

creating comfortable spaces
with **SOUND** in mind



Learn more about

- Quiet Qurl[®]
- Cylent Assurance[™] Clip
- GSL[®] and more



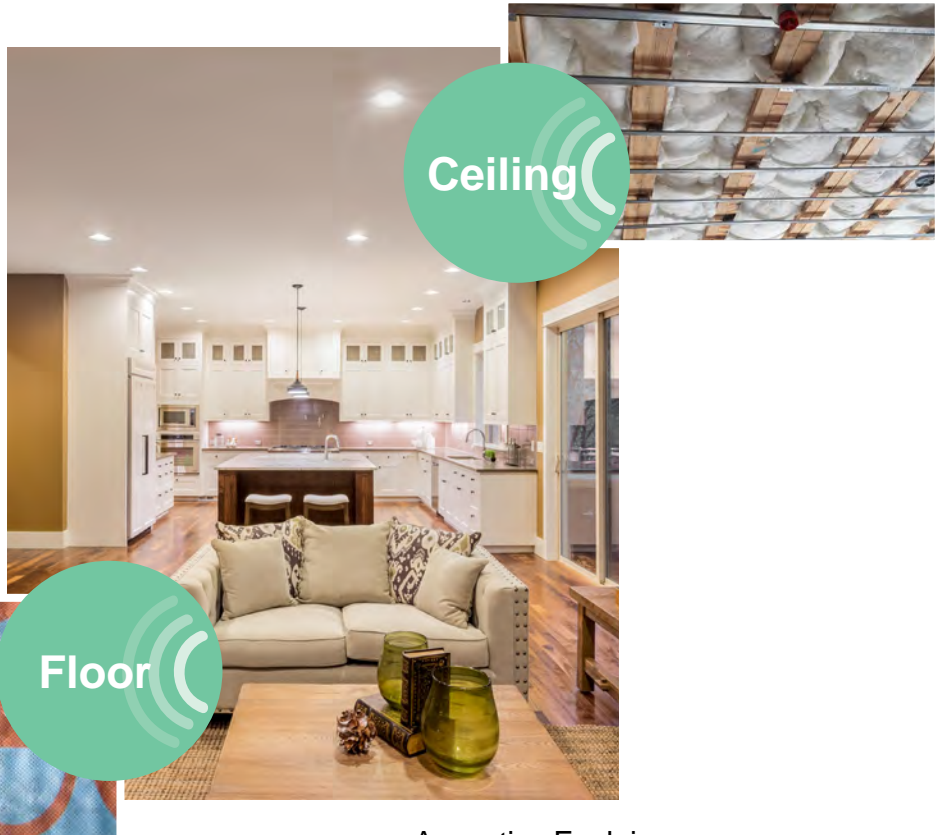
ACOUSTIC PRODUCT GUIDE

from Keene Building Products



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Acoustic Product Guide From Keene Building Products



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Acoustics Explainer

Learning about Noise

Noise control in multi-family housing, especially in wood frame construction, has been a challenge for years.

- Noise complaints are the second most litigated issue in multi-family construction today.
- Low frequency noise, or the thudding of footfall is the biggest complaint.

Two types of sounds that are measured:

- Airborne (music and voices). Measured by STC (Sound Transmission Class).
- Impact (objects dropping and footfall). Measured by IIC (Impact Insulation Class).

STC or Sound Transmission Class

- A 50 STC rating is the minimum code for laboratory tests and 45 F-STC for field testing
- Predominantly controlled by adding MASS to the system as well as properly sealing all air-leakages
- Applicable in both walls and floor-ceiling assemblies

IIC or Impact Insulation Class

- A 50 IIC rating is the minimum code required for laboratory test and 45 F-IIC for field testing
- Increased ISOLATION is the key factor in increasing IIC
- This is typically done using a combination of sound mats, resilient channels and/or isolation clips

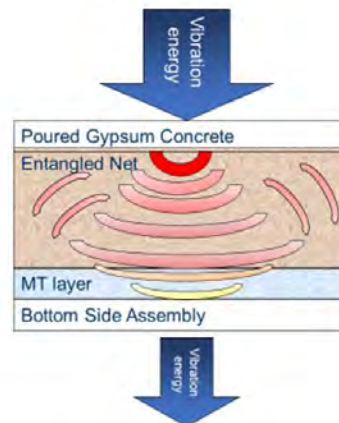
Quiet Qurl Sound Mats Are a Three-Dimensional Entangled Net Plastic:

- Reduces the contact with the structural subfloor by 90%.
- Decouples vibration
- Reduces heat and pressure buildup

Critical functions of an entangled net:

Impact Noise Creates:

- **Vibration**
- **Heat**
- **Pressure Build Up**





System Options

Thickness & Fabric Matter

Vibrations travel through connections. By limiting direct connections (such as between the finished floor and the framing 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 performance needs. All products are designed for use with underlayments such as gypsum concrete and light-weight concrete.

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



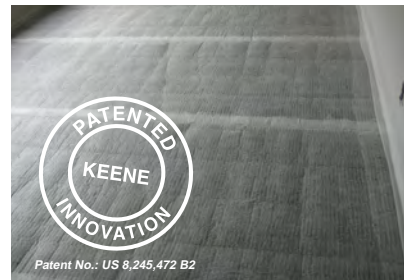
Muffling Technology (MT)

- Available in all thicknesses
- Highly compressible cotton-like material
- Enhances decibels that pass through sound mat by 3 to 5 IIC points
- Load of gypsum concrete compresses the MT into the larger filaments of the sound mat
- No additional thickness to Quiet Qurl®



Reinforced Fabric (RF)

- Available in all thicknesses
- Used when additional reinforcement is needed.
- A reinforced fabric is laminated to the surface increasing tensile strength of gypsum concrete.





Quiet Qurl® MT

Muffling Technology Enhancement

Muffling Technology or “MT” uses a high loft fabric that weighs very little and is easily compressible with little pressure. When loaded with an underlayment such as gypsum concrete in a sound control application, the sound performance is dramatically enhanced.

Quiet Qurl® MT Fabric

- MT fabric imbeds itself into the entangled net when compressed
- Helps reduce pressure wave buildup from impact sound
- Enhances IIC rating of Quiet Qurl by 3 to 5 points

Pouring Gypsum Concrete over Quiet Qurl

Refer to the chart below for the appropriate thickness of gypsum concrete. Different versions of Quiet Qurl require different thicknesses of **gypsum concretes**:

Versions of Quiet Qurl	Standard	MT
QUIET QURL 013	0.75”	0.75”
QUIET QURL 025	1.0”	1.0”
QUIET QURL 040	1.0”	1.25”
QUIET QURL 075	1.5”	1.5”



Applications

- ✓ Multi-family wood frame and concrete construction
- ✓ For high-end results in a nominal 0.25” sound mat
- ✓ Works with gypsum underlayments from 0.75” thickness and greater

Benefits

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



Quiet Qurl® RF

Reinforced Fabric

Quiet Qurl® RF Fabric

- Available on all versions of the standard Quiet Qurl® product.
- Designed for use when the gypsum concrete pour is not to standard thickness (or when additional reinforcement is needed).
- Matches a reinforced fabric and scrim, which are bonded together, in combination with the standard “entangled net” core material.
- A reinforced fabric is laminated to the surface of an open mesh reinforcing scrim to enhance bonding of the gypsum or lightweight concrete

Pouring Gypsum Concrete over Quiet Qurl®

Refer to the chart below for the appropriate thickness of gypsum concrete. Different Versions of Quiet Qurl® require different thicknesses of **gypsum concretes**:

Versions of Quiet Qurl®	Standard	RF
QUIET QURL 013	0.75”	0.75”
QUIET QURL 025	1.0”	0.75”
QUIET QURL 040	1.0”	1.0”
QUIET QURL 075	1.5”	1.5”



Benefits

- ✓ Best performing 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
- ✓ Passes a Robinson Wheel Test with the following minimum thicknesses: 0.75” with QQ 025, 1.0” with QQ 040, and 1.5” with QQ 075.

Applications

- ✓ Multi-family construction: apartments and condominiums
- ✓ Radiant-heated flooring when poured with gypsum or lightweight concrete
- ✓ Compatible with hard surfaces: stone, tile, vinyl and hardwood
- ✓ With topping layers, such as gypsum concrete, lightweight concrete, mortar beds and plywood. At greatly reduced thicknesses



Multi-Family Underlayments

from Dependable, LLC

Dependable's GSL® multi-family line provides a one source system for sound control and gypsum underlayments. Dependable's variety of gypsum self-levelers (GSL) and Keene Building Product's Quiet Curl® come together providing a floor ready for covering while meeting or exceeding flooring and sound codes. All GSL Products are UL Approved. Dependable provides durability, luxury, and comfort in new multi-family construction.



GSL® K2.6
A standard gypsum underlayment for wood frame and precast concrete construction
PSI Range: 2,000 - 3,500



GSL® M3.4
A premium high strength gypsum for renovations and high traffic projects
PSI Range: 3,000 - 4,500



GSL® RH
Gypsum cement formulated for radiant floor heating applications
PSI Range 2,200 - 3,500

GSL® ALL PURPOSE SEALER	Use with GSL products to enhance the bond between the underlayment and finished floor covering
GSL® PRIMER	Use with GSL products to enhance the bond between the underlayment and various substrates
CONSOLICRETE™	A two-part epoxy designed to repair damaged substrates

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





Noise Control Products

from Keene Building Products

Product Name	Minimum Gypsum Thickness	Roll Length	Area
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☺ Mat Thickness 0.125 Inches / 3.0 mm

Quiet Qurl 013	0.75 inch	100 ft.	400 sq. ft.
Quiet Qurl 013 MT	0.75 inch	100 ft.	400 sq. ft.
Quiet Qurl 013 RF	0.75 inch	100 ft.	400 sq. ft.
Quiet Qurl 013 RF MT	0.75 inch	100 ft.	400 sq. ft.

☺ Mat Thickness 0.25 Inches / 6.0 mm

Quiet Qurl 025	1.0 inch	100 ft.	400 sq. ft.
Quiet Qurl 025 MT	1.0 inch	50 ft.	200 sq. ft.
Quiet Qurl 025 RF	0.75 inch	100 ft.	400 sq. ft.
Quiet Qurl 025 RF MT	1.0 inch	50 ft.	200 sq. ft.

☺ Mat Thickness 0.40 Inches / 10.0 mm

Quiet Qurl 040	1.0 inch	100 ft.	400 sq. ft.
Quiet Qurl 040 MT	1.25 inch	50 ft.	200 sq. ft.
Quiet Qurl 040 RF	1.0 inch	100 ft.	400 sq. ft.
Quiet Qurl 040 RF MT	1.0 inch	50 ft.	200 sq. ft.

☺ Mat Thickness 0.75 Inches / 19.0 mm

Quiet Qurl 075	1.5 inch	50 ft.	200 sq. ft.
Quiet Qurl 075 MT	1.5 inch	50 ft.	200 sq. ft.
Quiet Qurl 075 RF	1.5 inch	50 ft.	200 sq. ft.
Quiet Qurl 075 RF MT	1.5 inch	50 ft.	200 sq. ft.

☺ Additional Products

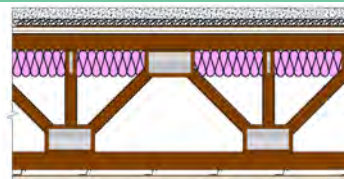
Product Name	Product Thickness	Length	Area
Quiet Qurl Reinforcement RWT	0.375 in./9.0 mm	75 ft.	300 sq. ft.
Quiet Qurl Perimeter Isolation 025	0.25 in./6.0 mm	250 ft.	62.5 sq. ft.
Quiet Qurl Perimeter Isolation 2"	0.125 in./3.0 mm	550 ft.	183.3 sq. ft.
Quiet Qurl Perimeter Isolation 3.5" with EASY-FOLD	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.
Space Assurance	0.25 in./6.0 mm	100 ft.	25 sq. ft.
Cylent Assurance Clip			



Sound Test Results

Quiet Qurl® & GSL® Products

OPEN WEB Assemblies



Keene Sound Mat	GSL Gypsum Concrete Depth	Framing Depth	Insulation Type	RC Channel / Cylent Assurance Clip	Layer(s) of Gypsum Board	Floor Covering Type	STC	IIC	Test Number					
Quiet Qurl 013	3/4"	16"	3 1/2" batt	16" o.c.	1 layer	Bare	53	56	100236043CRT-001b					
						Ceramic Tile		56	100236043CRT-001a					
						Eng. Wood		56	100236043CRT-001c					
						Vinyl		53	100236043CRT-001d					
Quiet Qurl 013 MT	3/4"	18"	3 1/2" batt	16" o.c. w/ Cylent Assurance Clip	1 layer	Bare	60	57	H7706.01-113-11-R0					
						Eng. Wood	60	64	H7706.04-113-11-R0					
			Full Cavity	16" o.c.	1 layer	Bare	60	62	H7706.03-113-11-R0					
						Eng. Wood	55	53	101937109CRT-002a					
	7/8"	18"	3 1/2" batt	16" o.c.	1 layer	Vinyl w/Pad		56	101937109CRT-002d					
						Vinyl		59	101937109CRT-001b					
								56	101937109CRT-001c					
								56	101937109CRT-001c					
Quiet Qurl 025	1"	18"	3 1/2" batt	24" o.c.	1 layer	Bare	55	52	100700282CRT-002a					
						Ceramic Tile		54	100700282CRT-001a					
						Eng. Wood		56	100700282CRT-001a					
						Vinyl		53	100700282CRT-001a					
Quiet Qurl 025 MT	1"	18"	6" batt	16" o.c.	2 layers	Bare	54	51	3130401CRT-002					
						Ceramic Tile		53	3130401CRT-002					
						Eng. Wood		54	3130401CRT-002					
			3 1/2" batt	16" o.c.	1 layer	6" batt	16" o.c.	2 layers	Vinyl		53	3130401CRT-002		
									Bare	61	58	F09-1104		
									Eng. Wood		62			
						3 1/2" batt	16" o.c.	1 layer	16" o.c. w/ Cylent Assurance Clip	1 layer	Bare	62	56	J4155.00A
											Vinyl	62	57	J4155.01
											LVT	62	56	J4155.02
											Eng. Wood	62	56	J4155.03
											Ceramic Tile	62	58	J4155.05
											Bare	62	58	J4155.00B
Vinyl	62	60	J4155.06											
LVT	62	61	J4155.07											
Eng. Wood	62	61	J4155.08											
Ceramic Tile	62	62	J4155.10											
Quiet Qurl 040	1 1/4"	18"	3 1/2" batt	16" o.c.	1 layer	Bare	58	52	I1132.01					
						Vinyl / Pad		58	I1132.02					
						Eng. Wood		57	I1132.03					
						LVT / Pad		58	I1132.04					
			16" o.c. w/ Cylent Assurance Clip	16" o.c.	1 layer	16" o.c.	1 layer	Ceramic Tile		58	I1132.05			
								Bare	60	56	I1132.06			
								Vinyl / Pad		59	I1132.07			
								Eng. Wood		60	I1132.08			
LVT / Pad		60	I1132.09											
Quiet Qurl 040 MT	1"	16"	3 1/2" batt	16" o.c.	1 layer	Bare		58	3158385CRT-001d					
Quiet Qurl 075	1 1/2"	18"	6" batt	16" o.c.	1 layer	Bare	55	59						
						Ceramic Tile		60						
						Eng. Wood		61						
						Vinyl		60						

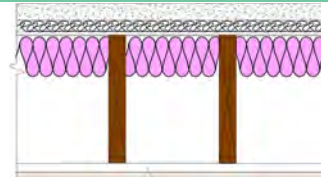
Open Web UL Designs L528, L529, L534, L542, L546, L550, L556, L558, L562, L563, L574, L576, L577, L579, L581, L583, L585, L586, L587, L592, M500, M501, M503 (Equivalent to L521), M508, M510



Sound Test Results

Quiet Qurl® & GSL® Products

NOMINAL WOOD JOIST Assemblies



Keene Sound Mat	GSL Gypsum Concrete Depth	Framing Depth	Insulation Type	RC Channel / Cylent Assurance Clip	Layer(s) of Gypsum Board	Floor Covering Type	STC	IIC	Test Number
Quiet Qurl 013	3/4"	10"	3 1/2" batt	16" o.c.	1 layer	Bare	57		100302175CRT-001b
						Ceramic Tile		50	100302175CRT-001a
						Eng. Wood		55	
						Vinyl		51	
Quiet Qurl 025	1"	10"	3 1/2"	16" o.c.	1 layer	LVT	60	52	J4551.05
						Ceramic Tile		52	3163170CRT-001b
						Eng. Wood		55	
		12"	3 1/2"	24" o.c.	1 layer	Bare	54		3147950CRT-001b
						Ceramic Tile		52	3147950CRT-001a
						Eng. Wood		54	
Quiet Qurl 025 MT	1"	10"	3 1/2" batt	16" o.c.	1 layer	Bare	56	53	100302175CRT-002c
						Ceramic Tile		57	3163170CRT-001a
						Eng. Wood		57	3163170CRT-001a
						Vinyl		53	100302175CRT-001c
Quiet Qurl 040 MT	1 1/4"	10"	3 1/2" batt	16" o.c.	1 layer	Bare	57		100340878CRT-002b
						Vinyl		54	100340878CRT-001b
UL Designs L006, L201, L202, 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, M514, M517, M518, M519, M528, M531, M538									

WOOD RETROFIT Assemblies



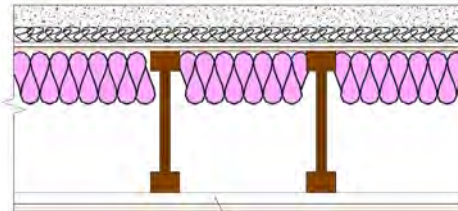
Keene Sound Mat	GSL Gypsum Concrete Depth	Framing Depth	Insulation Type	RC Channel / Cylent Assurance Clip	Layer(s) of Gypsum Board	Floor Covering Type	STC	IIC	Test Number
Quiet Qurl 025	1"	14"	None	None	None	Vinyl	51	52	
Quiet Qurl 025 MT	2"	12"	None	None	None	Bare	58	47	F10-413
						Ceramic Tile		47	
						Eng. Wood		50	
						Vinyl		50	
Quiet Qurl 075	2"	12"	None	None	None	Bare	58	52	F10-413
						Ceramic Tile		52	
						Eng. Wood		55	
						Vinyl		55	
Quiet Qurl 075 MT	2"	12"	None	None	None	Bare	60	56	F10-413
						Ceramic Tile		58	
						Eng. Wood		59	
						Vinyl		59	



Sound Test Results

Quiet Qurl® & GSL® Products

I JOIST Assemblies



Keene Sound Mat	GSL Gypsum Concrete Depth	Framing Depth	Insulation Type	RC Channel / Cylent Assurance Clip	Layer(s) of Gypsum Board	Floor Covering Type	STC	IIC	Test Number
Quiet Qurl 013	3/4"	11 7/8"	3 1/2" batt	16" o.c.	2 layers	Ceramic	58	56	100302175CRT-001a
						Eng. Wood	58	58	100302175CRT-001a
						Vinyl	58	52	100302175CRT-001a
Quiet Qurl 025	1"	11 7/8"	3 1/2" batt	16" o.c.	1 layer	Ceramic	53	54	3123796CRT-001b
						Eng. Wood	53	57	
					2 layers	LVT	61	53	
Quiet Qurl 025 MT	1 1/4"	11 7/8"	3 1/2" batt	12" o.c.	2 layers	Bare		54	100430978CRT-001g
						Ceramic Tile		56	
						Eng. Wood		59	
						Vinyl		56	
Quiet Qurl 040	1 1/2"	14"	5 1/2" batt	24" o.c.	2layers	Bare		53	3103841CRT-001a
						Ceramic Tile		54	3103841CRT-001a
						Eng. Wood		56	3103841CRT-001a
						Vinyl		54	3103841CRT-001a
	1 1/4"	11 7/8"	3 1/2"	16" o.c.	2 layers	LVT	61	53	J4551.02
Quiet Qurl 040 MT	1"	11 7/8"	3 1/2" batt	16" o.c.	2layers	Bare	57	60	
						Ceramic Tile		59	
						Eng. Wood		61	
						Vinyl		61	

UL Designs L518, L530, L538, L537, L570, L583, L589, L590, M502, M506, M511, M512, M515, M530, M535

CONCRETE Assemblies

Keene Sound Mat	GSL Gypsum Concrete Depth	Framing Depth	Insulation Type	RC Channel / Cylent Assurance Clip	Layer(s) of Gypsum Board	Floor Covering Type	STC	IIC	Test Number
Quiet Qurl 013	3/4"	9"	None	None	None	Bare	55	48	F18-0375
Quiet Qurl 025	1"	6"	None	None	None	Vinyl		54	3033285-003
			3 1/2" batt	16" o.c.	1 layer	Vinyl		63	3033285-002
Quiet Qurl 040	1"	6"	None	None	None	Vinyl		53	3033285-002
			Eng. Wood		55				
	3 1/2" batt	16" o.c.	1 layer	Vinyl		64			
				Eng. Wood		68			
2 3/4"	8"	None	None	None	Bare	63	56	6853.01-202-10	

UL Designs J917, J919, J920, J924, J927, J931, J957, J991, J994



Sound Test Results

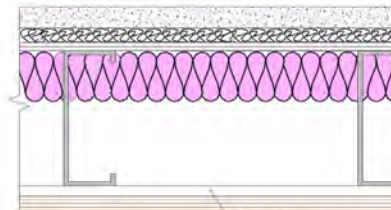
Quiet Qurl® & GSL® Products

CLT System Assemblies



Keene Sound Mat	GSL Gypsum Concrete Depth	Framing Depth	Insulation Type	RC Channel / Cylent Assurance Clip	Layer(s) of Gypsum Board	Floor Covering Type	STC	IIC	Test Number
5mm Quiet Qurl Step Soft Over Quiet Qurl 040 MT	2.5" GSL M3.4	5-Ply CLT	None	None	None	5.5mm LVT		53	K3686.06
5mm Quiet Qurl Step Soft Over Quiet Qurl 075 MT	2.5" GSL M3.4	5-Ply CLT	None	None	None	5.5mm LVT		56	K3686.03
Quiet Qurl 075 MT	2" GSL M3.4	5-Ply CLT	None	None	None	5.5mm LVT		54	K3686.02
KeedeRoll MT	1" Dependable Platform L2	5-Ply CLT	None	None	None	5.5mm LVT		58	K3686.04
Quiet Qurl 040MT	2" GSL M3.4								
KeedeRoll MT	1" Dependable Platform L2	5-Ply CLT	None	None	None	5.5mm LVT		60	K3686.01
Quiet Qurl 040MT	2" GSL M3.4								

STEEL JOIST Assemblies



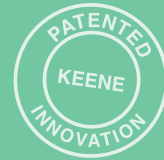
Keene Sound Mat	GSL Gypsum Concrete Depth	Framing Depth	Insulation Type	RC Channel / Cylent Assurance Clip	Layer(s) of Gypsum Board	Floor Covering Type	STC	IIC	Test Number
Quiet Qurl 025 MT	1 1/4"	#8 Trade-Ready Joist	3 1/2" batt	12" o.c.	1 layer	Bare	55	53	184607CRT-002c
						Ceramic Tile		56	
						Eng. Wood		57	
						Vinyl		57	

UL Designs G553, G561, G565, G577, G578, G579, G580, G581, G582, L524, L527, L543, L549, L551, L552, L559, L560, L564, L565, L568, L573, M513, M536



Topical Sound Mats

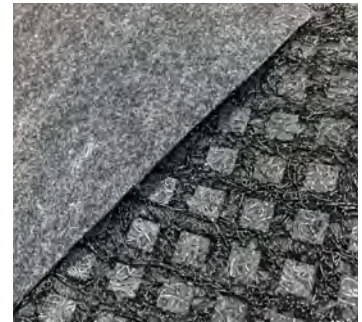
KeedeRoll™



SPACER ASSEMBLY FOR PREVENTING AN ACOUSTIC SHORT CIRCUIT IN A BUILDING
Patent No.: US 8,136,320 B2

KeedeRoll™ MT

KeedeRoll™ MT combines our patented Muffling Technology with our uncoupling KEEDE technology to create a quiet yet durable subfloor. Specifically designed for ceramic tile, this product contains all the benefits of both an uncoupling mat and a sound mat.



KeedeRoll™ 100

This uncoupling mat provides a fast, durable and cost effective solution for tile installation. The technology works by absorbing subfloor movements and reinforcing mortar; while the fabric allows for shearing movement to take place by separating the subfloor from the tile or natural stone.



KeedeRoll™ 300

This product offers the same uncoupling benefits of KeedeRoll™ 100, but with added moisture protection. The specially designed fabric is completely water resistant, forming a barrier between the tile and your subfloor.





Topical Sound Mats

Quiet Qurl Step Soft™



QQ Step Soft™ is a sound deadening recycled rubber flooring underlayment designed to promote quiet living and improve sound ratings.

Sound Tests: ASTM E492 and ASTM E2179

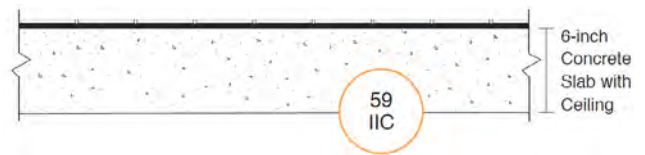
- Offered in 2-15mm thickness
- Effective impact noise reduction
- Crack isolation capabilities
- Engineered hardness
- Increased dynamic-to-static load ratio
- Recycled material
- Low VOC content
- High density
- Low compressibility
- 95% + recycled material
- LEED eligible

QQ Step Soft's 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.

QQ Step Soft™ passes the Federal Flammability Standard, meets CHPS standards for VOCs, and passes the ASTM C627 reliability standard for residential use.

Ceramic Tiles over **QQ Step Soft™ 5mm**



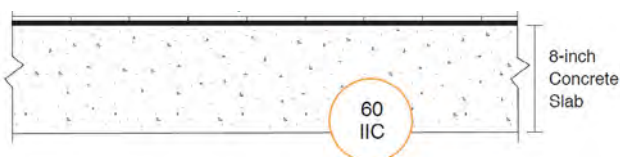
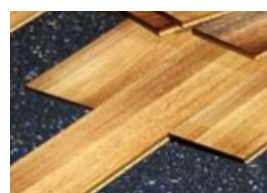
Ceramic Tiles over **QQ Step Soft™ 5mm**



Ceramic Tiles over **QQ Step Soft™ 5mm**



Click Laminate over **QQ Step Soft™ 5mm**





Ceiling Acoustics

Cylent Assurance Clip™



CLIP FOR ACOUSTICAL WALL OR CEILING MOUNT
Patent No.: US 10,385,568 B2

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. **Cylent Assurance™ Clip** and **Space Assurance™** are cost-effective products that take the difficulty out of ceiling isolation.

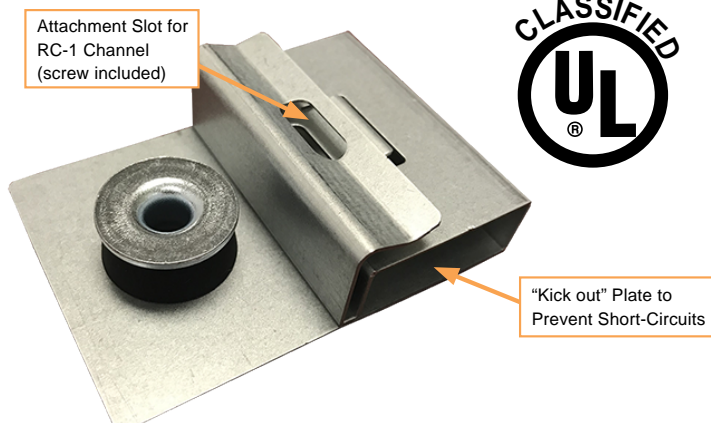
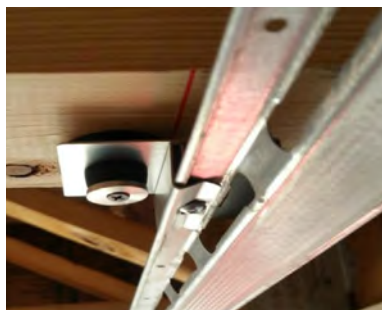
Superior Performance in Wood Frame Construction: **Cylent Assurance™ Clip** is a resilient channel vibration isolation clip, engineered to significantly reduce low frequency noise transfer in ceiling/wall assemblies used in modern multi-family construction. It can work with any type of resilient channel. All other vibration isolation clips available on the market today are limited in their application. Only Keene offers a vibration isolation clip that can work with any type of standard or generic resilient channel.

The KEENE Complete Acoustic System

- 3/4" GSL® K2.6
- Quiet Qurl® 013 MT
- Cylent Assurance™ Clip
- Space Assurance™

Floor Finish	STC	IIC
Vinyl Plank	60	62
Engineered Wood	60	64

*18" Open Web Truss



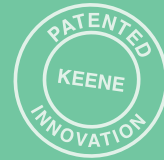
Cylent Assurance™ Clips

- ✓ US Patent issued
- ✓ Tested ceiling & wall assemblies
- ✓ Designed for use with any RC-1 channel
- ✓ Ceiling joists: I-joist, open web truss, nominal lumber, metal joists, & metal studs
- ✓ Most cost-effective option on the market
- ✓ Enhances the acoustic performance of ceilings & walls
- ✓ Luxury system performance of 60+ IIC & STC
- ✓ Fast & easy installation



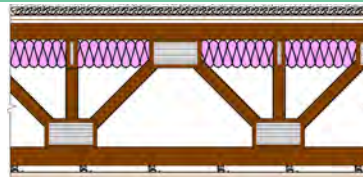
Sound Test Results

Ceiling Acoustics™



SPACER ASSEMBLY FOR PREVENTING AN ACOUSTIC SHORT CIRCUIT IN A BUILDING
Patent No.: US 8,136,320 B2

OPEN WEB Assemblies



Keene Sound Mat	GSL Gypsum Concrete Depth	Framing Depth	Insulation Type	RC Channel / Cylent Assurance Clip	Layer(s) of Gypsum Board	Floor Covering Type	STC	IIC	Test Number
Quiet Qurl 013 MT	3/4"	18"	3 1/2" batt	16" o.c. w/ Cylent Assurance Clip	1 layer	Bare	60	57	H7706.01-113-11-R0
						Eng. Wood	60	64	H7706.04-113-11-R0
						Vinyl	60	62	H7706.03-113-11-R0
Quiet Qurl 025 MT	1"	18"	3 1/2" batt	16" o.c. w/ Cylent Assurance Clip	1 layer	Bare	62	58	J4155.00B
						Vinyl	62	60	J4155.06
						LVT	62	61	J4155.07
						Eng. Wood	62	61	J4155.08
						Ceramic Tile	62	62	J4155.10
Quiet Qurl 040	1 1/4"	18"	3 1/2" batt	16" o.c. w/ Cylent Assurance Clip	1 layer	Bare	60	56	I1132.01
						Vinyl / Pad	59	62	I1132.02
						Eng. Wood	60	62	I1132.03
						LVT / Pad	60	64	I1132.04

UL Designs: L510, L518, L523, L530, L533, L534, L535, L538, L546, L547, L550, L556, L558, L563, L569, L570, L574, L576, L577, L579, L585, L587, L589, L590, L592, L593, L598, M500, M501, M502, and M503

Various Assemblies - Field Testing

Keene Sound Mat	GSL Gypsum Concrete Depth	Framing Depth	Insulation Type	RC Channel / Cylent Assurance Clip	Layer(s) of Gypsum Board	Floor Covering Type	NNIC	NISR	LIR ¹	NHIR ¹	ASTC	AiIC	Test Number
3/4" Entangled Net Sound Mat	1-1/2"	16" TJI	Full Cavity	RCS D / 12" o.c. w/ Cylent	2 layer / 5/8"	Vinyl	63	68	78	73	63	61	F19-1765 / F19-1768
Quiet Qurl 013 MT	3/4"	16" Open Web	3 1/2" batt	Generic RC 16" o.c. w/ Cylent Assurance Clip	1 layer 5/8"	Vinyl					57	59	Available Upon Request
Quiet Qurl 013 MT	3/4"	18" Open Web	3 1/2" batt	Generic RC 16" o.c. w/ Cylent Assurance Clip	1 layer 5/8"	Vinyl			64	59	59	54	F19-2240 / F19-2241
3/4" Entangled Net Sound Mat	1-1/2"	TJI	6" batt	Cemco RC-1 RC Channel @ 16"	2 layer / 5/8"	Bare	55	49	32	50			Before Cylent Assurance Clips F19-0270 / F19-0271
				Cemco RC-1 RC Channel @ 16" w/Cylent Assurance Clip	2 layer / 5/8"	Bare	58	55	61	55			After Cylent Assurance Clips F19-0367 / F19-0368
Quiet Qurl 040	1-1/8"	2" x 12" Solid Wood Joist	13" batt	RC Channel @ 12" w/ Cylent Assurance Clip	1 layer 5/8"	LVP	60	61	61	69			F19-2605 / F19-2608

¹ LIR and NHIR - John Loverde and Wayland Dong, A dual-rating method for evaluating impact noise isolation of floor-ceiling assemblies. J. Acoust. Soc. Am., 141, 428-440 (2017).
<http://dx.doi.org/10.1121/1.4973868>



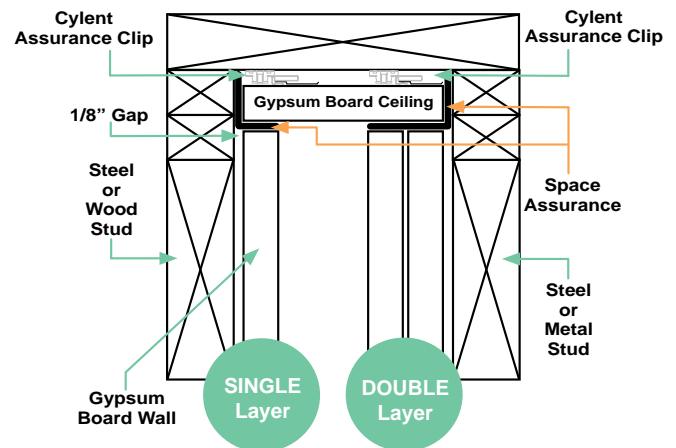
Ceiling Acoustics

Space Assurance™



SPACER ASSEMBLY FOR PREVENTING AN ACOUSTIC SHORT CIRCUIT IN A BUILDING
Patent No.: US 8,136,320 B2

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



Space Assurance™

- ✓ Proactively creates space between gypsum ceilings and walls
- ✓ Eliminates need for acoustical caulk at wall ceiling line
- ✓ Simple to inspect for proper spacing
- ✓ Eliminates flanking paths for noise
- ✓ Quick installation that saves time and money
- ✓ Only UL-listed joint assembly with a gap





Ceiling Acoustics

RC Assurance™



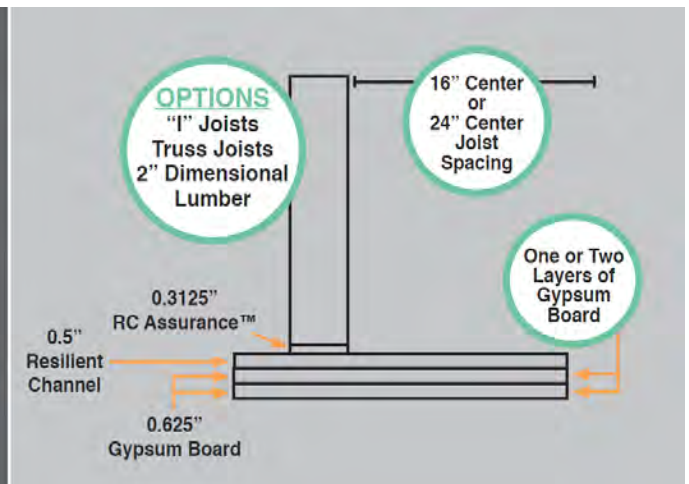
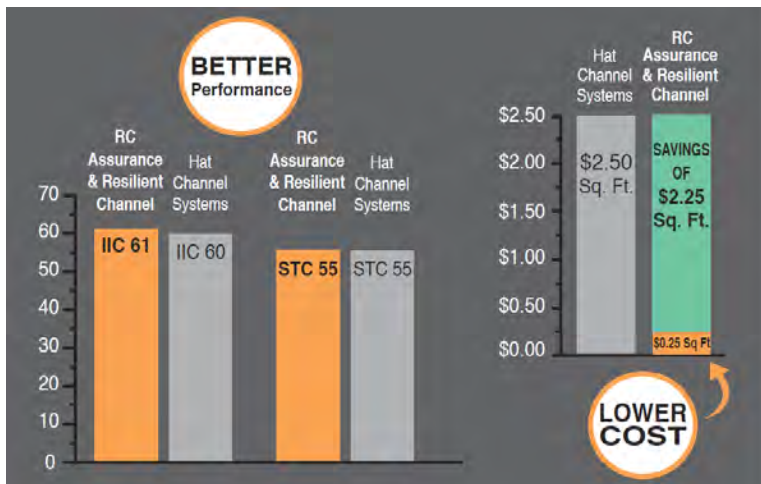
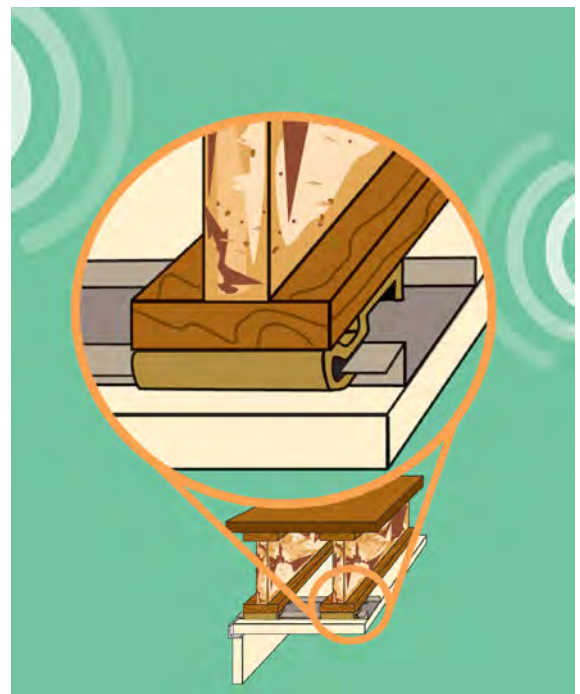
SPACER ASSEMBLY FOR PREVENTING AN ACOUSTIC SHORT CIRCUIT IN A BUILDING
Patent No.: US 8,136,320 B2

One of the biggest issues with RC Channels is short circuiting of the channels into the framing assembly, by using too long of a screw. **RC Assurance™** Eliminates short circuits.

RC Assurance™

Acoustical Assurance

- Enables resilient channel to be installed correctly
- With the correct installation, resilient channel can perform at levels equal to more expensive isolator clip assemblies
- UL-listed and approved
- Cannot be penetrated
- Push-down flange that prevents channel “ride”
- Intersection of the channel and joist is protected
- **RC Assurance™** acts as an impenetrable washer that puts extra space between the resilient channel and the joist
- For the developer, it is assurance that the RC channels are installed properly

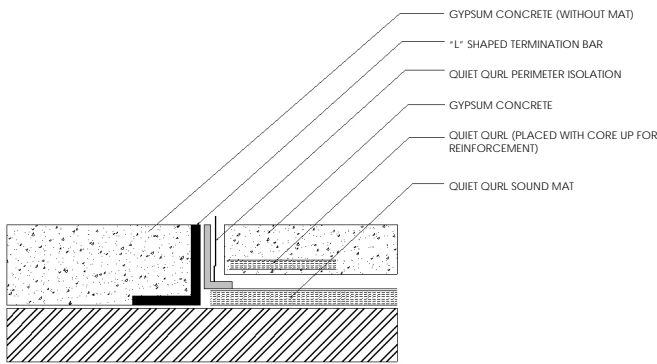




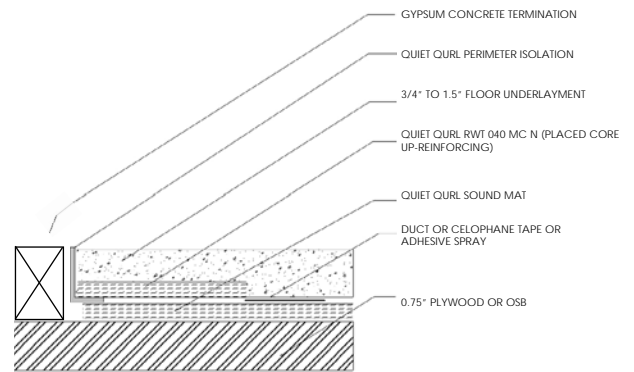
KEENE IDEAS®

Transition Details

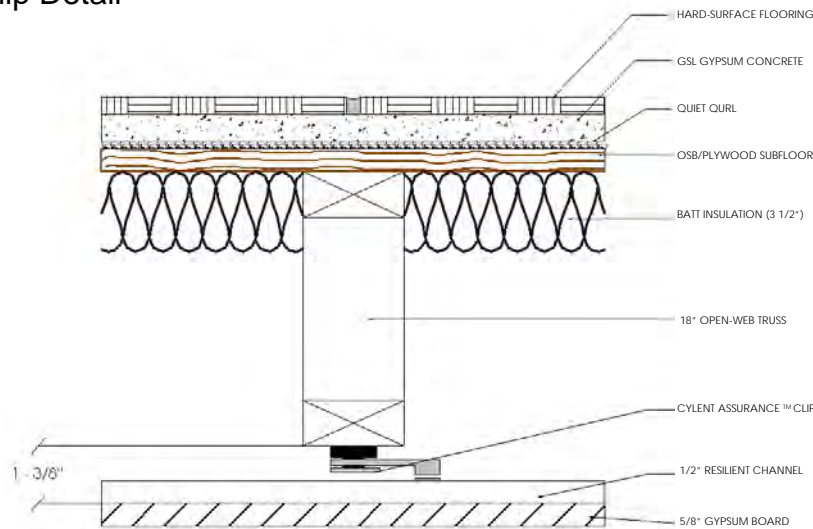
Transition to Gypsum Concrete without mat Quiet Qurl Installation in Hard Surface Areas



Quiet Qurl Doorway and Floor Transition Detail with Reinforcement



Cylent Assurance™ Clip Detail



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



877 | 514 | 5336
P 440 | 605 | 1020
F 440 | 605 | 1120
Info@keenebuilding.com



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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