

## Sound Control Underlayment Troubleshooting Guide

**TDS 206** 

## 170 Sound & Crack Isolation Mat

Complaint	Cause(s)	Prevention
Cracked Tiles/ Grout	<ol> <li>Deflection of suspended slab</li> <li>Lack of movement joints</li> <li>Movement or settlement of substrate</li> </ol>	<ol> <li>Substrate deflection rating of L/360 must be met to accept tile and sound control mortar. Substrate deflection rating of L/480 must be met to accept stone and sound control mortar.</li> <li>Follow Tile Council of North America (TCNA) Detail EJ171 for recommendation of placement of movement joints. Isolate perimeter of installation and all restraining surfaces with foam expansion spacers.</li> <li>Ensure that construct meets industry guidelines.</li> </ol>
Loose or Hollow Sounding Tile or Stone	<ol> <li>Deflection of suspended slab</li> <li>Lack of movement joints</li> <li>Sound control underlayment not installed properly</li> <li>Substrate surface not cleaned</li> <li>Subjected to stress prior to recommended cure time</li> </ol>	<ol> <li>Ensure that construct meets industry gaterines.</li> <li>Substrate deflection rating of L/360 must be met to accept tile and sound control mortar. Substrate deflection rating of L/480 must be met to accept stone and sound control mortar.</li> <li>Follow TCNA Detail EJ171 for recommendation of placement of movement joints. Isolate perimeter of installation and all restraining surfaces with foam expansion spacers.</li> <li>Install 170 Sound &amp; Crack Isolation Mat per installation instructions on DS 170.0.</li> <li>Substrate must be free of contamination (e.g. sealers, curing compounds, coatings, oil, paint, dirt and dust). Clean contaminants from surface by sandblasting, shot-blasting, water blasting, bush hammer, machine grinding or other means of scarification. Chemical cleaning is not recommended.</li> <li>Allow a sufficient amount of time for sound control mortar to set firm prior to opening to traffic or use. Isolate perimeter of installation and all restraining surfaces with foam expansion spacers.</li> </ol>
Tiles Tenting	1. Improper movement joint design	<ol> <li>Follow TCNA Detail EJ171 for recommendation of placement of movement joints. Isolate perimeter of installation and all restraining surfaces with foam expansion spacers.</li> </ol>
Sound Ratings Not Met	<ol> <li>Lack of perimeter isolation</li> <li>Floor structure is not adequate</li> </ol>	<ol> <li>Isolate perimeter of installation and all restraining surfaces with foam expansion spacers.</li> <li>IIC rating of floor structure (e.g. concrete) is not high enough to attain necessary IIC rating of entire assembly. For example, ΔIIC of 170 Sound &amp; Crack Isolation Mat is 16; if an IIC of 50 is required, the floor structure must achieve a minimum IIC rating of 34.</li> </ol>

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