COMFORTABLE CONCRETE RETOLD Engineered for Acoustic Excellence

Milliken.

SSSSHHH.... OUR PRODUCTS ABSORB **SOUND** SO YOU CAN HEAR YOURSELF THINK

Unwanted noise in the workplace is a significant contributor to stress, fatigue, illness and absenteeism.

Sound is one of the 10 Concepts in the WELL Building Standard (WELL v2). A study by Cornell University* indicated that workers in open-office environments exhibited increased levels of stress hormones, which made it more likely for them to become less motivated and less creative. In fact, data shows that productivity can go down by as much as 66%**.

The right floor covering choice, for the appropriate area can create an environment where sound levels are more comfortable, boost concentration, memory and focus and increase morale and productivity.



* Evans, G.W. & Johnson, D. (2000). Stress and open-office noise. Journal of Psychology, 85 (5), 779-783

** The 4 ways sound affects us, Julian Treasure, Talk at TEDGlobal 2009, July 2009

WHEN PERFORMANCE MATTERS

Milliken's cushion-backed carpet can have a powerful impact on productivity. By absorbing up to 60% more ambient sound than hard-backed tiles and up to twelve times more than hard surface products, our cushion backing makes it easier for everyone to hear, communicate and concentrate.

Milliken Cushion Backing absorbs up to

60% more noise than hardback

Milliken cushion backing has also been shown to reduce impact sound, for example, from foot traffic in and around workspaces, by up to 40% when compared to hardback carpet. This can help makes spaces feel much calmer and less frenetic.

Well-being and Floor Covering

Milliken's floor coverings offer many tangible well-being benefits in terms of approved acoustics, comfort, indoor air quality and safety, all of which enhance everyone's well-being.

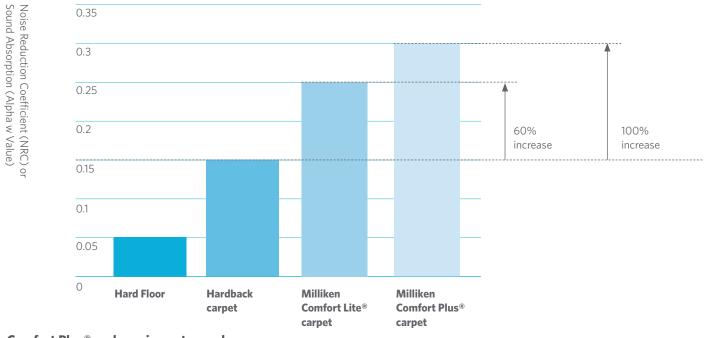


Urban Outline URL06-27-13 Smokey Charcoal Urban Graffiti URG105-204-227 Pastel

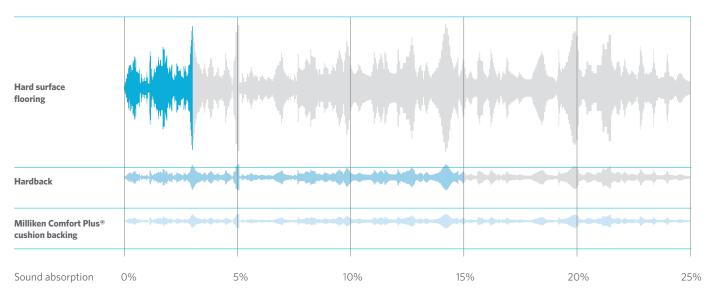


MAKE A **SOUND** CHOICE WITH MILLIKEN

Impact Noise Comparison



Comfort Plus $^{\mbox{\tiny (e)}}$ reduces impact sound (e.g. from foot traffic) by up to 40%



Sound Absorption Comparison

Milliken Cushion Backing provides:

- · 24% less noise generation than hardback carpet
- 90% less noise generation than a hard surface

Acoustic Values

COMFORTABLE CONCRETE RETOLD /

Urban Outline / Urban Portrait / Urban Sketch / Urban Vista / Urban Scene / Urban Graffiti / Urban Energy



Sound Absorption (ISO 354) Impact Sound (ISO 140-8 / ISO 10140-3)

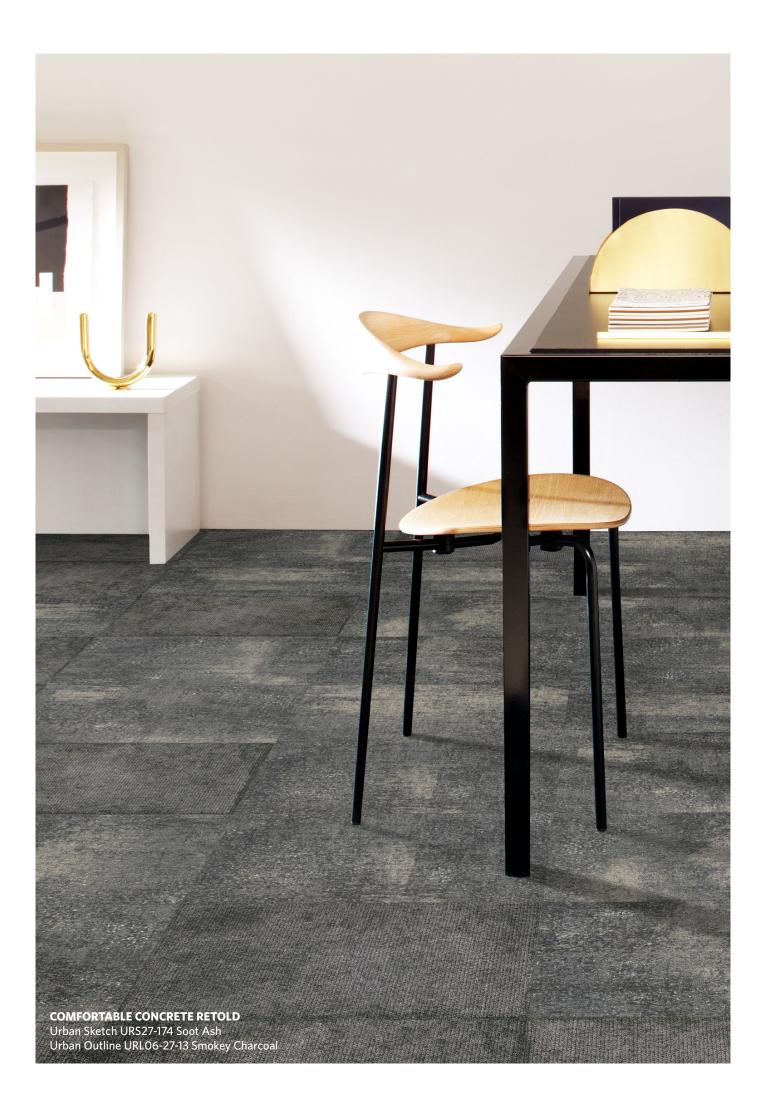
Comfortable Concrete Retold Comfort Lite[®] α_w 0.30 Class D

Comfortable Concrete Retold Comfort Lite[®] ΔL_w 32dB

bund absorptio	on coefficient α_s							
FREQUENCY	Comfort Lite*							
(Hz)	α _s	1.40						
100	0.02	1.20						
125	0.03	1.20						
160	0.04	8 100						
200	0.04							
250	0.05	δ 1.00 0.80 0.60 0.60 0.40 0.40						
315	0.09	6 08.0						
400	0.17							
500	0.38	0.60						
630	0.39							
800	0.26	5 0.40						
1000	0.23							
1250	0.24	0.20						
1600	0.25							
2000	0.28	0.00						
2500	0.30	100 160 250 400 630 1000 1600 2500 4000						
3150	0.33	frequency, f (Hz) Comfort Lite®						
4000	0.37							
5000	0.40							

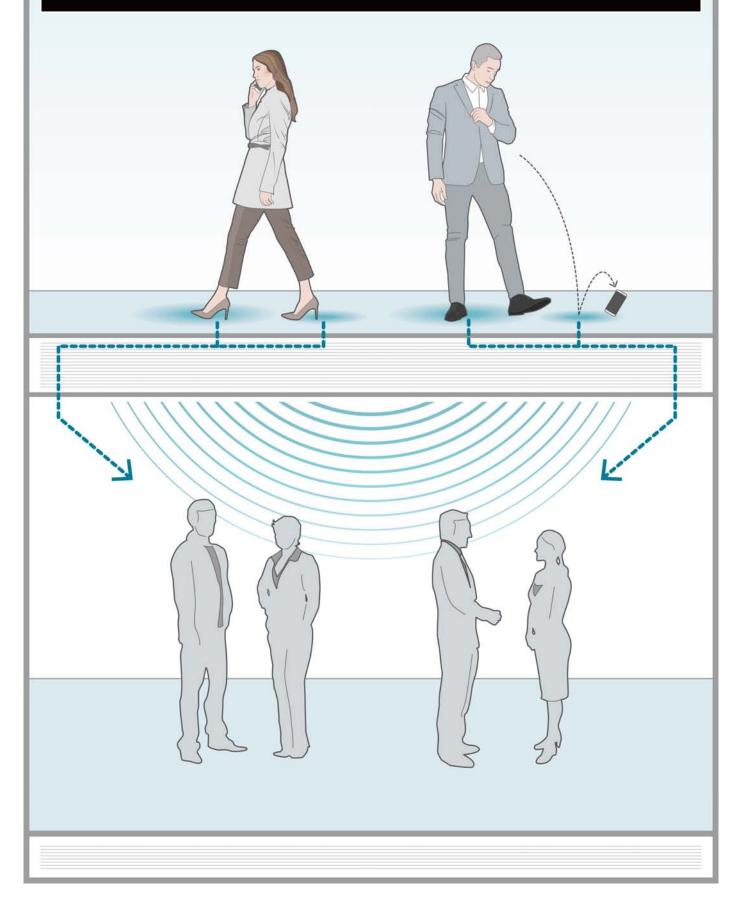
Sound absorption coefficient α_s

α _p values (Comfort Lite [®])							Class
125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	(overall value)	
0.05	0.05	0.30	0.25	0.30	0.35	0.30	D

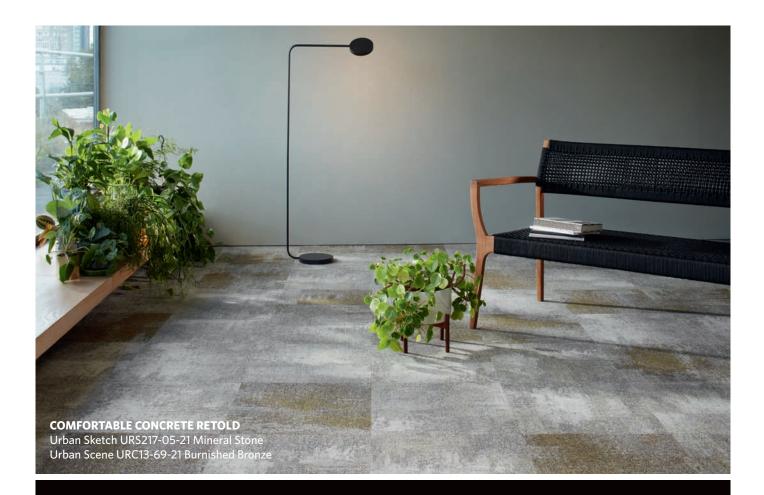


SOUND TRAVELS

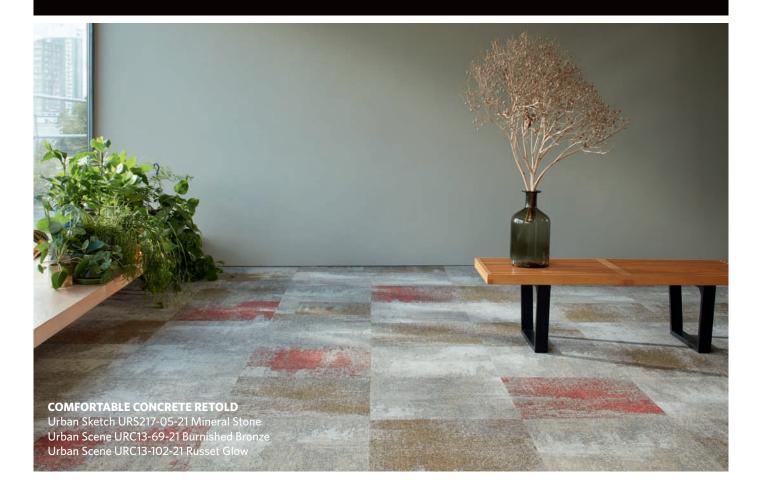
In a building with multiple floors, installing a floor covering that reduces impact sound, can dramatically reduce the intensity of sound on the floor below from both impact noise (eg walking). and background noise (eg telephones or conversations.)



COMFORTABLE CONCRETE RETOLD Urban Sketch URS27-174 Soot Ash Urban Portrait URP133-141-05 Chartreu Flint Urban Portrait URP133-126-05 Harbour Blue Urban Portrait URP133-190-05 Autumn Sunset



To transform, enhance and increase the well-being and acoustic performance in your interior space, view our entire Comfortable Concrete Retold collection **here**



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