



Safe 'n' Silent™ Pro



General Product Information

ROCKWOOL stone wool products are made of basalt, a volcanic stone.

ROCKWOOL stone wool products are non-combustible with a melting point approximately 1000°C. They are particularly suitable for thermal insulation, fire protection and sound reduction or absorption.

ROCKWOOL stone wool is inorganic and contains no nutritious substance. Therefore it will not be attacked by microorganisms. Stone wool will not rot and does not attract vermin.

No CFCs, HFCs, HCFCs, or asbestos are used in the manufacture of ROCKWOOL stone wool products.

Applications

ROCKWOOL Safe 'n' Silent Pro is designed and manufactured to achieve excellent acoustic insulation performance in all types of drywall partition configurations. It is recommended to be used for drywall partition applications in hospitals, cinemas, schools, offices, residential and industrial buildings.

Safe 'n' Silent Pro meets the requirements of Noise Criteria (NC) specifications developed by the ROCKWOOL company. NC comprehensively measures the noise levels of a room and with the use of NC ratings, recommends the desired acoustic comfort level of a room/space.

Facings

Optional facing with one or two sided glass tissue is available upon request for perforated wall panel.

For more information, please contact your local representatives.

Packaging and Storage

ROCKWOOL Safe 'n' Silent Pro is shrink-wrapped in polyethylene sheets for ease of handling, transportation, storage and identification.

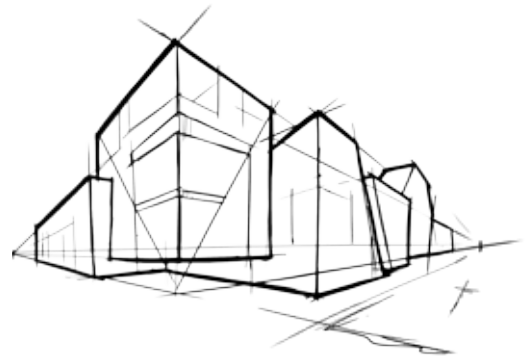
Products should be stored indoors or under waterproof covering.

Technical Parameters

| Product Name | Safe 'n' Silent Pro 330 | Safe 'n' Silent Pro 350 | Safe 'n' Silent Pro 370 | Safe 'n' Silent Pro 380 | Standards |
|--|---|--|--|---|----------------------------|
| Noise Absorption Co-efficient at 50mm (NRC) | 0.90 | 1.00 | 1.00 | 1.00 | EN ISO 354 / ASTM C 423-01 |
| Fire Performance | Non-combustible / A1 Fire Classification | Non-combustible / A1 Fire Classification | Non-combustible / A1 Fire Classification | Non-combustible / A1 Fire Classification | EN13501-1 |
| Melting Point | More than 1000°C | More than 1000°C | More than 1000°C | More than 1000°C | ASTM E794 |
| *Thermal Conductivity 20°C λ Value (W/mK) | 0.036 | 0.035 | 0.034 | 0.033 | ASTM C518 |
| R-value at 50mm thickness thickness (m ² K/W) Water | 1.389 | 1.429 | 1.471 | 1.515 | |
| Water Absorption (partial immersion) | 1.0kg/m ² | 0.5kg/m ² | 0.5kg/m ² | 0.5kg/m ² | EN1609.97 |
| Water Vapor Absorption | Less than 0.04 Vol % | Less than 0.04 Vol % | Less than 0.04 Vol % | Less than 0.04 Vol % | ASTM C1104/ C1104M |
| Thickness | 50, 75, 100mm | 50, 75, 100mm | 50, 75, 100mm | 50, 75, 100mm | EN822 |
| Applications | Recommended for commercial applications such as retail and office partition walls | Recommended for all drywall partition applications | Recommended for dry-wall with high acoustic insulation requirement | Recommended for dry-wall with high acoustic insulation requirements | |

* Thermal conductivity values are based on testing conducted in external accredited laboratory in accordance to ASTM C518 : 1991. Test reports are available upon request. For design, it is recommended to use a safety factor of 20% as design value.

* For UL approved products, please contact our local representative.



G00085
 G00094
 G00095
 SGBP 2018-1622



SGBP 2018-1897
 SGBP 2018-1898



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Cool 'n' Comfort™ Blanket and Slab



General Product Information

ROCKWOOL stone wool products are made of basalt, a volcanic stone, which is the world's most abundant natural resource.

ROCKWOOL stone wool products are non-combustible with a melting point more than 1000°C. They are particularly suitable for thermal insulation, fire protection and sound reduction or absorption.

ROCKWOOL stone wool is inorganic and contains no nutritious substance. Therefore it will not be attacked by microorganisms. Stone wool will not rot and does not attract vermin.

No CFCs, HFCs, HCFCs, or asbestos are used in the manufacture of ROCKWOOL stone wool products.

Introduction

ROCKWOOL Cool 'n' Comfort series is designed for single or double skin metal roof, with or without skylight, to satisfy U-value requirements in order to achieve the desired roof thermal transmittance value (RTTV). It is also available with a radiant barrier facing to suit the requirements of all types of roofs

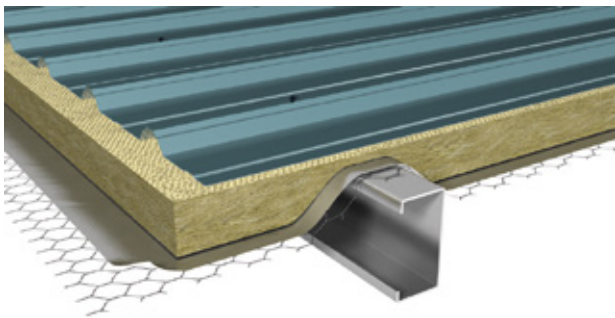
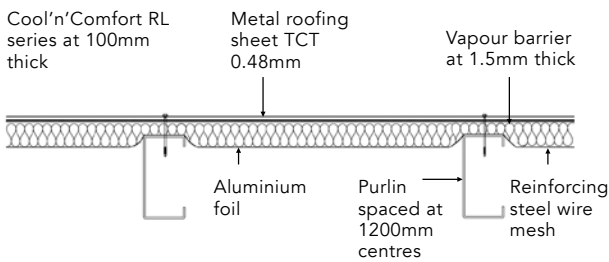
in commercial and industrial buildings.

Cool 'n' Comfort is highly effective in reducing solar heat gain through the roof for non air-conditioned buildings; and where air-conditions are used, Cool 'n' Comfort helps to save energy and reduce energy costs. The unique properties of Cool 'n' Comfort contribute to make an energy efficient, environmentally sustainable and fire safe roofing system, thereby creating a cool, comfortable and safe indoor environment.



Applications

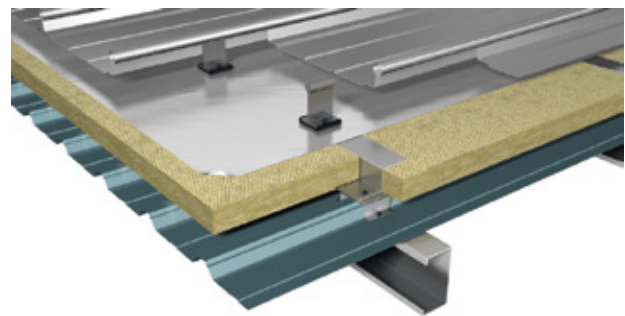
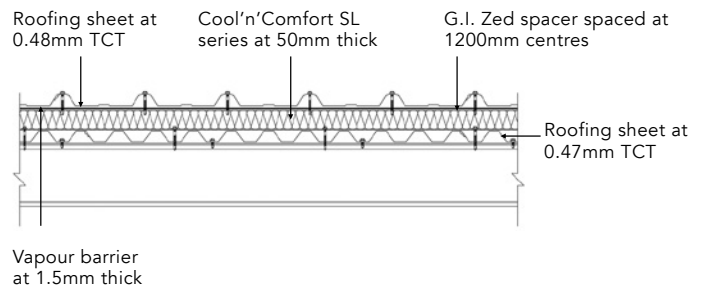
Metal roofing systems are generally categorized as single skin metal roof or double skin metal roof. In single skin roof system, insulation is installed below the metal cladding sheet held by reinforcing steel wire mesh and aluminum foil rolled over purlins. This roofing system is an economically sound option for most industrial buildings. Cool 'n' Comfort RL Series is the ideal non-combustible light weight thermal insulation solution for single skin roofing system.



Single Skin Roof System

The double skin roofing system is a high performance roofing system comprising of an aesthetically designed trapezoidal or standing seam profile metal sheet on the top and a metal trapezoidal tray at the bottom. The two metal sheets are fixed together with a z-purlin creating a gap in the roof space for installation of insulation and vapor barrier. When coupled with Cool 'n' Comfort SL Series stone wool insulation, it boost the performance of the double skin metal roofing system with improved level of thermal insulation, acoustic and fire protection.

Cool 'n' Comfort SL, a semi rigid slab product, is a versatile insulation that is available in various sizes to provide ease of installation and a perfect fit between purlins.



Double Skin Roof System

Note: All systems drawings are not drawn to scale.

Water Repellent

Cool 'n' Comfort Series is specially formulated with a silicone water repellent coated onto each strand of the stone wool fibres. *This special coating allows Cool 'n' Comfort to repel rain water that comes into contact with the product, at the same time ensuring the product's excellent thermal and acoustic performance even after exposure to water.

As Cool 'n' Comfort is commonly applied or left outdoor during installation, the silicone water repellent is added into the product as a standard offering.



Product Range and Packaging

Cool 'n' Comfort comes in the form of blankets or slabs to suit many different metal roofing designs and installation needs.

Cool 'n' Comfort is shrink-wrapped in polyethylene sheets for ease of handling, transportation and storage.



Selected range of blanket products are in compressed roll which gives significant reduction in size compared to folded blankets, thereby further reducing your warehousing cost. Please refer to the local sales representatives on the ranges that are available in compressed roll packaging.

Facings

Cool 'n' Comfort series is available as plain products and additionally with options of foil facing or glass tissue on oneside or two-sided.



**Cool 'n' Comfort SL series
with foil facing**



**Cool 'n' Comfort RL series
without facing**

Standards

Cool 'n' Comfort is designed to meet the requirements of Malaysian Standard, MS1525 (Code of Practice on Energy Efficiency and Use of Renewable Energy for Non-Residential Buildings) and Singapore BCA Green Mark for Residential and Non-Residential (version 4.0).

*Note: Water repellent test standard is based on GBT 10299. For more information, please contact your local representatives.

Technical Parameters

| Product Name | Cool 'n' Comfort RL920 | Cool 'n' Comfort RL940 | Cool 'n' Comfort SL920 | Cool 'n' Comfort SL940 | Cool 'n' Comfort SL950 | Cool 'n' Comfort SL960 | Standard |
|---|--|---|---|---|--|---|-----------------------|
| R-value at 50mm thickness (m ² K/W) | 1.39 | 1.47 | 1.39 | 1.47 | 1.47 | 1.52 | |
| Thermal Conductivity 20°C λ Value (W/mk) | 0.036 | 0.034 | 0.036 | 0.034 | 0.034 | 0.034 | ASTM C518 |
| Water Absorption (partial immersion (kg/m ²)) | 1.0 | 1.0 | 0.5 | 0.5 | 0.5 | 0.5 | EN1609.97 |
| Water Vapor Absorption | Less than 0.04 Vol % | Less than 0.04 Vol % | Less than 0.04 Vol % | Less than 0.04 Vol % | Less than 0.04 Vol % | Less than 0.04 Vol % | ASTM C1104 C1104M |
| Fire Performance Non Combustibility | A1 Non-combustible | | | | | | EN 13501-1 BS EN 1182 |
| Melting Point | More than 1000°C | | | | | | ASTM E794 |
| Form Factor | Blanket | Blanket | Slab | Slab | Slab | Slab | |
| Thickness (mm) | 50, 75, 100 | | | | | | EN 822 |
| Width x Length (mm) | 1200 x 5000 | | 600 x 1200 | | | | EN 822 |
| Recommended for these common applications | Single skin metal roof for food centre or canteen, usually non air-condition, without walls and highly ventilated environment. Also commonly used in walkways and common pavilion in residential estates | Single skin metal roof for high end residential, to provide a better thermal performance and long term savings on energy bill | Double skin metal roof for residential & commercial buildings for general thermal performance | Double skin metal roof for industrial, warehouse and factory where higher insulation thickness is designed to be slightly compressed for acoustic damping of the metal roof | Double skin metal roof for exhibition hall, school & educational institute for versatile roof design and high durability | Double skin metal roof for concert hall & airport where high acoustic performance on low sound frequencies are required | |

Sound absorption coefficient at different Octave Band (50mm thickness)

| Product | 125 Hz | 250 Hz | 500 Hz | 1000 Hz | 2000 Hz | 4000 Hz | NRC | α _w |
|------------------------|--------|--------|--------|---------|---------|---------|------|----------------|
| Cool 'n' Comfort RL920 | 0.20 | 0.60 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.90 |
| Cool 'n' Comfort RL940 | 0.20 | 0.70 | 1.00 | 1.00 | 1.00 | 1.00 | 1.05 | 1.00 |
| Cool 'n' Comfort SL920 | 0.20 | 0.60 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.90 |
| Cool 'n' Comfort SL940 | 0.20 | 0.70 | 1.00 | 1.00 | 1.00 | 1.00 | 1.05 | 1.00 |
| Cool 'n' Comfort SL950 | 0.20 | 0.75 | 1.00 | 1.00 | 1.00 | 1.00 | 1.05 | 1.00 |
| Cool 'n' Comfort SL960 | 0.30 | 0.85 | 1.00 | 1.00 | 1.00 | 1.00 | 1.05 | 1.00 |



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