

# SOYAD™ CPW ADHESIVES

The natural choice for custom flat and curved plywood



- No-added-formaldehyde (NAF) Adhesive
- Highest Bio-based Content
- Cost Competitive
- Strong Adhesion to Difficult Substrates
- EPA and CARB Phase 2 Exempt

## Technology Overview

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

## Application Considerations

Soyad CPW adhesives are easily applied using the same spreaders typically used with other plywood adhesives. Production systems may require minor process changes. However, spread rates, press temperatures and press times are similar to those of other adhesives. Soyad CPW adhesives can be used with traditional flat panel hot presses as well as induction or RF presses. Our pre-designed mixing equipment is easy to use, low-cost and is constructed from readily available parts.

Compared to other adhesives, Soyad CPW adhesives have a longer pot life, which reduces the risk of the adhesive hardening in process piping. Other comparisons are shown in Table 1.

Table 1

ADHESIVE & PROCESS	SOYAD CPW	CARB2 UF	DRY MUF	LIQ-LIQ UF
Easy Mixing & Spreading	⊖	●	●	⊖
Long Stand Time	⊖	●	●	⊖
Long Glue Pot Life	●	⊖	⊖	●
Ease of Glue Clean-up	●	⊖	⊖	⊖
Operator Friendly	●	●	●	●



## Performance Advantages

Commercial applications confirm that Soyad CPW adhesives provide a number of performance advantages (see Table 2) for custom plywood manufacturers. Consider the following:

- Cost competitive with formaldehyde-based adhesives and other NAF technologies.



- Provides excellent knifing results and 3-cycle soak performance.
- Eliminates formaldehyde-related health hazards for workers and end-use consumers.

Table 2

COST & BOARD PROPERTIES	SOYAD CPW	CARB2 UF	DRY MUF	LIQ-LIQ UF
Knifing - High % Fiber Tear	⊖	⊖	●	●
Low-cost Adhesive	●	●	⊖	⊖
Shape Retention	●	⊖	●	●
High Bio-Based Content	●	●	●	●
No Added Formaldehyde	●	●	●	●

## Formaldehyde Emission Standards

Custom plywood panels made with Soyad CPW adhesives meet all global formaldehyde emission standards, including EPA 40 CFR Part 770, CARB Phase 2, European E0 and Japanese F★★★★ standards. Also, plywood panels produced with Soyad CPW adhesives qualify for “Exempt” status with both the EPA and CARB. EPA-Exempt means users will qualify for reduced testing and will have a significantly reduced risk of producing non-complying lots requiring 72-hour customer notification. Lastly, panels made with Soyad CPW adhesives qualify for LEED points and represent the highest level of green product design available.

## More Information

To learn more, contact your local Solenis field representative or visit us online at [soyad.com](http://soyad.com)

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