





Patent No.: US 7,096,630  
& US 8,146,310



# Quiet Qurl®: Raising the Bar

Noise Control Products from Keene Building Products

-  Quiet Qurl
-  Quiet Qurl Perimeter Isolation & Tape
-  GSL
-  QQ Step Soft
-  RC Assurance
-  Space Assurance
-  Resources & Education

Keene Building Products manufactures and markets 3-dimensional "entangled net" products for noise control.

These products work in construction projects such as multi-family apartments and condominiums to dramatically reduce impact and airborne noise transfer.

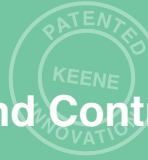
The Quiet Qurl® systems are available from 0.125" to 0.75" with options.





Raising the Bar

# Impact & Airborne Sound Control Mats



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Vibrations travel through connections. By limiting direct connections (such as between the finished floor and the joist assembly) we can effectively disrupt the path for noise to pass through our floors and walls. **Quiet Qurl® is the perfect solution** to this troublesome issue.

Keene Building Products' is raising the bar with Quiet Qurl's product line by offering solutions in different thicknesses and with enhanced fabric options for your code-driven performance needs.

**Quiet Qurl® systems are available from 0.125" to 0.75" with fabric options, including:**

- **Moisture Control (MC)**
- **Muffling Technology Enhancement (MT)**
- **Reinforced Fabric (RF)**
- **Fast Track (FT)**

All products are designed for use with underlayment such as gypsum concrete and lightweight concrete.







# Raising the Bar Impact & Airborne Sound Control



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## Quiet Qurl® MT, Muffling Technology Enhancement

Quiet Qurl® MT is the most exciting technology we've developed. This **"Muffling Technology"** is available on any Quiet Qurl® product and adds a conformable bottom side muffler to the sound control mat.

Quiet Qurl® MT uses a high loft fabric that weights very little and compresses with a low amount of pressure. When loaded with an underlayment such as gypsum concrete in a sound control application, the performance is dramatically enhanced.

The "MT" product addition can make 1/4" sound mats perform like 3/4" sound mats through the lessening of the decibel level in the critical lower frequencies. The MT product enhancement has been used extensively in mill building rehab applications.

### Benefits

- ✓ Performance like 0.75" Quiet Qurl in a 0.25" mat
- ✓ Cotton like layer acts to "Muffle" noise
- ✓ Performs from 125 Hz to 3150 Hz
- ✓ Up to 5 IIC point enhancement

### Applications

- ✓ Multi-family wood frame and concrete construction
- ✓ For high-end results in a nominal 0.25" sound mat
- ✓ Works with gypsum underlayments from 1.0" thickness and greater





## Quiet Qurl® RF, Reinforced Fabric

Quiet Qurl® RF is an alternative for all four versions of the standard product. It is designed for use when the gypsum concrete pour is not to standard thickness (or when additional reinforcement is needed).

The product matches a reinforced fabric and scrim, which are adhered together, in combination with the standard “entangled net” core material.

A reinforced fabric is laminated to the surface so that gypsum concrete or concrete can be placed to create a floating floor.

### Benefits

- ✓ Best performance product in wood frame construction when compared to solid mats
- ✓ Provides the thinnest underlayment thickness available on the market for wood frame
- ✓ A Class A fire-rated product and passes a Robinson Wheel Test with the following minimum thicknesses: 0.75” with QQ 55/025, 1.0” with QQ 60/040, and 1.5” with QQ 65/075.

### Applications

- ✓ Multi-family construction: apartments and condominiums
- ✓ When a resilient ceiling is installed
- ✓ Radiant-heated flooring when pumped with lightweight concrete or gypsum
- ✓ With hard surfaces: concrete, stone, tile, vinyl and hardwood
- ✓ With topping layers, such as gypsum concretes, lightweight concrete, mortar beds and plywood. At greatly reduced thicknesses





# Raising the Bar Impact & Airborne Sound Control



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& US 8,146,310



## Quiet Qurl® FT, Fast Track

This Quiet Qurl® variation is equipped with KEENE's "Fast Tracking" fabric liner. The FT fabric suspends the concrete mixture while expediting the drying time under the right environmental conditions. This occurs because the entangled net is thick enough to promote air movement while the fabric is vapor permeable which allows the bottom side of the slab to dry more efficiently.

Quiet Qurl® FT provides the same high performance impact noise control, but now can also decrease a projects delivery time at a crucial stage in the construction life cycle.

### Applications

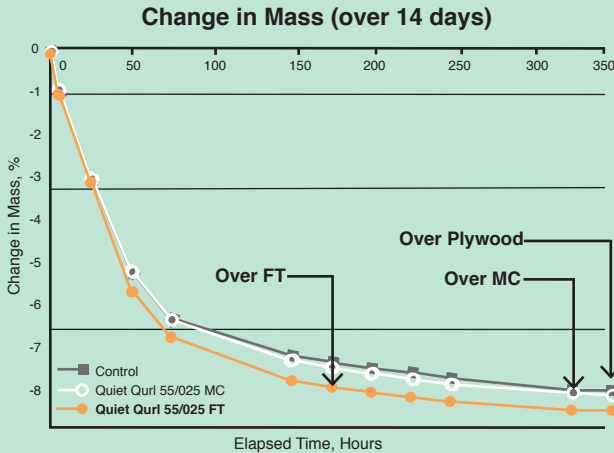
- ✓ Available with ALL other Quiet Qurl versions
- ✓ Multi-family construction: apartments and condominiums
- ✓ When decreased drying time is needed
- ✓ For fast track project delivery
- ✓ When a resilient ceiling is installed
- ✓ Radiant-heated flooring when pumped with lightweight concrete or gypsum
- ✓ With hard surfaces: concrete, stone, tile, vinyl and hardwood
- ✓ With topping layers, such as gypsum concretes, lightweight concrete, mortar beds and plywood
- ✓ With many types of subfloors





## Benefits

- ✓ Same high performance impact noise control
- ✓ Significantly decreased drying times of gypsum concrete toppings
- ✓ Performance in wood frame construction and concrete structures
- ✓ Floor can be covered faster allowing for a faster project completion



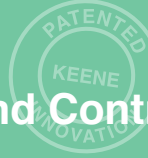
## Increases Drying Time Up to 40%\*

	Gypsum over Plywood	Gypsum over "Moisture Control"	Gypsum over "Fast Track"
Time until "Dry"	14 days (336 hours)	13 days (312 hours)	<b>8 days (192 hours)</b>
Increase over Control	n/a	7%	<b>43%</b>
Gypsum Continue Drying?	No	Negligible (<1%)	<b>Yes, 5% "more dry" in same period</b>

\* Testing completed by Concrete Research & Testing LLC. Report No. R-157 results may vary. For more information please contact Keene Building Products.



# Raising the Bar Impact & Airborne Sound Control



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## Quiet Qurl® Perimeter Isolation

Quiet Qurl® Perimeter Isolation is an accessory to the Quiet Qurl® sound control system designed to limit flanking sound. Flanking paths from the floor to the wall are limited by this simple material. The void space is filled so that airborne sound cannot flank either.

### 4 versions of Quiet Qurl® Perimeter Isolation are available:

1. Quiet Qurl® Perimeter Isolation 025, non-sticky
2. Quiet Qurl® Perimeter Isolation with Quik Stick 2", Sticky
3. Quiet Qurl® Perimeter Isolation with Quik Stick 3.5", Sticky and has EASY-FOLD
4. Quiet Qurl® Perimeter Isolation with Quik Stick 4", Sticky

### Applications

- ✓ Must be used with all Quiet Qurl® installations
- ✓ When a resilient ceiling is installed
- ✓ With hard surfaces: concrete, stone, tile and vinyl
- ✓ With structural layers, such as gypsum concrete, lightweight concrete, and mortar beds
- ✓ For applications in which sound system is between 0.25" to 4.0" in depth
- ✓ Acts as a barrier to help prevent damage of the drywall
- ✓ With hard surfaces: concrete, stone, tile and vinyl
- ✓ With structural layers, such as gypsum concrete, lightweight concrete and mortar beds







## Quiet Qurl® Tape

Quiet Qurl® Tape is an accessory to the Quiet Qurl® sound control system.

Quiet Qurl® Tape is an acrylic based pressure-sensitive adhesive combined with the conformability/flexibility of biaxially-oriented polypropylene (BOPP) film. It provides excellent sealing, protective benefits, and it's easy to handle.

For use on Class 1 flexible duct for permanent seaming and sealing to enhance appearance and provide moisture barrier protection. All temperature rates, flame retardant, high shear, aggressive, and UV resistant. Superior bonding at sub-zero or at elevated temperatures. UV/temperature resistant acrylic adhesive combined with inorganic polypropylene film provides the longest lasting closure method.

### Benefits

- ✓ Moisture barrier
- ✓ Cost effective
- ✓ Easy to handle
- ✓ Resistant to mold growth and high humidity
- ✓ UL Listed: 181B-FX

### Applications

- ✓ Used with all Quiet Qurl® seaming applications

**Total Thickness (PSTC-133):** 3 mils (0.076 mm)

**Color:** White

**Roll Size:** 3" x 148'


**Packaging:** 16 Rolls per Box. 48 Boxes per Pallet.  
768 Rolls per Pallet. Weight: 13 lb. per box, 675 lb. per pallet.



Dependable, LLC  
**Multi-Family Underlayment**



*Flooring Experts since 1951*

 Dependable provides a one source gypsum underlayment for luxury and comfort in multi-family, residential, or commercial construction.

- GSL® K2.6**      A pumpable gypsum self-leveling underlayment for wood frame, concrete and pre-cast concrete construction

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- GSL® M3.4**      A premium high strength gypsum self-leveler for wood frame, concrete and pre-cast concrete construction

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- GSL® ALL PURPOSE SEALER**      A sealer designed to use with GSL® family of products

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- GSL® PRIMER**      A primer designed for use with GSL® family of products

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- GSL® CSD**      A gypsum portland cement, designed for fire-rated corrugated steel deck construction applications

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- GSL® RH**      A fast, quick-setting gypsum cement formulated for radiant floor heating applications

Please contact us at 877-514-5336 or [info@dependable.us](mailto:info@dependable.us) so our technical team can help determine which product most adequately fits your projects needs.





GSL® gypsum underlayments provide a variety of advantages. In addition to speed, GSL® gypsum underlayments also provide fire protection; gypsum does not burn. GSL® gypsum underlayment also offers numerous acoustical advantages.

## **GSL® K2.6**

Dependable's standard gypsum self-leveling underlayment provides contractors with an economical solution to meeting UL and noise ratings.

Pumpable, GSL® K2.6 delivers high strength, good water resistance and outstanding performance when placed after drywall in typical multi-family projects. GSL® K2.6 can be poured anywhere from 0.375" to 3" thick.

### **APPLICATIONS**

Multi-family, light commercial, commercial/retail/office, hotel/motel, assisted living/senior care and for sound and fire control applications.

## **GSL® M3.4**

When higher strength is needed, Dependable also offers a stronger underlayment for high traffic jobs.

GSL® M3.4 sets within an hour and can handle foot traffic in two hours, making construction quick and easy. Near featheredge pours can be achieved, along with 3" thick applications as well. This product offers high density, yet less finished weight and more flexibility than Portland cement self-levelers.

### **APPLICATIONS**

Multi-family, renovations, floor leveling, light commercial, commercial/retail/office, hotel/motel, assisted living/senior care and for sound and fire control applications.



## QUICK Installation Instructions Quiet Qurl® and Gypsum Concrete



Roll out Quiet Qurl® mat on the floor with black core touching the adjacent black core, and the fabric flap overlapping the adjacent piece. Edge must be placed adjacent to other pieces without gap.



Remove plastic backing from the Zip-Strip. Firmly press down on the adhesive edge so that the mat remains snug to the fabric on the adjoining Quiet Qurl® strip. Adjoin all seams to prevent penetration into the core material during pour.

*If necessary, cover seams with tape (duct tape or cellophane tape) or spray adhesive (3M Super 77).*



Place Quiet Qurl® Perimeter Isolation on all walls at the junction of the Quiet Qurl® mat and the wall. Use the spray adhesive on the mat to bond the perimeter isolation permanently at that point. Do not spray on the wall. Place the Perimeter Isolation around all penetrations in a similar manner.



When the adhesive and taping is complete, pump gypsum concrete over top of mat.

*See page 7 for gypsum concrete minimum depths.*

### PRECAUTIONS:

1. Consult gypsum manufacturer for proper water content. Over watering can cause a breach of the Quiet Qurl® fabric.
2. Walk mat installation before pumping, and review all details.
3. Retrofit of old wood construction requires a roofing felt, mastic or poly sheet on the subfloor for moisture leak prevention.
4. After Quiet Qurl® mat is rolled out on floor try to minimize traffic before pouring gypsum concrete on top.



**For Complete instructions please refer to Keene Building Product's Quiet Qurl® Installation Instruction information sheets.**









# Keene Building Products Noise Control Products

Product Name	Minimum Gypsum Thickness	Roll Length	Area
<b>☺ Mat Thickness 0.125 Inches / 3.0 mm</b>			
Quiet Qurl 52/013 MC	0.75 inch	100 ft.	400 sq. ft.
Quiet Qurl 52/013 MC MT	0.875 inch	100 ft.	400 sq. ft.
Quiet Qurl 52/013 RF	0.75 inch	100 ft.	400 sq. ft.
Quiet Qurl 52/013 RF MT	0.75 inch	100 ft.	400 sq. ft.
<b>☺ Mat Thickness 0.25 Inches / 6.0 mm</b>			
Quiet Qurl 55/025 FT	1.0 inch	100 ft.	400 sq. ft.
Quiet Qurl 55/025 MC	1.0 inch	100 ft.	400 sq. ft.
Quiet Qurl 55/025 MC MT	1.0 inch	50 ft.	200 sq. ft.
Quiet Qurl 55/025 RF	0.75 inch	100 ft.	400 sq. ft.
Quiet Qurl 55/025 RF MT	1.0 inch	50 ft.	200 sq. ft.
<b>☺ Mat Thickness 0.40 Inches / 10.0 mm</b>			
Quiet Qurl 60/040 MC	1.0 inch	100 ft.	400 sq. ft.
Quiet Qurl 60/040 MC MT	1.25 inch	50 ft.	200 sq. ft.
Quiet Qurl 60/040 RF	1.0 inch	100 ft.	400 sq. ft.
Quiet Qurl 60/040 RF MT	1.0 inch	50 ft.	400 sq. ft.
<b>☺ Mat Thickness 0.75 Inches / 19.0 mm</b>			
Quiet Qurl 65/075 MC	1.5 inch	50 ft.	200 sq. ft.
Quiet Qurl 65/075 N MT	1.5 inch	50 ft.	200 sq. ft.
Quiet Qurl 65/075 N RF	1.5 inch	50 ft.	200 sq. ft.
Quiet Qurl 65/075 RF MT	1.5 inch	50 ft.	200 sq. ft.
<b>☺ Additional Products</b>	<b>Product Thickness</b>	<b>Length</b>	<b>Area</b>
Quiet Qurl Reinforcement RWT	0.375 in./9.0 mm	75 ft.	300 sq. ft.
Quiet Qurl Perimeter Isolation	0.125 in./3.0 mm	550 ft.	183.3 sq. ft.
QQ Step Soft 2 mm	2.0 mm	50 ft.	200 sq. ft.
QQ Step Soft 5 mm	5.0 mm	25 ft.	100 sq. ft.
QQ Step Soft 6 mm	6.0 mm	25 ft.	100 sq. ft.
QQ Step Soft 8 mm	8.0 mm	20 ft.	80 sq. ft.
QQ Step Soft 10 mm	10.0 mm	20 ft.	80 sq. ft.
RC Assurance	0.3125 in./8.0 mm	(500 clips per box)	
Space Assurance	0.25 in./6.0 mm	100 ft.	25 sq. ft.



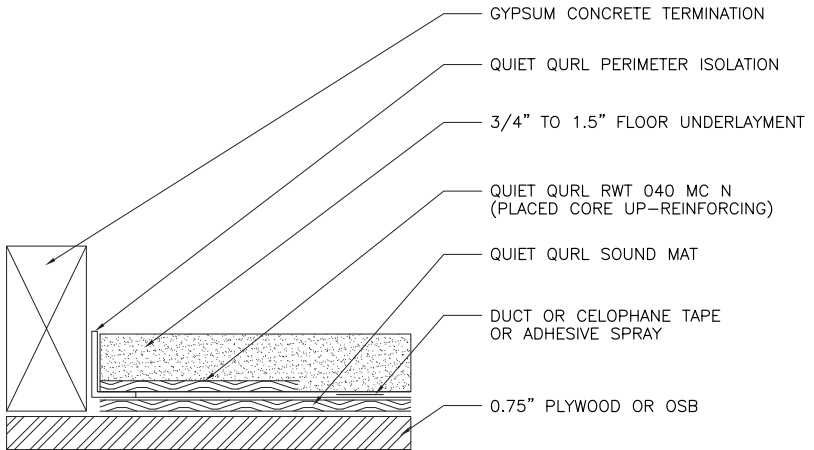
# Quiet Curl® Assembly Results

	Quiet Curl	Gypsum Floor Underlayment	Insulation	Truss Depth	GWB/ RC-1 Channel	IIC / AIC				STC / ASTC	
						Bare Gypsum Carpet	Ceramic Tile	Engineered Wood	Vinyl		
<b>OPEN WEB JOIST</b> 	52/013	0.75"	3 1/2" batt	16"	1 layer/16" o.c.		56	56	53	53	
	55/025	1"	3 1/2" batt	18"	1 layer/24" o.c.	51	53	54	53	54	
	60/040	1"	Full Cavity	16"	1 layer/24" o.c.		84	57	59	61	
	65/075	1 1/2"	6" batt	18"	1 layer/16" o.c.	59	60	61	60	55	
	52/013 MT	0.875"	3 1/2" batt	18"	1 layer/16" o.c.	52	54	56	53		
	55/025 MT	1"	6" batt	18"	2 layers/16" o.c.	58		62	61	61	
UL: L521, L528, L529, L534, L542, L546, L550, L558, L562, L563, L574, L576, L577, L579, L581, L583, L586, L587, L592 M500, M501, M503, M508, M510											
<b>Nominal WOOD JOIST</b> 	52/013	0.75"	3 1/2" batt	10"	16" o.c.		50	55	51	57	
	55/025	1"	3 1/2" batt	10"	1 layer/16" o.c.		52	55	53	54	
	60/040	1 1/4"	3 1/2" batt	10"	16" o.c.	50	53	54	50	54	
	65/075	1 1/2"	3 1/2" batt	10"	16" o.c.	52		54	52	55	
	55/025 MT	1"	3 1/2" batt	10"	16" o.c.	55	74	57	57	52	
	60/040 MT	1 1/4"	3 1/2" batt	10"	16" o.c.	53	68	55	54	53	
UL: L6, L201, L202, L206, L208, L209, L210, L211, L212, L501, L502, L503, L504, L505, L506, L507, L508, L509, L510, L511, L512, L513, L514, L515, L516, L517, L519, L520, L522, L523, L525, L526, L532, L533, L535, L536, L537, L539, L540, L541, L545, L557, L569, L588, L593, L598 M504											
<b>I JOIST</b> 	52/013	0.75"	3 1/2" batt	11 7/8"	2 layers/16" o.c.		56	58	52	58	
	55/025	1"	3 1/2" batt	11 7/8"	1 layer/16" o.c.		54	57	53	53	
	60/040	1 1/2"	5 1/2" batt	14"	2 layers/24" o.c.	53	54	56	54	53	
	55/025 MT	1 1/4"	3 1/2" batt	11 7/8"	2 layers/12" o.c.	54	56	59	56		
	60/040 MT	1"	3 1/2" batt	11 7/8"	2 layers/16" o.c.	60	78	59	61	61	57
UL: L518, L538, L547, L570, L583, L589, L590 M502, M506, M511, M512, M515											
<b>STEEL JOIST</b> 	55/025 MT	1"	3 1/2" batt	9 1/4"	1 layer/12" o.c.	54	57	56	55	54	
	UL: G553, G561, G565, G577, G578, G579, G580, G581, G582 L524, L527, L543, L549, L551, L552, L559, L560, L564, L568, L573 M513										
<b>CONCRETE</b> 	55/025	1"	NONE	6"	NONE					54	
		1"	YES	6"	1 layer					68	63
	60/040	1"	NONE	6"	NONE					55	53
		1"	YES	6"	1 layer					68	64
UL: J917, J919, J920, J924, J927, J931, J957, J991, J994											
<b>WOOD TIMBER RETROFIT</b> 	55/025	1"	NONE	App 14"	NONE					52	51
	65/075 N	2"	NONE	App 12"	NONE	52	52	55	55	58	
	55/025 MT	2"	NONE	App 12"	NONE	47	47	50	50	58	
	65/075 N MT	2"	NONE	App 12"	NONE	56	58	59	59	60	

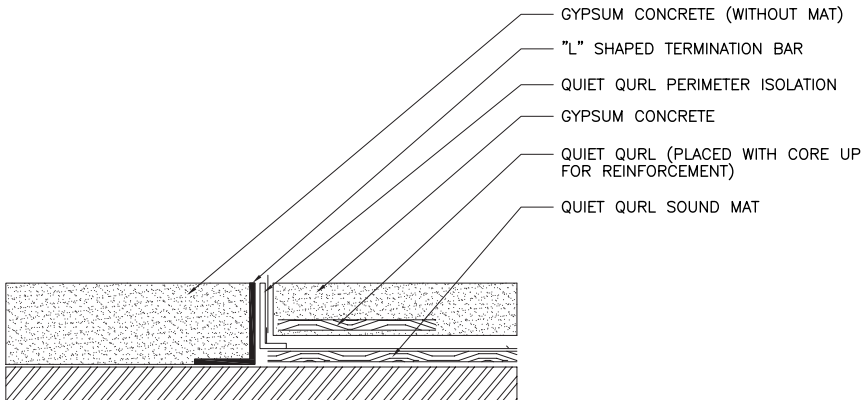


# KEENE IDEAS® - Transition Details

## Quiet Qurl® Doorway and Floor Transition Detail with Reinforcement



## Transition to Gypsum Concrete without mat Quiet Qurl® Installation in Hard Surface Areas



**For Complete Transition Details please refer to Keene Building Product's KEENE IDEAS® information sheets.**



## Project Profile Quiet Qurl® 55/025 FT

In the charming historic district of Laurel, Maryland, a new apartment complex completed production in April, 2016. With 484 units provided, your choice of one, two, or three bedroom apartments is available. You can even choose to have an open floor plan with a loft! Inside the apartment includes wood plank-style flooring, stainless steel appliances, granite counter tops, a private balcony, and spacious walk-in closets! It can't get much better than that!

This 8,500 square foot apartment home community is conveniently located for commuters to both Washington DC and Baltimore, Maryland. Or stay in the area and explore the many restaurants and shopping plaza's Laurel has to offer!

Don't feel like leaving the apartment? Then take a dip in the resort-inspired outdoor pool and spa, hangout with friends in the clubhouse, attend a yoga class in the yoga/pilates studio, take your pet to the pet spa and wash, or have a cookout at the BBQ and picnic area! With so many activities to choose from, you'll always be entertained without having to leave the apartment!

With large apartment communities like this one, a main concern is keeping the residents happy. With this in mind, the builders made sure to turn a critical eye to maybe the most important amenity of all; Noise Control!

In such a condensed living space with population well into the thousands, noise is sure to be a big concern. This is where Keene Building Products' **Quiet Qurl® 55/025 FT** was used to help mitigate this issue.

Quiet Qurl® 55/025 FT is a sound control mat designed to limit impact noise between floors. This resilient mat absorbs noise when sandwiched in a mass-spring-mass building design. The **FT** version is equipped with a KEENE's "Fast Tracking" fabric liner that suspends the concrete mixture while expediting the drying time of gypsum concrete topping. This occurs because the bottom side is thick enough for air movement while the fabric is open enough to allow bottom drying. The final floor can be covered faster allowing for a faster project completion. A quality sound control mat and flooring installed quickly.

This apartment was built with the tenants best interest at heart. Not only was the builders committed to making the community pleasing to the eye, they were able to make it pleasing to the ear as well!







## Product Highlight

# Quiet Qurl® 52/013 MC MT

KEENE BUILDING PRODUCTS has recently introduced a thin-profile mat to offer luxury performance. Quiet Qurl® 52/013 MC MT is a nominal 0.125-inch, random-filament, sound control mat designed to limit impact noise between floors.

The core is a polymer matrix of tangled polypropylene monofilaments laminated to a point-bonded, moisture-resistant fabric so that gypsum concrete and other materials can be placed to create a floating floor.

On the bottom side our Muffling Technology (MT for short), a highly compressible polyester fabric is bonded. This muffling fabric almost completely compresses when installed with a 0.825" gypsum concrete floor underlayment. The MT addition will create up to an additional 5 IIC points for the assembly verses the standard version. In laboratory tests, Quiet Qurl® 52/013 MC MT performs better than thicker sound mats in a thinner application.

Better performance in a thinner overall system. Quiet Qurl® 52/013 MC MT is truly the best of both worlds!

### Benefits

- ✓ Excellent performance at reducing sound in mid and high frequencies
- ✓ Performance in wood frame construction and concrete structures
- ✓ Minimal deflection, and no creep or long term degradation
- ✓ Provides a thin profile for tight construction assemblies
- ✓ Lightweight and easy to handle
- ✓ High recycled polymer content for LEED® credit

### Applications

- ✓ Multi-family construction: apartments and condominiums
- ✓ Thin-pour applications for less transition.
- ✓ When a resilient ceiling is installed
- ✓ With gypsum concrete
- ✓ For all hard surface applications in wood frame construction
- ✓ Provides an overall system thickness of 1.0"





# Raising the Bar Impact and Airborne Sound Control



## QQ Step Soft™

QQ Step Soft™ is a 100% recycled product that can be used directly under tile, engineered wood and traditional hardwood. The 2 mm to 10 mm product is full adhered when the finished flooring is fully adhered, and loose laid when the finish flooring is floating.

In most high-rise concrete construction, impact noise can be controlled with a one layer system on the top side of the construction. QQ Step Soft™ has been tested to provide excellent noise control when used directly under tile applications or engineered wood.

### Benefits

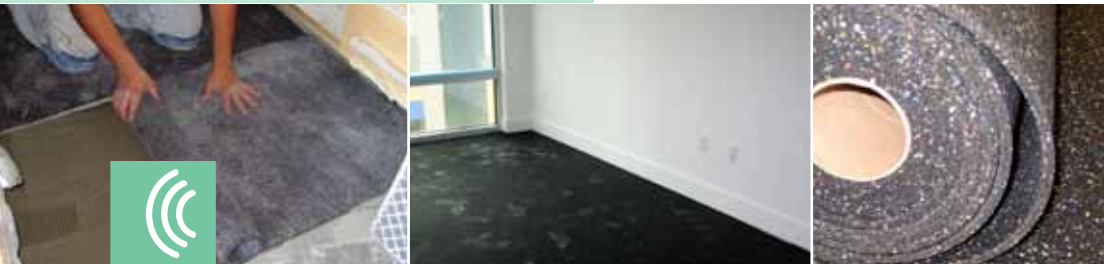
- ✓ Effective impact noise reduction
- ✓ Thinner material required vs. other resilient underlayments
- ✓ Environmentally friendly
- ✓ Low odor
- ✓ Long life
- ✓ Delta IIC of 21 at 5 mm
- ✓ Reliable tile installations
- ✓ Lower unit cost

### Applications

- ✓ With fully adhered finished hard surfaces, such as ceramic tile and glued-down wood
- ✓ Loose-laid with floating engineered wood systems
- ✓ In high-rise concrete applications
- ✓ In conjunction with wood frame construction and gypsum concrete
- ✓ Achieves an industry standard IIC of 50 in previously tested assemblies
- ✓ For LEED credit for utilizing 100% recycled tire rubber

QQ Step Soft™ passes a Robinson Wheel Test (ASTM C627) at a residential rating.

The Delta IIC value of a 5-mm, 100% recycled rubber mat has been tested under ASTM E2179-03, and shown to provide 21 dB.





## Project Profile

# QQ Step Soft™ 4mm

Being one of the most diverse cities in Canada, Vancouver, British Columbia, has quickly become an extremely popular tourist destination. With the scenic views, mild climate, and urban atmosphere who wouldn't want to plan a trip? When tourists come flooding the city, there is one important question that comes to mind: where will you stay? One luxurious urban hotel in Downtown Vancouver is your answer!

Located on West Georgia Street in Downtown Vancouver, you're in the center of it all! Walk a few blocks for miles of shopping, fine dining, and unlimited entertainment.

Or stay in the hotel and enjoy the luxury spa, heated indoor pool, outdoor relaxing jacuzzi, state of the art fitness center, award winning restaurant, and much more!

Taking care of the guests of the hotel and meeting all of their wants and needs is always the main concern. With the hotel standing 616 feet tall, with 69 stories there is one very important amenity that needed to be taken care of: Noise Control.

When staying at a hotel, the last thing you want is to hear your neighbor stomping around upstairs or music blasting through the floor, you want to enjoy peace and quiet. Which is why a decision was made to incorporate Keene Building Products' QQ Step Soft™ 4 mm into the floors of each room. Using this product will provide a noise free environment for all guests.

QQ Step Soft™ is a recycled rubber flooring underlayment for sound isolation and impact noise control, which ranges in 2 mm to 10 mm. The rubber material provides a resilient layer within the flooring assembly for reducing vibration noise. QQ Step Soft™ is a critical component in meeting International Building Code requirements for ceiling/floor noise reduction performance. In this case, the QQ Step Soft™ was installed under wood flooring offering many benefits such as: effective impact noise reduction, low odor, long lasting, and is environmentally friendly!





# Raising the Bar Ceiling Acoustics

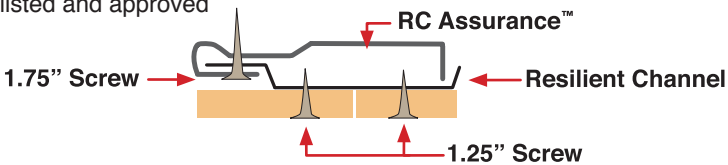
Ceiling isolation is as important to noise control as the floor isolation system. Unfortunately, the bottom side remains a weak link. Acousticians and architects design ceiling systems properly, but many problems occur during installation. RC Assurance™ and Space Assurance™ are cost-effective products that take the difficulty out of ceiling isolation.

## RC Assurance™

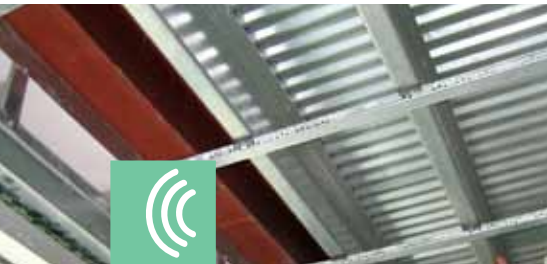
RC Assurance™ is a clip designed for resilient channels. The product acts as an impenetrable washer that puts extra space between the channel and the joist. The snap on clip works with any resilient channel but is specifically designed for use with RC Deluxe from Dietrich.

Developed a number of decades ago, resilient channels are a staple in the multi-family industry. There are some issues with Resilient Channel installation. The resilient channel needs another 0.375" to assure that connections are limited between the gypsum board and the joist assembly. RC Assurance™ provides that space and assures against "Channel Ride."

- ✓ Floor assemblies and wall assemblies
- ✓ With every joist type: metal, open web,"I" joist design and nominal 2" lumber
- ✓ UL listed and approved
- ✓ Ease in installation, snap on design and no laser alignment like the other clips



*Please refer to complete Installation Instructions for RC Assurance™*



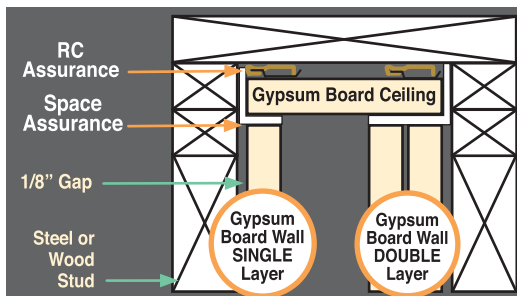


## Space Assurance™

Space Assurance™ is a ceiling perimeter isolation that is made up of a flexible, flame resistant polyester fabric. It is used as a fastener line, virtually assuring the proper detail between the wall and ceiling and eliminating one of the most common paths for noise flanking in multi-family construction.

Short circuits and flanking noise are often caused by improper detailing of the gypsum wall and ceiling. The proper detail is to leave a 0.25" space and then caulk the joint. This installation detail is difficult to install and difficult to assure. Space Assurance™ provides a better Solution.

The first step in ceiling installation is to install Space Assurance™ around the ceiling of every room. Ceiling elements butt against the Space Assurance™ with the bottom half used to separate the ceiling drywall from the wall board. The excess is cut off.



- ✓ Assures the proper space between gypsum ceiling and walls
- ✓ Quick installation that saves time and money
- ✓ Only UL listed joint assembly with a gap
- ✓ Eliminates flanking paths for noise
- ✓ Eliminates caulking and shimming

*Please refer to Complete Installation Instructions for RC and Space Assurance™*



# Receive AIA Continuing Education Credits

from Keene Building Products



## Multi-Family Sound Control

There are many ways of solving the sound dilemma in multi-family. This presentation will help architects learn and understand how noise is measured, types of noise, and how to build and design with noise control on your mind. You will learn the different elements involved in an entangled net sound system and how any multi-family construction can benefit from it.

### Learning Objectives

- ✓ Review how noise results are measured and types of noise in building design
- ✓ Discuss and identify the most common acoustical systems for quiet living in multi-family, and understanding that one component is not the solution in controlling noise
- ✓ Compare the performance of various building materials needed to reach certain classification standards, as well as establish the benefits of living in noise-free environments
- ✓ Establish the best practices for healthy living with the use of an entangled net sound system



Call or Email TODAY to set up a lunch presentation

**877-514-5336**

[info@keenebuilding.com](mailto:info@keenebuilding.com)

**Keene Building Products is a registered provider with The American Institute of Architects Continuing Education Systems.** Credit earned upon completion of this program will be reported to CES Records for AIA members. Credit includes Health, Safety, and Welfare (HSW) (1 Credit Hour).

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# Keene can Help You Achieve LEED® Credits



**LEED®, or Leadership in Energy & Environmental Design**, is a green building certification program that provides a national rating system for developing sustainable building designs and construction.

## LEED v4 BD+C (Building Design + Construction)



### MR Credit 3: 1-2 points

(Material & Resources)

#### Building Product Disclosure & Optimization - Sourcing of Raw Materials

Locally sourced materials and recycled content are now combined in 2 options:

1. Raw Material Source and Extraction Reporting (1 point)
2. Leadership Extraction Practices (1 point)

Product	Thickness	Recycled Content	Pre-Consumer Content	Post-Consumer Content
Quiet Qurl®	0.13 in. / 3.0 mm	up to 40%	35%	5%
	0.25 in. / 6.0 mm	up to 40%	35%	5%
	0.40 in. / 10.0 mm	up to 40%	35%	5%
	0.75 in. / 19.0 mm	up to 40%	35%	5%
QQ Step Soft™	2.0 mm – 10.0 mm	up to 90%	–	90%

### EQ Credit 9: 1-2 points

(Indoor Environmental Quality)

#### Acoustic Performance

Acoustic Performance has its own credit that requires a specific STC value based upon what type of room is being built, or your local building code, whichever is more stringent.

*Please refer to this chart for the list of Sound Transmission Class (STC) ratings for adjacent spaces.*

#### Maximum Composite Sound Transmission Class Ratings for Adjacent Spaces

Adjacency Combinations	STC
Residence (within a multifamily residence) hotel or motel room	55
Residence, hotel or motel room	50
Residence, hotel or motel room	60
Retail	50
Standard office	45
Executive office	50
Conference room	50
Office, conference room	50
Mechanical equipment room	60



QUIET QURL is a component in an overall floor/ceiling assembly. Its performance is affected by every other component and the likelihood of achieving code compliance is contingent upon many other trades including framers, plumbers, drywall contractors to name a few. Developers and general contractors are responsible for building properly and testing field performance as soon as possible in order to assure the reliability of the project.

**WARNING:** Laboratory tests are not a guarantee of field performance because of the issues noted above and many other design errors that may occur. Please consult a professional acoustical consultant to assure plans are proper and that the floor/ceiling assembly can perform to expectations.

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**P.O. Box 241353**  
**Mayfield Heights, OH 44124**  
**Info@keenebuilding.com**

**877 | 514 | 5336**  
**P 440 | 605 | 1020**  
**F 440 | 605 | 1120**

**keenebuilding.com**