

## HARMONY ACOUSTIC CORK

Harmony Acoustic Cork Matting is a 6mm dye cut medium density cork underlay specifically formulated to meet and surpass sound control standards and requirements as specified by building codes, high-rise body corporations, architects, and other governing agencies. At Harmony we take a mix of both large and small natural cork grains compressed to an optimal medium/low density. This combination of grains and ideal density results in the best acoustical sound control barriers when used in conjunction with assorted surface floors and is suitable for use with Hardwood,

Parquet, Laminate, Bamboo and Engineered Flooring. Cork has long been prized as an acoustic and heat insulator unlike other alternatives on the market cork is both non-toxic and environmentally friendly. Cork is naturally water impervious and will not support mould growth in high humidity environments. Our unique dye cut system also means that far less glue is needed in the installation process resulting in less waste and lower cost for your project.

### FEATURES AND BENEFITS

- 6mm thick for optimum sound reduction.
- Unique Dye cut system for quick installation and reduced glue use.
- Light weight for easy transportation and storage.
- Natural environmentally sustainable composition for full green credentials.
- Non-toxic and contains no formaldehydes or trace heavy metals.
- Natural Thermal installation.
- Natural composition allows floors to breathe reducing latent moisture issues.
- Impervious to water and mould.
- Medium density for better shock absorption and a more comfortable floor.
- Highly cost competitive.
- Meets all industry standards for sound reduction.
- Compatible with all Timber, Bamboo and Laminate products.

### SPECIFICATIONS

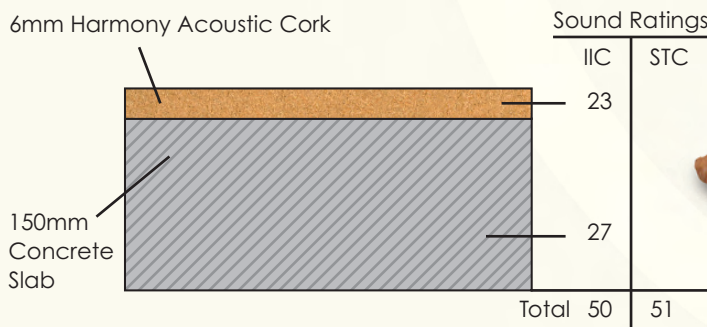
<b>Material</b>	Natural Composition Cork	
<b>Standard Range</b>	Underlayment / Acoustical / Sound Control Stress Crack Protection / Environmental Insulation	
<b>Binder</b>	Polyurethane	
<b>Granule Size</b>	1-4mm	
<b>Typical Values</b>	Density Minimum	184 (11.5)
	Kg / m3 (pcf)	
	Compression %	20-50
	Recovery %	up to 95
	Tensile Strength (*)	L - 414 (60)
	Kpa (psi)	T - 276 (40)

\* L - Test on the longitudinal way

\* T - Test on the transversal way

## SOUND RATINGS FOR HARMONY ACOUSTIC CORK UNDERLAYMENT

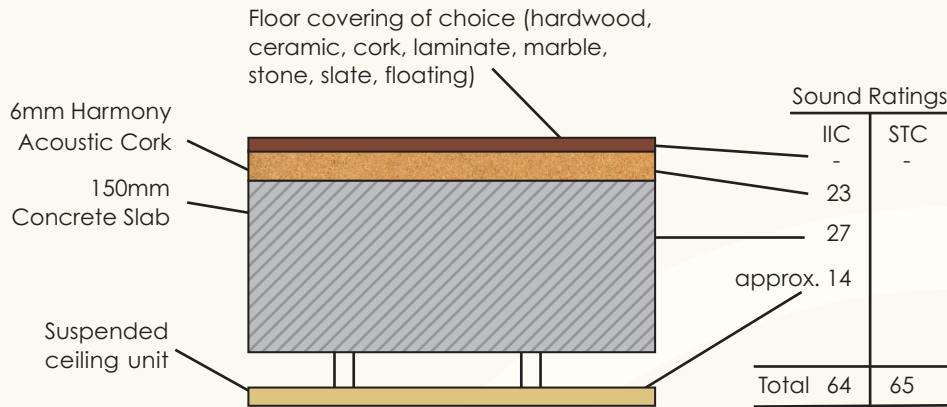
**Illustration A: 6mm Harmony Acoustic Cork on 150mm concrete slab**



**Result Analysis:** The concrete slab has a fixed rating of 27 dB (IIC). Affixing 6mm of Harmony Acoustic Cork to the concrete slab improves the overall IIC rating to 50.

## SOUND RATINGS FOR HARMONY ACOUSTIC CORK UNDERLAYMENT

**Illustration B:** 6mm Harmony Acoustic Cork on 150mm concrete slab with suspended ceiling and floor covering of choice.



**Result Analysis:** The concrete slab has a fixed rating of 27 dB (IIC). Affixing 6mm Harmony Acoustic Cork to the concrete slab improves the overall IIC rating to 50 (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 14dB depending on unit type. See the **Interpretation and Cautionary Note** above.

**Table One**

Concrete Subfloor	Harmony Acoustic Cork	Suspended Ceiling	Sound Ratings IIC	Sound Rating STC
150cm Slab	-	-	27	-
150cm Slab	6mm	-	50	51
150cm Slab	6mm	yes	64	65

## SOUND RATINGS

**What Exactly Does IIC, INR and STC Mean?** Sound rating methods have been established by the Federal Housing Administration (now HUD) and the National Bureau of Standards. These sound rating methods are recognized by building construction regulatory bodies and agencies. ASTM and ISO acoustical testing methods are used as the criteria to determine acceptable sound transmission standards.

**Impact Insulation Class (IIC)** Impact sound originates when one body strikes another, such as in the case of footsteps, hammering, and objects falling. Impact sound travels through the structure with little loss of energy if the structure is continuous and rigid. Transmission of impact sound can be controlled by isolation. IIC ratings are greatly improved by the introduction of Harmony Acoustic Cork. The higher the IIC number the better the impact insulation.

**Impact Noise Rating (INR)** The earliest single-number rating system was called the Impact Noise Rating (INR). This has since been replaced by Impact Insulation Class (IIC) as described above. IIC values will usually be around 50 points above the corresponding former INR values. This explanation of INR is given here simply to assist those still working with the old INR methods.

**Sound Transmission Class (STC)** Sound Transmission Class (STC) numbers have been adopted by acoustical engineers as a measure of resistance of a building element such as a floor or wall to the passage of audible sounds. Audible sounds are defined as voice, music, or any other noises not related to impact sound. STC ratings are greatly improved by the use of Harmony Acoustic Cork. The higher the STC number the better sound barrier.

Harmony Acoustic Cork materials have been tested for their acoustical properties. See *Testing Results*. Certified copies of all testing results may be obtained by request from Harmony Timber Floors.

Due to variables, Harmony Timber Floors cannot warrant the accuracy of the values. The final material choice and determination of values is that of the buyer and Harmony Timber Floors cannot be held responsible.