

Industrial Wood



CASE STUDY - Eliminate Acetone and replace with AEROGREEN® 4175 on Unilin Co. Automated Lines

Project Profile:

UNILIN produces laminate floors, engineered wood, boards, decorative panels, finished products, roofing elements and insulation panels. UNILIN forms part of the American company MOHAWK INDUSTRIES, INC., which is listed on the New York stock exchange. UNILIN has three divisions:

- UNILIN, division flooring (laminate, parquet and LIVYN),
- UNILIN, division panels (boards, decorative panels and finished products)
- UNILIN, division insulation (roofing elements and insulation panels)

Problem:

Our objective was to eliminate Acetone as their primary cleaner for all applicators and replace with AEROGREEN® 4175 Ink & Coating Remover.

Proposed Solution:

1. 4175...safe solvent free cleaner
2. Replaces Acetone as cleaner for all types of UV coatings
3. Reduces waste stream volume and cost to be removed
4. Cleans equipment better than Acetone
5. Reduces costs of solvent cleaning with slower evaporation rate.
6. Product unique to Sherwin Williams's vs Acetone available through any chemical distributor



Process:

Unilin uses a process called **ROLL COATERS** to apply UV coatings. Roll coating machines are commonly used for the application of a liquid to the surface of a part. Rollcoaters can be used to apply liquid adhesives, paints, oils, and coatings such as varnish or clear finish coats. This equipment must be cleaned on daily basis and the typical cleaner used for cleaning is ACETONE. Unilin has multiple lines for application of water based stains, primers and clear topcoats as well as 100% UV coater application. Our first effort was on water based applicator....we flushed system with solution of AEROGREEN® 4175 diluted 3-1 with water. We pumped 5 gallons of solution through system with great results in cleaning both rollers on machine. They followed with a 5 gallon water rinse through.

The parts taken off the machine such as blades were placed in a tank filled with 4175 diluted 3-1 with water for cleaning by second shift. The parts were easily cleaned with this process. These parts are hand wiped and dried.

Our second effort was on the UV coater with 100% solids material. We purged system using one and half gallons on AEROGREEN® 4175 diluted 2-1 with water. The rollers were cleaned and inspected with approval. Parts with dried material on surface were also removed with ease. The 4175 solution also worked on wiping down machine parts that can't be removed by hand wiping. All rags can be thrown out has non hazardous.



We determined while there that this same solution of 4175 could be used to clean floors as well. By eliminating Acetone from process Unilin will be able to claim that plant is totally green.

Conclusion:

Unilin uses Acetone throughout the plant for cleaning UV Coating residue in the water based applicator, immersion tank, UV Coater and for the industrial floors. The in plant trials determine that AEROGREEN 4175 performed as good or better than the Acetone they are currently using throughout the plant for cleaning UV Coating residue in the water based applicator, immersion tank, UV Coater and for the industrial floors resulting in a totally green environment.



Hi-Lite Solutions, LLC.
1285 Brucetown Rd.
Clear Brook, VA 22624
+1-540-450-8375
www.hi-litesolutions.com

