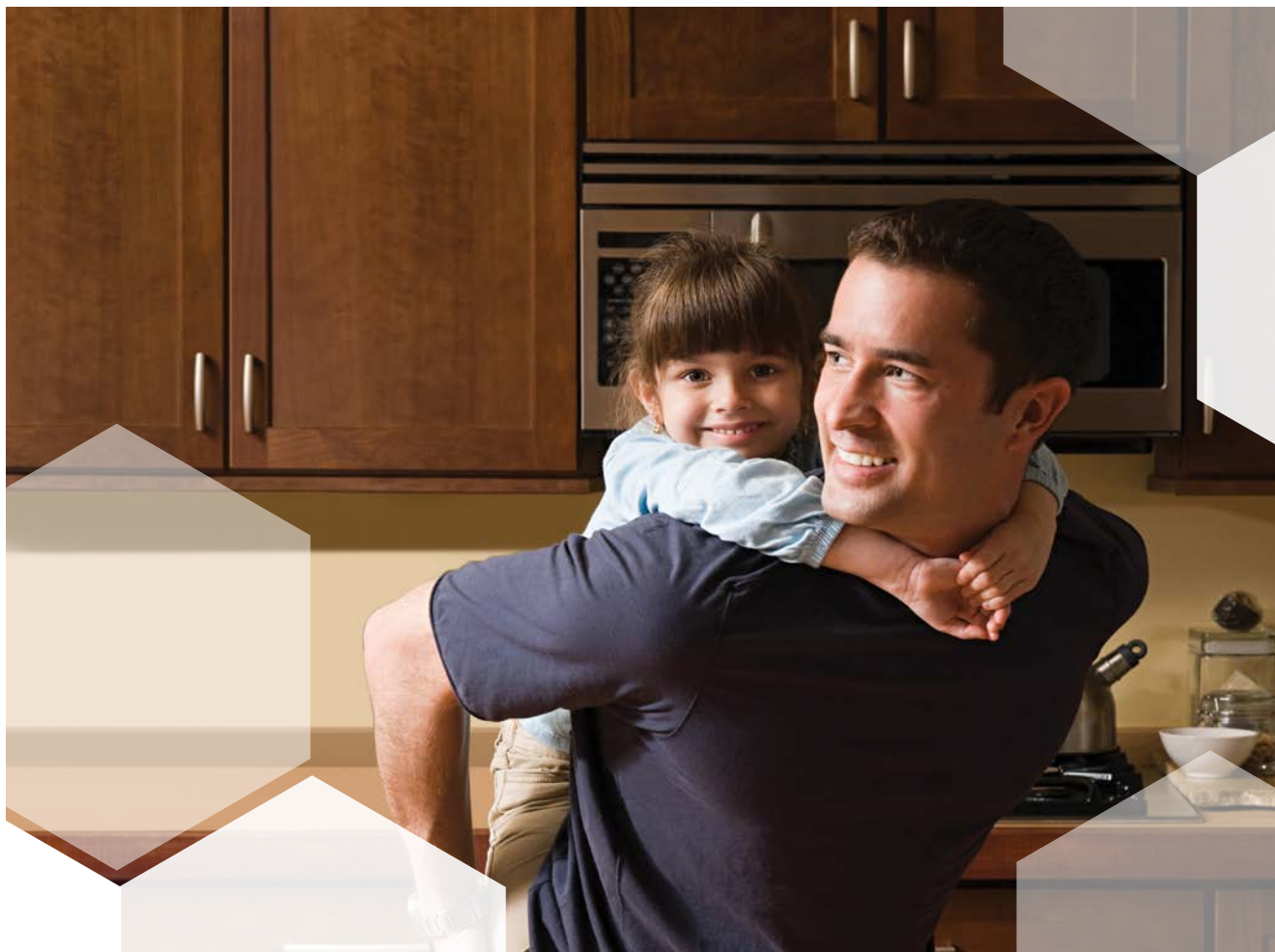


SOYAD™ ADHESIVE TECHNOLOGY

The natural choice for hardwood plywood



- Formaldehyde-free
- Cost Competitive
- CARB Phase 2 Exempt
- LEED* Compliant
- Easy to Use

Technology Overview

Soyad™ adhesive technology is a patented, formaldehyde-free adhesive system from Solenis that is widely used to manufacture environmentally-friendly hardwood plywood panels. Soyad adhesives are used to produce panels with veneer, particleboard or medium-density fiberboard cores. The strength provided by a Soyad adhesive is comparable to that of formaldehyde-based adhesives. Soyad adhesives are cost competitive with formaldehyde-based adhesives and, in most cases, cost less than other no-added-formaldehyde (NAF) technologies.

Soyad adhesives are water-based systems formulated with natural soy flour and a proprietary cross-linking resin. When blended together the resin reacts with the protein in the soy flour to form a durable and water-resistant thermoset adhesive.

The Soyad adhesive can be customized as needed to meet your specific operational and manufacturing requirements.

Ease of Use

Soyad adhesives are mixed on-site and easily applied using the same application equipment typically used for formaldehyde-based adhesives. No special mixing equipment is needed and only minor system changes are required to convert from a formaldehyde-based adhesive to a Soyad adhesive. Production processes need not be altered: with Soyad adhesives, spread rates, press temperatures and press times are similar to those of formaldehyde-based adhesives.

Industry Acceptance

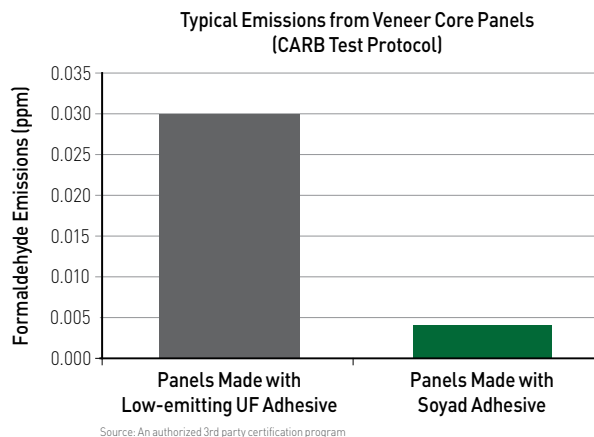
Since 2005, more than 110 million hardwood plywood panels have been produced in North America with Soyad adhesive technology. In fact, the Hardwood Plywood Veneer Association of North America estimates that more than half of the hardwood plywood panels manufactured in North America during 2010 were made with Soyad adhesives.

Today, Soyad adhesives are used globally to produce hardwood plywood panels and it is the adhesive system of choice for industry leading manufacturers who want to stay ahead of formaldehyde regulations and help improve indoor air quality.



Formaldehyde Emission Standards

Soyad adhesives are ideally suited for hardwood plywood panels because they contain no formaldehyde. The amount of formaldehyde emitted from hardwood plywood panels made with Soyad adhesives is attributable to naturally occurring formaldehyde within the wood and is significantly lower than that of panels made with low-emitting urea-formaldehyde (UF) adhesives.



Hardwood plywood panels made with Soyad adhesives meet all global formaldehyde emission standards, including CARB Phase 2, European E0 and Japanese F☆☆☆☆ standards. Additionally, hardwood plywood panels produced with Soyad adhesives are CARB Phase 2 exempt and are eligible for LEED points for improved indoor air quality.

Performance Advantages

Commercial applications confirm that Soyad adhesives provide a number of performance advantages for hardwood plywood manufacturers. Consider the following:

- Eliminates formaldehyde-related health hazards for workers and end-use consumers
- Cost competitive with formaldehyde-based adhesives and other NAF technologies
- Easy transition from formaldehyde-based adhesive using existing spreader and press conditions

Additionally, hardwood plywood panels made with Soyad adhesives:

- Meet all global formaldehyde emission standards
- Are CARB Phase 2 exempt
- Qualify for LEED points

More Information

To learn more, contact your technical sales representative or visit us online.

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