TECHNICAL DATA SHEET

ECOWOOL BROWNIE BLANKET
Glass Mineral Wool Insulation

DESCRIPTION
ECOWOOL BROWNIE blanket, the formaldehyde free range of ECOWOOL glass mineral wool insulation manufactured by PGF Insulation employs formaldehyde free binder that is free of formaldehyde, phenol or any other artificial chemicals.

FORMALDEHYDE FREE
Formaldehyde has traditionally been used as part of the binder in glass mineral wool insulation. Although there is no health risk with the traditional insulation, formaldehyde at higher level may cause irritation and sensitivity. PGF Insulation formaldehyde free insulation utilises an innovative new binder that eliminates binder-related formaldehyde emissions. Once installed, will not off-gas formaldehyde in the indoor environment.

ECOWOOL BROWNIE is tested in Air Quality Services and the product emission for formaldehyde & VOCs passed the GREENGUARD Children & Schools Criteria.

APPLICATIONS
Recommended as a thermal insulation for the exterior of HVAC systems or other spaces or surfaces where temperature control is required. ECOWOOL BROWNIE meets typical industry standards for core and tensile strength, which makes the product more resistant to damage during lamination and installation. The flexible and light weight features allow the insulation to conform easily around corners and curved surfaces and is readily cut in die presses or with a knife.

ADVANTAGES
Improves Indoor Air Quality. Formaldehyde free binder reduces the overall formaldehyde exposure. Satisfying the growing indoor air quality (IAQ) needs, formaldehyde free insulation means a better smelling indoor environment and less formaldehyde in the air.

Sustainable Product. PGF Insulation uses no ozone depleting products (ODP) in manufacture and has low volatile organic compounds (VOCs) content.

Optimal fibre diameter. Optimal fibre diameter ranging from 4-5micron produces more air chamber which enables the insulation to provide a better and enhanced performance.

Better fibre network. Fine, longer and evenly distributed fibre network helps in creating better tensile strength allowing the insulation to demonstrate superior durability, flexibility and feeling much softer.

Less dusty and less itchy. Specifically engineered to produce a comfortable and less dusty insulation. The insulation creates a pleasant work experience by reducing the tingling feeling during installation.

Absorbs Disturbing Sound. Exceptional sound-absorbing properties. ECOWOOL BROWNIE reduces the transmission of HVAC noises such as air turbulence, popping and cracking.

Corrosiveness. Chemically inert. Will not cause or accelerate corrosion of steel, stainless steel, copper or aluminum due to its specifically inorganic and mineral composition. Tested in accordance with ASTM C665-12.

Mould Growth. Does not encourage growth of mould, fungus, bacteria or rodents. Tested in accordance with ASTM C1338-08.

Water Vapor Absorption. Absorbs less than 5% by weight. Tested in accordance with ASTM C1104.

Odor Emission. Does not emit any unpleasant odor. Tested in accordance with ASTM C1304.

Alkalinity. pH 6~7.

MS1020:2010 CERTIFIED
ECOWOOL BROWNIE is MS1020:2010 compliant product. The certification is accredited by SIRIM QAS.

CIDB CERTIFIED
ECOWOOL BROWNIE is certified by CIDB according to Section VIIA CIDB Act (2011 Amendment). Please contact PGF Insulation representative for further information.

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INDIVIDUAL VOLATILE ORGANIC COMPOUNDS (VOCS) EMISSION

ECOWOOL BROWNIE blanket is safe to use due to the low VOC content. Tested in accordance with ASTM D 5116. Please ontact PGF insulation sales representative for more information.

FIRE PROPERTIES

Tested in accordance with :
- BOMBA Class "0"
- B.S. 476: Part 4 Non-combustibility
- B.S. 476: Part 6 Fire propagation
- B.S. 476: Part 7 Surface spread of flame
- ASTM E84

THERMAL CONDUCTIVITY

Tested and complies with ASTM C518 at 20˚C mean temperature. Please refer to the below table on the thermal resistance values.

Type	Density (kg/m³)	K-Value (W/mk)	R-Value (m²k/w)
EWBL 0.75	28	0.0334	0.75
EWBL 1.50	28	0.0334	1.50

ACOUSTICAL PERFORMANCE

Not only an effective thermal insulation, ECOWOOL BROWNIE blanket acts as a natural and effective sound barrier. ECOWOOL BROWNIE blanket is amongst the most effective acoustic insulation solutions when sound proofing is required. Please contact PGF Insulation representative for further information.

PRODUCTS AVAILABLE

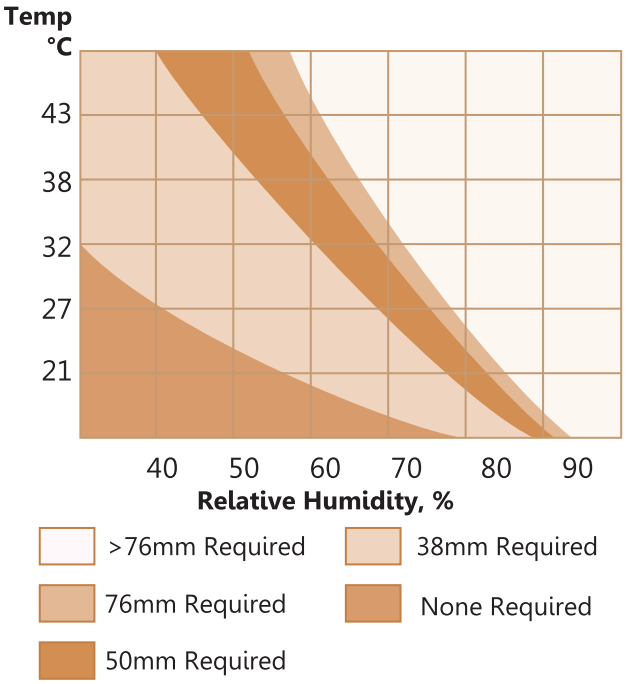
Type	Density (kg/m³)	Thickness (mm)	Width (m)	Length (m)
EWBL 0.75	28	25	1.2	20
EWBL 1.50	28	50	1.2	10

AVAILABLE FORM

Unfaced or Plain – designed for predictable thermal insulation performance with the added benefit of being an effective sound absorption material.

CONDENSATION CONTROL

This chart is based on indoor conditions so far as wind and other factors are concerned. To determine thickness to prevent condensation, based on installed thickness at 75% of nominal (out-of-package) thickness and a duct internal air temperature of 13˚C refer to the condensation control chart below.



To use:
1) Select maximum relative humidity (%) on lower axis;
2) Read up vertically until that line intersects the maximum ambient air temperature;
3) Select the thickness indicated at the point of intersection.

Note: The chart is based on indoor conditions as far as wind and other factors are concerned.

SHORT FORM SPECIFICATION

All ducts are to be insulated on the external GI surface with ECOWOOL BROWNIE formaldehyde free Glass Mineral Wool. All glass wool insulation shown on drawings or specified herein shall be ECOWOOL BROWNIE _____(EWBL 0.75, EWBL 1.50) with thickness of _____mm (25mm, 50mm).

Thermal conductivity K-Value of the insulation shall be K 0.0334. Thermal resistance "R-Value" of the insulation shall be R ____. The insulation material shall be non combustible, tested and comply with BS 476 : Part 4 :1970.

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