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Technical Newsletter #26 3.0

Subject: Underlay (soundproofing) criteria for glued down installation with specified MIRAGE products

The goal of this technical newsletter is to review acoustic underlayments and the minimum criteria needed to maintain specified MIRAGE products lifetime warranty.

For acoustical reasons, you can install specified MIRAGE floors glued to an underlayment.
However, the pad/assembly must meet the following minimum criteria:

	Criteria	Standard	Limit	Note
Underlay only	**Compression @ 25% deflection**	**ASTM D-3575**	**≥ 2 psi** thickness less than 7 mm **≥ 6 psi** thickness between 7 and 10 mm	To avoid movement (comfort and squeaking) 10 mm is the maximum thickness
	Tensile @ 100% elongation or less	**ASTM D-412** (method A) or equivalent	60 psi (min. 0.4 Mpa)	To limit expansion/contraction and to ensure wear resistance of underlayment
	Adhesive transfer to flooring	N/A	75%	To ensure proper adhesion
	Service temperature		20 to 110°F (-6 to 43°C)	To sustain radiant heat systems
	Water vapor transmission	**ASTM E-96**	Min. 0.6 lb./1,000 sq. ft./24 hrs	To be considered a moisture vapor protection

Underlayment: Do not confuse with vapor resistant/barrier products designed for concrete or wooden subfloors.

Typical assembly*	**Tensile** (perpendicular to gluing plan)	**EN 14293** (or equivalent)	50 psi [0.35 Mpa] (7-day cure) Max. 4 mm @ 50 psi (0.35 Mpa)	This value is not a percentage, in order to avoid thickness affecting results
	Creep (tensile) (perpendicular to gluing plan)	**EN 14293** (or equivalent)	Max. 2 mm (from loading) Loading 30 psi (0.2 Mpa) 30 minutes load	To limit expansion/contraction and excessive deformation

**Typical assembly*: *subfloor + adhesive + underlay + adhesive + installed floor. Both underlayment and adhesive effects should be considered to ensure good product performance.*
***Note 1**: The acoustical performance of the underlayment is dependent on the construction where it is used. The subfloor can impact performance of the underlayment.*

Important notes:

- All the criteria must be met to ensure proper performance of the product.
- The adhesive used must meet the standards set out in Technical Newsletter #23.

MIRAGE will not be held responsible for:

- The acoustical performance of the underlayment used (see note 1)
- The long-term resistance to wear (moisture, mildew)
- The content of the underlayment (raw materials, adhesives, contaminants, VOCs or formaldehyde content)
- The compatibility with sealants or adhesives (according to manufacturer)
- The warranty (should be at least equal to MIRAGE flooring)
- Any problems related to the use and installation of the underlayment or accessories

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