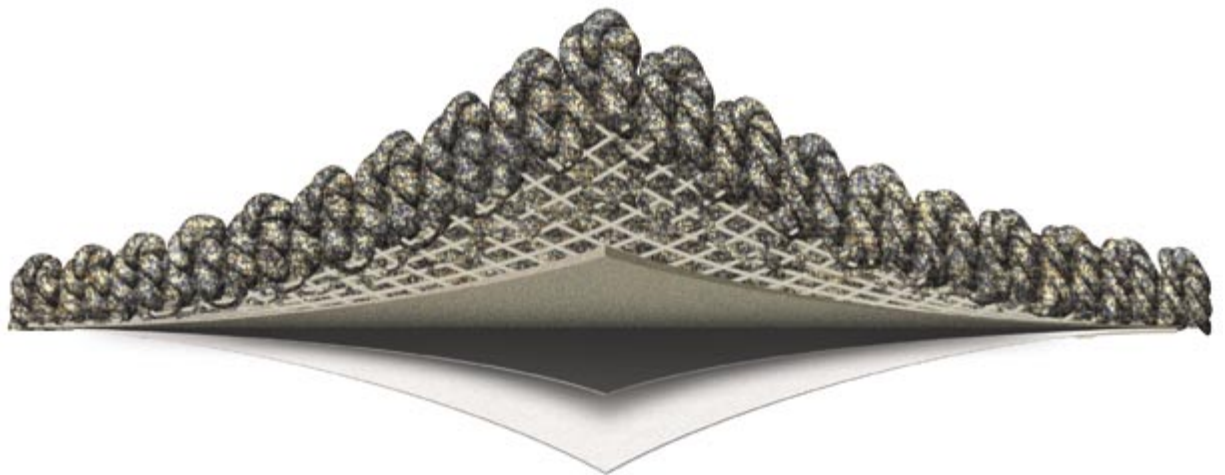


# tek.talk

Your Technical Resource for Education, Healthcare and Government Carpet Knowledge.

## Backing Systems: The Real Story

Selecting the best backing system can be a difficult task because of the wide assortment of backings available. The end user must determine the highest priorities of the facility to know which backing will best meet the requirements. For example, an educational installation typically requires a performance backing with high tuft bind, the ability to prevent wick back staining and easy maintenance, while a healthcare facility might need a backing that features a moisture barrier, antimicrobial treatments, stain resistance and roller mobility. Other facilities may place a high priority on the ability to recycle the carpet or on a product that has sealable seams for moisture resistance.



performance carpet by Shaw

## Terminology and Benefits of Different Backing Systems

Backing systems can be divided into four main categories depending on how the backing is created and the chemistry used. Each one has specific benefits.

	<b>Emulsion</b>	<b>Thermoset</b>	<b>Thermoplastic</b>	<b>PVC-Polyvinyl Chloride</b>
<b>Definition</b>	A dispersion of solid materials into a liquid. For carpet, it is the latex adhesive chemistry plus water.	This backing structure is formed by reactive chemistry and is not water based. Once the backing is formed, the materials cannot be reheated and softened again.	This backing system uses materials that become soft when heated and solid when cooled, and this may be repeated many times	This backing is a combination of PVC polymer resin suspended in oil with filler added. It is formed by reactive chemistry like a thermoset yet can be heated and cooled many times, like a thermoplastic.
<b>Benefits</b>	Cost effective, high tuft bind, no delamination or edge ravel, excellent pattern match	Outstanding wet and dry tuft bind, warranted moisture barrier, no edge ravel delamination, excellent pattern match	Excellent recyclability, dimensional stability, impervious moisture barrier, sealable seams for moisture resistance, superior delamination and edge ravel strength	Dimensional stability, no delamination or edge ravel, sealable seams
<b>Shaw Products</b>	<i>TekLok™</i>	<i>UltraLoc® MP and MPC</i>	<i>EcoTek 6 Ecoworx®</i>	<i>Permacac® 6</i>



## Tests that Measure Backing System Effectiveness

Manufacturers such as Shaw subject all their backing systems to rigorous testing using both standardized tests developed by AATCC (American Association of Textile Chemists and Colorists) and ASTM (American Society of Tests and Measurements) along with industry tests, which are not standardized tests but are used as a measuring stick, like the British Spill Test or the Roll Chair Test. Specifiers may want to ask for specific test results depending on which backings features are the most important to them. For example, ASTM D 1335 (Wet and Dry Tuft Bind) measures how many pounds of pressure are required to pull the tuft out of the backing. ASTM D 3936 measures delamination – the amount of force required to strip the secondary backing from the primary backing. AATCC 138 and 174 measure the ability of the backing to resist growth of bacteria and fungi. For a complete list of tests or test results for specific backings, contact Shaw Tek Inforum at 1.877.502.7429.

## Problems Caused by Incorrect Backing Systems and Suggested Solutions

Selecting an incorrect backing system can result in problems on the floor. Let's take a look at some problems and their causes and determine the solution.

**Problem and Cause:** Delamination caused by too much wet cleaning or selecting the wrong backing for high traffic areas.

**Solution:** Performance backing; select a moisture barrier if the facility will have limited drying time after wet extraction cleaning.

**Problem and Cause:** Moisture penetration and wick back staining caused when spills seep into backing and sub-floor because there's no moisture barrier.

**Solution:** Select a product with a moisture barrier.

**Problem and Cause:** Plasticizer migration which is caused by not removing old adhesive from vinyl asbestos tile or using the wrong adhesive.

**Solution:** Proper adhesive and/or a non-PVC backing system.

**Problem and Cause:** Edge ravel caused by the wrong backing, not enough seam sealer or bonnet cleaning.

**Solution:** Performance backing along with proper installation and maintenance procedures.

## Importance of Warranties in Making the Best Backing Decision

Another factor to consider in selecting a backing system is the type of warranty that is provided by the manufacturer. This warranty should be available in writing to the specifier and end user. We recommend selecting products that have a Lifetime Commercial Warranty. For example, the lifetime commercial warranty for Shaw's high performance broadloom and 6' carpet with TekLok™, Ultraloc® MP, Ultraloc® MPC, Ecoworx®, EcoTek 6 and Permabac® 6 includes tuft bind, edge ravel, abrasive wear, backing integrity/delamination, moisture management, pattern matching, cushion resilience and static propensity. For written warranties on Shaw's backing systems, contact Shaw Tek Inforum at 1.877.502.7429.

## In Summary

Selecting the proper backing system is extremely important in floor performance. Specifiers and end users should determine their highest priority needs as far as performance on the floor; then select a backing system that provides those benefits and is supported by a Lifetime Commercial Warranty and technical support in adhesive selection, installation and maintenance.



tek.talk