

# Technical Bulletin



## QuietZone™ Acoustic Floor Mat

Insulation

### DESCRIPTION

Acoustic evaluation from a national laboratory on floor/ceiling assemblies confirms the benefit of adding QuietZone™ Acoustic Floor Mat to reduce both airborne and impact noise.

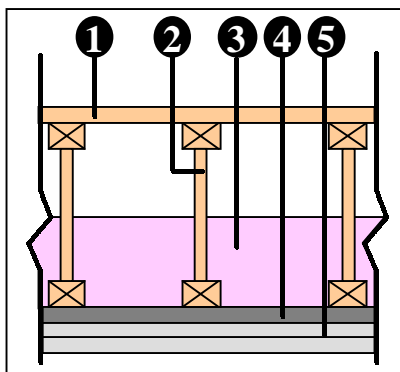
### CONSTRUCTION MATERIALS KEY

1. OSB floor decking
2. Trus Joist 11-7/8" TJI®/Pro™ 150 at 16 inches on center
3. Owens Corning Insulation
4. Generic resilient channels at 16 inches on center
5. 2 layers of 5/8" USG SHEETROCK® gypsum panels, FIRECODE C core
6. 1 ½ inch concrete, density 145 pcf
7. 10 lb. Tarpaper
8. 1 ½ inch USG LEVELROCK™ floor underlayment 2500
9. 3/8 inch Owens Corning QuietZone™ Acoustic Floor Mat

Note: Material substitution may yield different results.

Acoustic testing was completed in a full-scale facility that was designed and constructed for the measurement of sound transmission in complete assemblies. Additional research is being completed as part of an ongoing consortium research program with the National Research Council of Canada.

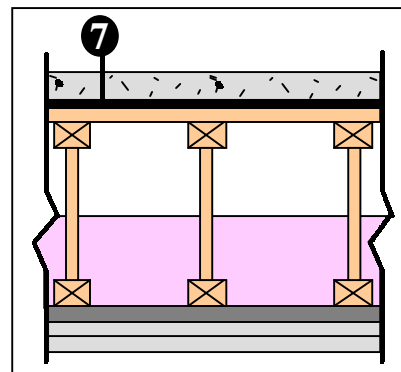
### # 1 – BARE FLOOR



An untreated floor assembly provides only marginal acoustic resistance to airborne (FSTC) and structure-borne impact (FIIC) noise.

Floor with Bare Surface	Floor with Vinyl Covering
<b>FSTC 54</b>	-
<b>FIIC 47</b>	<b>FIIC 49</b>

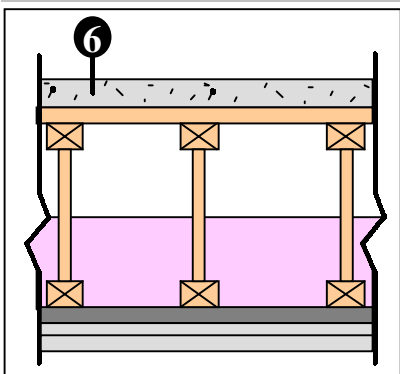
### # 3 – TARPAPER



Some construction techniques have proposed a "solution" of breaking the bond with a layer of tarpaper. However, this research testing shows only a marginal improvement.

Floor with Bare Surface	Floor with Vinyl Covering
<b>FSTC 67</b>	-
<b>FIIC 41</b>	<b>FIIC 49</b>

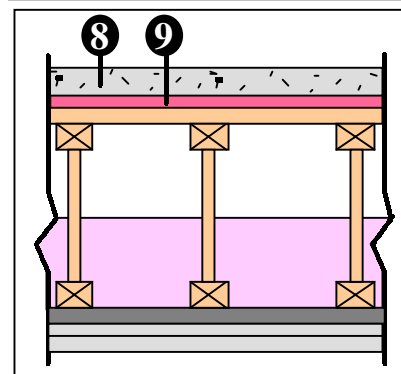
### # 2 – CONCRETE TOPPING



Adding 1 ½ inch layer of concrete or gypsum-concrete improves the airborne noise resistance, but it reduces the impact noise resistance. A bonded cementitious topping will enable a direct sound transmission path.

Floor with Bare Surface	Floor with Vinyl Covering
<b>FSTC 64</b>	-
<b>FIIC 39</b>	<b>FIIC 49</b>

### # 4 – QuietZone™ ACOUSTIC FLOOR MAT



Research testing shows that using QuietZone™ Acoustic Floor Mat as a resilient interlayer and bond breaker **clearly provides superior reductions in both airborne and structure-borne noise.**

Floor with Bare Surface	Floor with Vinyl Covering
<b>FSTC 69</b>	-
<b>FIIC 56</b>	<b>FIIC 58</b>



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