



# MDF Manufacturer Reduces pMDI Adhesive Costs with Soy-based Co-adhesive System

## Soyad™ SD442 Co-adhesive Technology

### Customer Overview:

- Segment: Wood Composite Panels
- Product(s): Medium-Density Fiberboard (MDF)
- Location: North America

### Application Overview:

- Type: Wood adhesive
- Equipment: Continuous, MDF production line.
- Capacity: 140 million square feet per year

### Existing Treatment:

- 3.5% pMDI adhesive
- Release agent

### Problem Summary:

This MDF producer wanted to reduce its pMDI adhesive costs and improve the cost competitiveness of its finished MDF panels.

### Customer Objectives:

- Reduce adhesive costs
- Maintain strength properties of finished panels
- Maintain moisture swell properties
- Maintain production rates

### Solenis Solution:

The Solenis team surveyed the customer's process and recommended the use of Soyad SD442 co-adhesive technology. Soyad co-adhesives are water-based dispersions formulated with natural soy flour and proprietary ingredients and are lower cost than pMDI adhesives.

The Soyad co-adhesive was diluted with a small amount of water to reduce the viscosity and improve spraying distribution. The dilute co-adhesive was added to the discharge of the defibrator, separately and before the pMDI. 20% of the pMDI adhesive was replaced with Soyad SD442 co-adhesive.

Bulk tanks and permanent pump systems were installed for continuous use of Soyad in the process.

### Customer Benefits:

- Adhesive costs were reduced by 5%.
- MOR, IB and other physical properties were maintained.
- Moisture swell was maintained.
- Production rates were maintained.

### Conclusion:

Soyad SD442 co-adhesive provided the customer with a lower cost adhesive system, enabling them to be more competitive in the building products market.

