

SITUATION:

I am working with a moisture cure urethane and I am not sure I understand how the product works.

HOW A MOISTURE CURE ADHESIVE WORKS

Moisture Cure Urethane Adhesives are known as "reactive" adhesives. A reactive adhesive is one that requires a catalyst, something in which to begin the chemical reaction of the adhesive which causes it to begin curing. A moisture cure urethane begins curing with exposure to moisture or humidity and unlike two-component reactive adhesives (most of us are familiar with an epoxy that has a Part A and a Part B that is mixed together) a moisture cure urethane is not affected as much by temperature as it is by humidity. This is the opposite of two-component reactive adhesives.

If there is very low relative humidity (below 40%) and a very low porosity substrate, the adhesive may appear to stop curing because the cure rate is slowed so dramatically by the reduced amount of the available catalyst (water/moisture in the environment).

Moisture Cure Urethane Adhesives work a bit differently than a water or solvent based wood flooring adhesive in that they work by means of a chemical and mechanical bond rather than just a mechanical bond. They chemically "attach" themselves to the wood as well as "grabbing" onto the wood and substrate. A water/solvent based wood adhesive only "grabs" the wood and the substrate. What individuals call "etching" the surface of the wood is often misleading as Roberts moisture cure urethane adhesive chemical bond to the surface if not removed quickly. The adhesive can then only be removed by mechanical means which can cause some slight scratching of the surface during the removal requiring the surface be re-touched to match the original surface. If a moisture cure urethane is accidentally applied (fingerprints, smudges, etc) the adhesive must be removed immediately from the surface of the flooring and prior to it forming a chemical bond with the flooring. This same principle is why moisture cure urethanes are the strongest on the market and make great wood flooring adhesives. They offer tenacious bonding power, yet remain flexible and expand and contract with the natural movement of wood flooring.

Roberts offers the following moisture cure wood flooring adhesives:

R1530 All-In-One Wood Flooring Adhesive (Works as an adhesive, sound reduction barrier and moisture barrier all in one application!)

R1509 Wood and Bamboo Flooring Adhesive

1408 Solid Wood and Bamboo Flooring Adhesive

And for those times when accidents happen...

R5505 Urethane / Multipurpose Adhesive Remover