

A paint manufacturer approached Acuren after paint blisters were reported on the siding of a building that was recently painted with one of their products. The client asked Acuren to determine the cause of the coating failure. Acuren performed a visual inspection and cross-section analysis, which found that a cohesive failure of the primer layer caused the paint blisters. The primer layer had excessive air bubbles trapped in the coating film, which reduced the cohesive bond strength of the primer. There are multiple causes for air bubbles in a coating film, including excessive shaking of the primer can before application, poor spray gun settings during the application, applying the primer to a hot surface, excessive moisture on the substrate surface, or high humidity/rain during application.



Figure 1

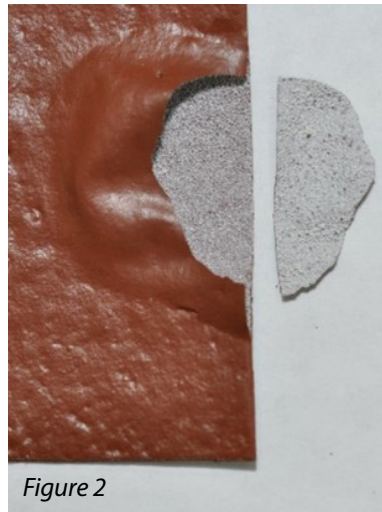


Figure 2



Figure 3

Figure 1: The paint blisters as they appeared on the siding. Figure 2: An opened blister reveals bubbles underneath the coating. Figure 3: A macrograph (~64x magnification) showing bubbles present throughout the primer layer.

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- With expertise in a wide spectrum of engineering disciplines, Acuren employs a cohesive team of engineers, scientists, technologists, and technicians
- Advanced analysis techniques save clients time and money in avoided repairs, reduced business interruption, and improved reliability
- Organic testing lab provides a variety of testing to our clients, involving plastics, rubbers, coatings, and fluids for quality control, failure analysis, and litigation support
- Provide solutions to improve operation and extend life of fixed equipment
- Deepest pool of expertise and solutions in the market
- In-house experts across all disciplines available through our North American network, eliminating the need to outsource
- Rather than simply reporting results, we lead the industry by going a step further – we assist customers in interpreting results and designing solutions

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1-800-218-7450



www.acuren.com
info@acuren.com

