordic exchange Copenhagen. At present, it has 51 manufacturers around the world, nearly 12,000 employees and a sales network of more than 120 countries and regions around the world. At the level of corporate governance, ROCKWOOL has a perfect organizational structure and decision-making mechanism of listed companies, which are supervised and managed by the group's management, the board of directors and the

general meeting of shareholders respectively, and the audit committee and Remuneration Committee ensure the smooth development of the group's business strategy.

In China, ROCKWOOL provides a wide range of products for building insulation and other industrial areas that cater to different applications. We have more than 20 years of exploration and operation in China. ROCKWOOL stone wool is integrated with several excellent strengths: fire resilience, thermal properties, acoustic capabilities, durability and sustainability etc. Our products can stand the test of time. They protect buildings and people in any environment while reducing the carbon footprint. ROCKWOOL protects the environment and makes our society develop with a more sustainable approach.

ROCKWOOL China has an annual stone wool production capacity of 100,000 tons in Qingyuan and Yangzhou, and subsidiaries located in Beijing, Guangzhou, Hong Kong, Taiwan, Philippines and other major cities at present.

100 Times

Energy saved in the life cycle of building application is 100 times than energy consumption during the production.



ROCKWOOL VentRock DD

Introduction

VentRock DD is an innovation insulation solution provided by ROCKWOOL. The product is made from natural rocks such as basalt and limestone. The rocks are melted in a cupola at temperature of higher than 1450°C, and the molten lava is fiberized by a spinner. The inorganic fibres are bonded together using a thermosetting resin to form the final product which is cut into suitable size for easy handling and installation. Comparing with common stone wool slab used in ventilated façade or non-transparent curtain wall system, VentRock DD features lower density, higher mechanical strength, and easier installation. It is an ideal combination of good thermal performance, fire resistance, acoustic, durability and sustainability.

Application

VentRock DD is an ideal insulation material for ventilated façade or non-transparent curtain wall system of residential, commercial, and industrial constructions.

Fire spreads rapidly once it breaks out due to the chimney effect in curtain wall system, so the fire safety of curtain wall is extremely important. VentRock DD has excellent performance in fire resistance, with a wide range of great features such as remarkable strength, high water repellence, and low thermal conductivity. VR-DD is an ideal insulation for curtain walls.

The cavity between the curtain wall decoration panel and the stone wool insulation layer in the curtain wall system is often in a state of high temperature, humidity and rainwater infiltration. The ROCKWOOL VentRock DD has a strong surface layer manufactured by a special process, which can reduce the adverse effects of temperature and humidity stress on stone wool and enhance the durability of insulation layer.

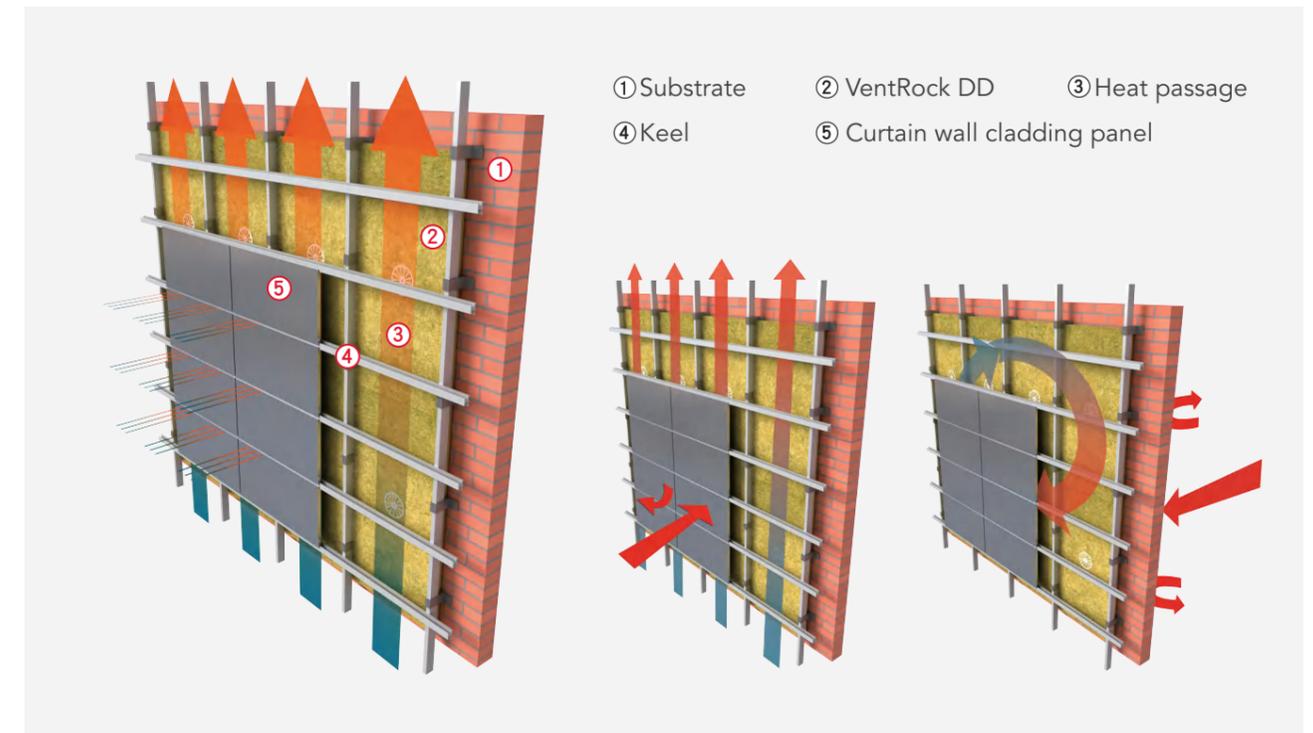


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Typical Structure

A curtain wall system is an outer covering of building that consists of cladding panels and supporting structure. It is subjected to an imposed displacement of the supports in the plane of the wall, and curtain wall itself does not carry any load from the main structure. It consists of substrate, supporting structure, insulation layer, anchor fixing and other parts. The curtain wall system can be applied with ROCKWOOL VR-DD which has multiple benefits, e.g. light in weight, easy construction, noise isolation, rainproof, wind pressure resistance and thermal insulation.



Technical Parameters

Item	Unit	VR-DD	Standard
Nominal density	kg/m ³	≤65	GB/T 5480
Fire performance	-	A (A1)	GB 8624
Thermal conductivity	W/ (m·k)	≤0.036	GB/T 10295
Tensile strength of top layer	kPa	≥2.5	GB/T 25975
Acidity ratio	-	≥1.8	GB/T 1549
Water repellence	%	≥99.5	GB/T 19686
Shot content (shot size>0.25mm)	%	≤5	GB/T 25975
Short term water absorption (Partial immersion, 24h)	kg/m ²	≤0.25	GB/T 25975
Long term water absorption (Partial immersion, 28d)	kg/m ²	≤0.5	GB/T 25975
Moisture absorption	%	≤0.5	GB/T 19686

Suitable for ultra-low/ near-zero/ zero energy consumption curtain wall building thermal insulation system

With the improvement of building energy-saving standards and the development of low-carbon and carbon-reduction technologies, the thickness of the thermal insulation layer in the curtain wall system will continue to increase, which will adversely affect the structural strength and stability of the insulation material itself, and also increase the construction and installation difficulty, posing new challenges to the installation quality.

The high density of the surface layer of VentRock effectively improves the pull-through resistance of anchoring bolts, and enhances the structural safety and stability of the insulation layer. In the meanwhile, the high water-tightness brought by high density provides waterproof and moisture-proof advantages, minimizes the risk of waterproof problems in the stone wool insulation layer, and provides users with a secure and reliable thermal insulation, fire proof, and durable thermal insulation system.

Product Range

Product code	Thickness (mm)	Size (mm)
VR-DD	50-150	1200×600

Benefits

Comparing with traditional stone wool slab (80kg/m³-100kg/m³) used in curtain wall system:

- Product weight reduced by more than 15%, resulting in weight reduction of the whole curtain wall system, easier to transport, handle and install;
- Higher top layer tensile strength, better wind load resistant performance;
- Higher overall mechanical strength, less wastage during installation;
- More flexible bottom layer allows easier flattening during installation;
- Class A1 non-combustible material, melting point above 1000°C;
- Good acoustic performance and noise reduction;
- Does not contain asbestos, non-hazardous to health;
- Does not release toxic smoke, safe to use;
- Good dimensional stability, strong resistance to shrinkage at temperature encountered in fire conditions;
- Excellent air permeability, no corrosion to metal and components within the structure;
- Physically and chemically stable;
- No foaming agent and fire retardant during production process, contribute to sustainability of the environment.



Remind when starting design and construction

- VentRock DD has two sides with different mechanical strength, a ROCKWOOL mark is placed on the side with higher strength for ease of identification. When installing the product, the marked side must be facing towards the outside;
- Avoid using small size slab when installing VentRock DD. Each slab shall be fixed closely to adjacent ones, and in such a way that gaps are staggered between rows and columns;
- Cutting should be done by sharp tools like knife or panel saw;
- Requirements of the design drawing, regulations and other applicable standards shall be complied.

Packaging and Storage

- ROCKWOOL VentRock DD is shrink-wrapped in polyethylene sheets for ease of handling, transportation, storage and identification.
- Do not expose directly to water during transportation to prevent damage to products;
- VentRock DD should be stored in a ventilated indoor space or in an open area covered with a tarpaulin.



Installation

