Technical Data Sheet

KM MW Mineral Wool, 64 kg/m^3

Non Combustible, Acoustic & Thermal Insulation

Material Description

KM MW Mineral Wool Insulation Slab are medium dense products for Fire Protection System, Thermal Insulation and Acoustic Control in buildings.

KM MW Mineral Wool is manufactured using our exclusive RCS (Rapid Centrifugal Spinning) technology, which produces a very thin and even fiber structure, bonded by thermosetting resins & water repellant.

In addition, application of the Pendulum System forms thinner and more even air layers that effectively block off heat flow.

KM MW Mineral is defined as a hydrophobic material, with inherent water-repellant properties mixed with the fibers during its production process. As such, KM MW Mineral is non-hygroscopic material, moisture has no influence on its thermal and structural performance. At the same time, there is no influence on its durability either, so its ability to withstand wear and pressure remains unaffected.

KM MW Mineral Wool Insulation Slab is supplied in semi-rigid sheets for applications, with ease of cutting without breaking easily.

Key Performance Properties

- Non- Combustible
- Lightweight, highly durable insulation product
- Performance is not adversely affected from moisture contact
- Fungi Resistant
- Vermin Resistant
- Zero HCHO, TVOC
- Zero Ozone Depletion Potential
- Zero Global Warming Potential
- Asbestos- Free

~ Please consult our technical services for any enquiries and application concerns.

Technical Performance

Physical Properties, nominal	
Nominal Density [kg / m^3]	64
Nominal Density [lb / ft^3]	4.00
Thermal Conductivity @ 20°C [W/mK]	0.034
Fire Performance	Non – Combustible: BS 476 Part 4
Moisture Resistance	Absorb ≤ 0.5% by mass
TVOC emission [ISO 16000-9: 2006]	0.01 mg/m^3
Formaldehyde Emission [ISO 16000-9: 2006; NIOSH 2016: 2016]	Not Detected
Compliance	Tested and Proven in Fire Protection Systems in TUV SUD PSB and SIRIM. KM MW conforms to BS 4958 : Part 5 'Specification for bonded man-made mineral fibre slabs' and can be used to satisfy BS 5422 ' Thermal insulating materials on pipes, ductwork and equipment'. KM MW conforms to ASTM C 612 'Standard Specification for Mineral Fiber Block and Board Thermal Insulation'

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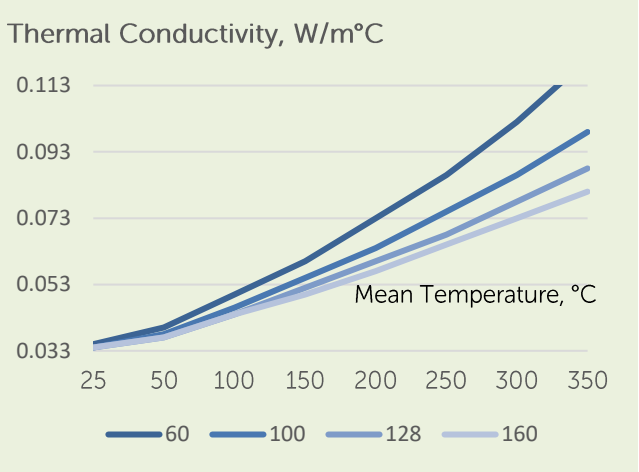
Thermal Conductivity

Thermal Conductivity, W/m°C				
Mean Temp. °C	64 kg/m³	100 kg/m³	128 kg/m³	160 kg/m³
25	0.035	0.034	0.034	0.034
50	0.040	0.038	0.037	0.037
100	0.050	0.046	0.044	0.044
150	0.060	0.055	0.052	0.050
200	0.073	0.064	0.060	0.057
250	0.086	0.075	0.068	0.065
300	0.102	0.086	0.078	0.073
350	0.121	0.099	0.088	0.081

*Apparent thermal conductivity curve determined in accordance with ASTM Practice C 1045 with data obtained by ASTM Test Method C 177. Values are nominal, subject to normal testing and manufacturing tolerances.



KM Mineral Wool is made out of thin and even fibers that form noise-absorbing interconnected microscopic pores. As sound pressure travels through these pores, the pores negate this energy by converting it into friction. When used in a standard Stud-Wall, or between floors, can increase the sound insulation performance by 3 to 5 dB. For fitting under Roof Constructions, KM Mineral Wool provides a reduction in reverberant noise levels of up to 10 dB.

Density	Thickness	Sound Absorption Coefficients, Hz						
kg/m³	(mm)	125	250	500	1000	2000	4000	NRC
64	25	0.13	0.48	1.02	1.08	1.02	1.01	0.90
	50	0.20	0.61	1.07	1.06	1.04	1.07	0.95
	75	0.43	0.64	1.08	1.08	1.04	1.07	0.95
	100	0.88	1.14	1.17	1.08	1.06	1.10	1.10
	150	1.32	1.14	1.11	1.09	1.06	1.07	1.10

*Values given are for design approximations only: production and test variabilities will alter results. Specific designs should be evaluated in end-use configurations. All tests were conducted in accordance with ASTM C 423, Mounting A (material placed against a solid backing)

Corrosion Resistance Performance
(ASTM C 795; USAEC Regulation Compliance)

KM Mineral Wool is made from chemically stable inorganic materials. Because of this, KM Mineral Wool is strong against acid and alkaline chemicals and against degradation from weathering.

Fire Resistance

KM MW Mineral Wool is non- combustible when tested in accordance with British Standard 476: Part 4: 1970 "Fire Test on Building Materials and Structures – Non- Combustibility Test for Materials".

Maximum Service Temperature

- Continuous Safe Operating Temperature: Up to 1100°C
- Intermittent Temperature [Up to 4-Hours]: 1200°C max.

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Standard Sizes & Packaging
- Standard Thickness: 25, 50, 75 100 mm nominal.
- Standard Size: Width 0.6-M x L 1.2-M
- Standard packaging is shrink-wrapped polythene.
- Other sizes are available to order but may be subject to a minimum order quantity.

Available Facings
KM MW Mineral Wool is available as either un-faced or can be applied with FSK [Foil Scrim Kraft], black Tissue Felt, wire mesh, silver foil, metal lath, etc.

Application Recommendations

Pins with speed washers or studs and nuts should be installed on 400mm spacing (max.) and not more than 100mm from the edge of the insulation. The insulation is normally impaled over the pins or studs and the enclosing sheet metal or metal mesh is secured to the same fasteners. Joints of the sheet metal finish are offset from joints of the insulation.

With faced insulation boards, cover pins and clips with vapor- sealing pressure- sensitive patches matching the facing.

For temperatures over 204°C, good insulation practice suggests double layer application, regardless of insulation type. Single layer installation of any type of insulation material requires good workmanship to minimize heat loss and hot spots at insulation joints.

These insulations may be installed in either single or multiple layers at all temperatures up to 649°C. In multiple layer applications, use faced insulations on outer layer only.

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