

Acoustic Solutions For Impact Noise and Sound Transmission

TESTING RESULTS

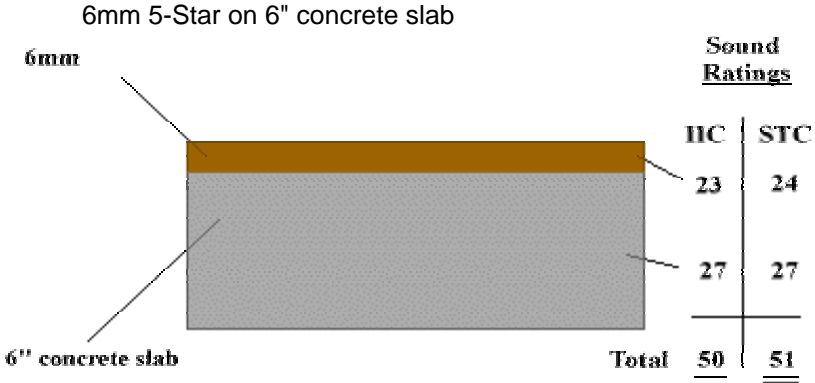
5-Star Test Results

Interpretation and Cautionary Note: Many published test results, although accurate, may be misinterpreted unless closely analyzed. For this reason 5-Star materials were tested to reflect the ratings as independent of other material influences as possible. For example, test results on underlayment cork materials in conjunction with suspended ceiling systems do not accurately reflect the true acoustical reduction values of impact noise and sound transmission provided by cork. The type of suspended ceiling system used during a testing procedure along with underlayment cork may result in increased IIC and STC ratings by as much as 30 dB. Since there are numerous suspended ceiling systems, it is virtually impossible to provide test results for each and every type of such ceiling system. On average it is estimated that IIC and STC ratings increase by approximately 14 dB when suspended ceilings are used in conjunction with cork underlayments. Where suspended ceilings are included in the ratings shown below, the IIC and STC values are not definitive and are only estimated averages based on information gathered from acoustic consultants and a broad range of industry sources.

Ratings are also further influenced by the type of floor covering placed over cork underlayments but not to the degree of suspended ceilings. Flooring thickness, material type, wood types, installation methods, glues, vapor barriers, and other factors all do influence to various degrees the final IIC and STC ratings. To provide acoustical test results with unknown variables could be misleading unless all the variables are clearly and accurately submitted. As the testing results of 5-Star shown below indicate, the use of 5-Star for acoustical sound control by itself and particularly in conjunction with any suspended ceiling systems and any floor types, clearly meets and surpasses required IIC and STC ratings.

Sound Ratings For 5-Star Underlayment

Illustration A:

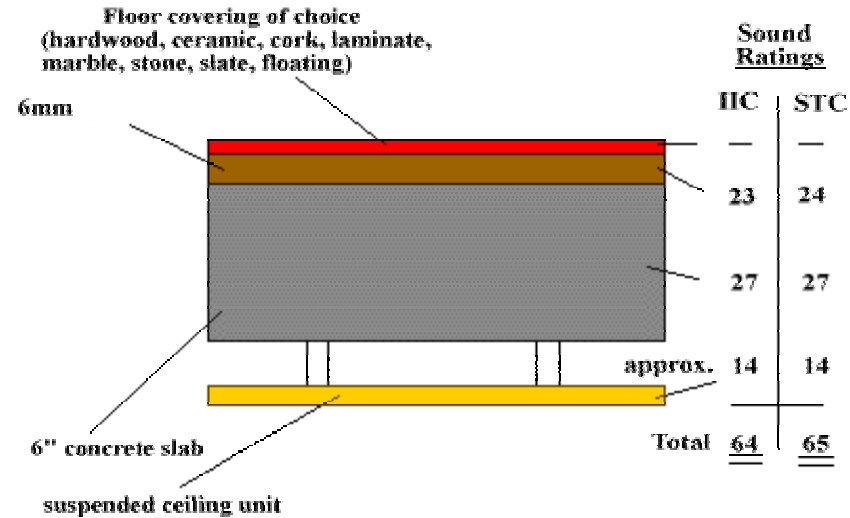


Result Analysis:

The concrete slab has a fixed rating of 27 dB. Affixing 6mm of 5-Star to the concrete slab improves the overall IIC rating to 50 and the STC rating to 51.

Illustration B:

6mm 5-Star on 6" concrete slab .



Result Analysis:

The concrete slab has a fixed rating of 27 dB. Affixing 6mm 5-Star to the concrete slab improves the overall IIC rating to 50 and the STC rating to 51 (see illustration A). Adding floor covering may slightly alter the ratings depending on floor type. Adding a suspended ceiling unit will increase the ratings significantly, generally by an average of 14 dB depending on unit type. See the **Interpretation and Cautionary Note** above.

Table 1:

Concrete Subfloor	5-Star	Suspended Ceiling	Sound Ratings IIC	Sound Ratings STC
6" slab	--	--	27	27
6" slab	6mm	--	50	51
6" slab	6mm	yes	64	65

Comparative Testing Results of 5-Star To Other Cork Underlayment Manufacturers

Field Impact Isolation Class (FIIC) testing was performed to determine the "rank-ordering" by manufacturer of several different but popular cork underlayment materials currently being used in the North American market. These relative ratings apply to bare 5/8" plywood laid over the cork and the cork over the concrete without any binding cement. Such cement may alter the result slightly. Four different specimens of cork from other manufacturers were used, and one test was run without any cork to serve as the control number.

Table 2: Material	Expressed on a relative "IIC" scale	
	Rating	Ranking
Manufacturer 1 - 6mm cork	54	
5-Star - 6mm cork	55	Best
Manufacturer 2 - 6mm cork	54	
Manufacturer 3 - 6mm cork	53	Least

Result analysis: All (but the no cork) produced acceptable results but 5-Star **ranked as the material with best results**. This data is not absolutely indicative of the IIC value that may be achieved in the field, but is rather aimed at comparing various materials and "rank-ordering" those materials accurately, the higher number indicating better isolation on a decibel scale. Illustration C below is the actual data, graphing the impact sound levels of the differing cork underlayments.