

ROCKBOARD® 40/60/80

Premium Multipurpose Board Insulation
for Acoustic/Thermal Applications

ROXUL ROCKBOARD® Provides Superior Sound Absorption

Acoustic Performance

ROXUL stone wool insulation products are specified for high acoustical performance. There are two physical characteristics that support this result. One is the multi-directional fiber orientation, the other is the density of the products.

The ROCKBOARD® family of products is available in various densities to support different applications. ROCKBOARD® 60 in particular has exceptional energy absorbing characteristics and is effective at reducing sound transmission across a wide range of frequencies.

ROCKBOARD®'s excellent sound-damping characteristics make it ideal for buffering the hum from noisy mechanical rooms.



ROCKBOARD® 40 – Acoustical Performance

ASTM C 423 CO-EFFICIENTS AT FREQUENCIES							
Thickness	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	NRC
1.0"	0.07	0.32	0.77	1.04	1.05	1.05	0.80
1.5"	0.18	0.48	0.96	1.09	1.05	1.05	0.90
2.0"	0.26	0.68	1.12	1.10	1.03	1.04	1.00
3.0"	0.63	0.95	1.14	1.01	1.03	1.04	1.05
4.0"	1.03	1.07	1.12	1.04	1.07	1.08	1.10

ROCKBOARD® 60 – Acoustical Performance

ASTM C 423 CO-EFFICIENTS AT FREQUENCIES							
Thickness	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	NRC
1.0"	0.08	0.33	0.78	1.03	1.02	1.04	0.80
1.5"	0.17	0.62	1.00	1.05	1.01	1.01	0.90
2.0"	0.32	0.81	1.06	1.02	0.99	1.04	0.95
3.0"	0.78	0.89	1.04	0.98	1.01	1.02	1.00

ROCKBOARD® 80 – Acoustical Performance

ASTM C 423 CO-EFFICIENTS AT FREQUENCIES							
Thickness	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	NRC
1.0"	0.11	0.31	0.82	1.01	1.02	1.01	0.80
1.5"	0.21	0.64	0.92	1.00	0.95	1.01	0.90
2.0"	0.43	0.78	0.90	0.97	0.97	1.00	0.90
3.0"	0.75	0.82	0.89	0.94	1.00	1.00	0.90

ROCKBOARD® Products and Applications

Product	Density	Thicknesses	W X L	Common Applications
ROCKBOARD® 40	4 lb/ft ³ (64kg/m ³)	1" - 4" (½" increments), 5"	24" x 48"	Mechanical/Utility rooms/Parking garages
ROCKBOARD® 60	6 lb/ft ³ (96kg/m ³)	1" - 4" (½" increments), 5", 6"	24" x 48"	Theaters, Recording studios, Metal roofs requiring snow load
ROCKBOARD® 80	8 lb/ft ³ (128kg/m ³)	1" - 4" (½" increments), 5"	24" x 48"	Surfaces requiring wind load (e.g. substrate for stucco walls)

ROCKBOARD®'s superior acoustic properties make it ideal for theaters, recording studios and other sound-damping applications.



Thermal Integrity & Moisture Control

Thermal Integrity

Stone wool is naturally denser than fiberglass, and will maintain its dimensional integrity under all conditions. It will not slump, shrink, expand with temperature fluctuations or compress under light loads as competitive insulations are prone to do.

Thermal Resistance

ROCKBOARD® 40/80 ASTM C 518 [C 177]	R-value/inch @ 75 °F RSI value/25.4 mm @ 24 °C	4.1 hr.ft².F/BTU 0.72 m²K/W
ROCKBOARD® 60 ASTM C 518 [C 177]	R-value/inch @ 75 °F RSI value/25.4 mm @ 24 °C	4.2 hr.ft².F/BTU 0.72 m²K/W



ROCKBOARD® is ideal for maintaining thermal integrity and moisture control in interior applications.

Water Repellent Insulation – Will not Rot, Corrode, Promote Mold or Bacterial Growth

Moisture can cause a number of structural and/or aesthetic problems within commercial buildings. As an integral part of any building design, proper ventilation is necessary to allow any built-up condensation to drain out of the system. ROCKBOARD® stone wool insulation is water repellent, helping to deflect moisture away from the surface, alleviating potential issues.

ROCKBOARD® insulation is inorganic, and will not rot, corrode, or promote fungi or bacteria growth, which means the potential for related environmental health issues is also mitigated as a result.



Moisture Resistance

ROCKBOARD® 40/60/80 ASTM C 1104	Moisture Sorption	<0.08%
------------------------------------	-------------------	--------

Fungi Resistance

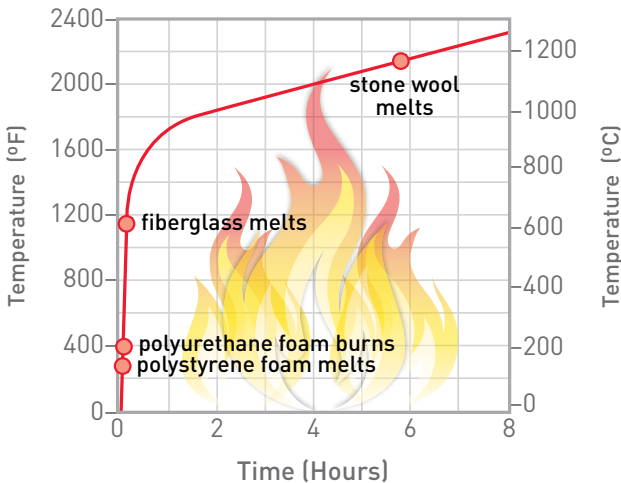
ROCKBOARD® 40/60/80 ASTM C 1338	Determination of Fungi Resistance	Passed
------------------------------------	--------------------------------------	--------

Fire Resistant Insulation – Protecting both the Building and the Occupants

Fire Resistance

ROCKBOARD® products are non-combustible. ROXUL stone wool has an extremely high melting point of 2150 °F (1177 °C) compared to fiberglass at ~1112 °F (~600 °C), thermoplastic insulation at 160-600 °F (~70-315 °C). ROCKBOARD® products do not produce toxic smoke in the event of a fire and are an excellent barrier against the spread of flames to help protect occupants and reduce property damage.

Temperature Development in a Standard Fire (ASTM E119)



In an application where elevated temperatures are a concern, stone wool will provide greater protection than fiberglass. The maximum service temperature of stone wool insulation when tested to ASTM C 411 is 1200 °F (650 °C), compared to fiberglass which is limited to a maximum service temperature of 450 °F (232 °C).

Maximum Service Temperature

Fire Performance

ROCKBOARD® 40/60/80 CAN4 S114	Test for Non-Combustibility	Non-Combustible
ROCKBOARD® 40/60/80 ASTM E 84(UL 723)	Surface Burning Characteristics	Flame Spread = 0 Smoke Developed = 0
ROCKBOARD® 40/60/80 CAN/ULC S102	Surface Burning Characteristics	Flame Spread = 0 Smoke Developed = 0



ROCKBOARD® adds an extra degree of fire resistance around utility rooms.

ROCKBOARD®
40/60/80

ASTM C 411

Hot Surface Performance

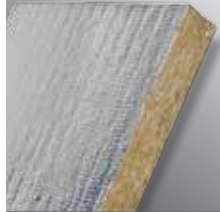


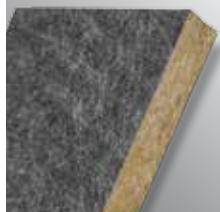
In Compliance with ASTM C 612 @ 1200 °F (650 °C)

Facing – Moisture Control, Sound Absorption, and Energy Savings

Facing can help to obtain optimum thermal and energy efficiency, structural integrity, and enhanced interior aesthetics with minimal cost impact on the overall project. ROCKBOARD® can be surfaced with a variety of facings to deliver the desired result.

Please contact ROXUL for our complete facing offering and technical information related to materials, permeability, light reflectance, and fire performance.



	Facer	Performance	Typical Applications
	Aluminum Foil with fiberglass reinforcement	ASTM E96 Permeance (WVTR) 0.02% (grains/hr.ft ² .in Hg) ASTM E84/UL 723 Flame Spread = 20 Smoke Development = 50	Aesthetics Vapor Barrier with Foil Tape for Seams
	White Polypropylene with fiberglass reinforcement	ASTM C 523 – 85% Light Reflectivity ASTM E96 Permeance (WVTR) 0.02% (grains/hr.ft ² .in Hg) Flame Spread = 25 Smoke Development = 50	Mechanical Rooms Underground Walkways Aesthetics
	White Pin Perforated Polypropylene with fiberglass reinforcement	ASTM C 523 – 85% Light Reflectivity Permeance (WVTR) >10 perm (grains/hr.ft ² .in Hg) Flame Spread = 25 Smoke Development = 50	Mechanical Rooms Underground Walkways Aesthetics
	Black Mat with non-woven fiberglass	ASTM E84/UL 723 Permeance (WVTR) >10 perm Flame Spread = 25 Smoke Development = 50	Aesthetics Theaters, Recording Studio Walls Shadowing behind other Surfaces/Façades

Compressive Strength

	@10%	@25%
ROCKBOARD® 40 ASTM C 165	90 psf (4.3 kPa)	226 psf (10.8 kPa)
ROCKBOARD® 60 ASTM C 165	196 psf (9.4 kPa)	547 psf (26.2 kPa)
ROCKBOARD® 80 ASTM C 165	353 psf (16.9 kPa)	794 psf (38 kPa)

Dimensional Stability

ROCKBOARD® 40 ASTM C 356	Linear Shrinkage	0.47 % @ 1200 °F (650 °C)
ROCKBOARD® 60 ASTM C 356	Linear Shrinkage	1.14 % @ 1200 °F (650 °C)
ROCKBOARD® 80 ASTM C 356	Linear Shrinkage	0.41 % @ 1200 °F (650 °C)

Compliance and Performance

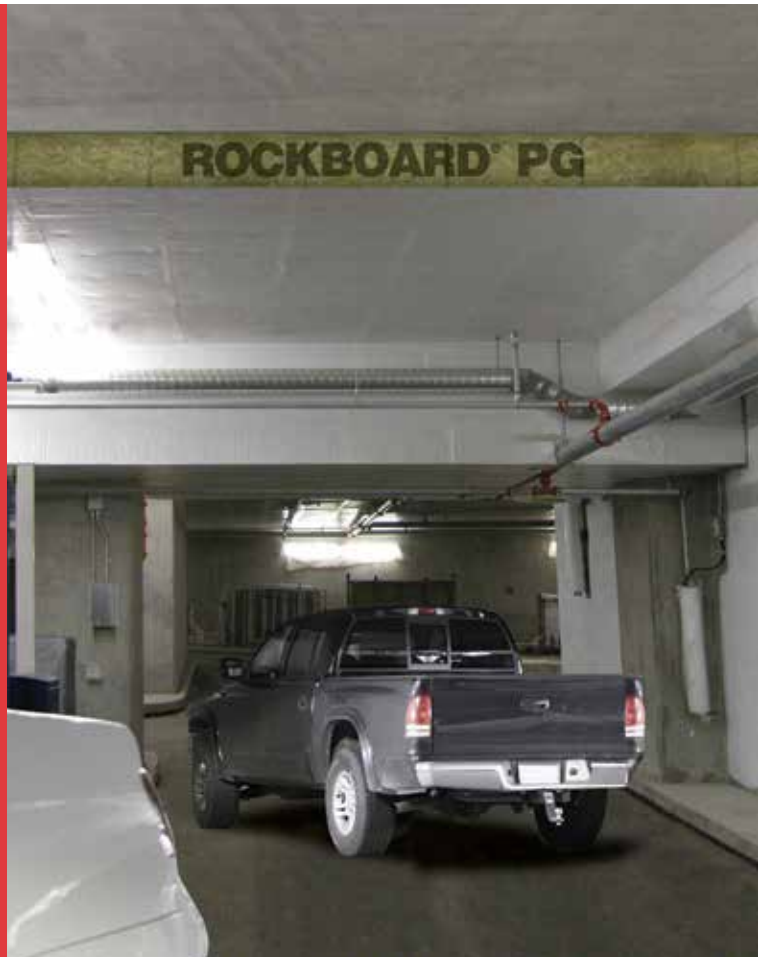
ROCKBOARD® 40 ASTM C 612	Mineral Fiber Block and Board Thermal Insulation	Type IVA, Complies
ROCKBOARD® 60/80 ASTM C 612	Mineral Fiber Block and Board Thermal Insulation	Type IVB, Complies

ROCKBOARD® PG is quieter, warmer, brighter and more cost effective!

ROCKBOARD® PG

Parking Garage Applications

ROCKBOARD® PG insulation is designed specifically for parking garage applications. ROCKBOARD® PG's reflective white facing can help reduce lighting investment costs (up to 20 per cent) while increasing the general aesthetics of the parking garage. For more information on ROCKBOARD® PG, contact your ROXUL Sales Representative.*



*CASE STUDY – Lamtec White Facings Reduce Lighting Investment Cost and Annual Electricity Costs (Lamtec® Corp.)
Light Reflectance Determined in Testing by Atlas Services Group on May 3rd, 2011.

A Global Leader

ROXUL Inc. is a subsidiary of ROCKWOOL International A/S, the world's leading supplier of innovative products and systems based on stone wool. ROCKWOOL International A/S is a publicly held company, which trades on the NASDAQ OMX Nordic Exchange Copenhagen. Operating 28 factories in 18 countries, the ROCKWOOL Group employs more than 10,000 people and features a global network of sales companies, trade offices and dedicated commercial partners. ROXUL® products provide superior thermal and acoustical value and are fire resistant, water repellent, non-corrosive, and resistant to mold.

For more, visit roxul.com

ROXUL is the Better Insulation Choice

ROXUL insulation is innovative, offering a world of green features. Sustainability is a fundamental pillar of our philosophy at ROXUL. We are proud to have our products used in projects targeting LEED® certification, as they can contribute both to energy efficiency and materials credits. For more information, we recommend reading the applicable LEED Reference Guide for detailed descriptions of all credits.

Find out more about how we can assist with your design projects.

A ROXUL representative will be pleased to provide you with further details on the products described in this brochure, and can also update you with comprehensive information on the entire line of ROXUL products.

Visit our website at roxul.com, or contact us directly at **1-800-265-6878**.



Environmentally Sustainable

Our stone wool production process uses some of the most advanced technology available. The last decade has seen a new generation of ROXUL manufacturing advancements designed to lower our environmental footprint. These endeavors have included:

- the capture and recycling of rainwater;
- reduction in energy consumption;
- recycling of raw materials back into the production process;
- the use of natural lighting in our facilities; and
- repurposing water used during the manufacturing process.

We are proud that these steps have minimized our impact on the environment and surrounding community resources. But our green programs don't stop there.

ROXUL insulation is created using naturally occurring inorganic raw materials, and reuses waste from other manufacturers as well as from our own plants. Stone wool insulation is non-combustible and achieves its thermal performance without the use of blowing agents. Therefore, our products do not off-gas over time. This feature alone makes a substantial contribution to a cleaner environment.

To remain efficient and environmentally friendly, each ROXUL plant uses a varying combination of new and recycled content. For example, as a direct result of producing less manufacturing waste during the production process, we are able to use up to 40 per cent recycled content. Our continuing effort to improve our overall efficiencies further solidifies our commitment to environmental stewardship within our organization.

