



Topcoat Compatibility with White LCM Primer

Author: Chris Boyer

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Project reference: P-339

Lab book reference: CB-14636 **Product reference:** WB-8813C

Background: White LCM Primer (WB-8813C) is a water based wood primer designed for general purpose industrial use on interior wood substrates. Several types of topcoats can be used over this primer.

Objective: Determine whether common topcoats can be applied over White LCM Primer without adhesion failure.

Experimental approach:

- Spray applied a 3-4 wet mils of White LCM Primer to maple millwork and let dry.
 - 3-4 mils wet film thickness; air dried 60 minutes (82°F, 46% RH)
- Lightly sanded primer with 220 grit sandpaper
- Applied topcoat
 - 3-4 mils wet film thickness
 - Air dried 60 minutes, oven dried 30 minutes at 120°F, Air dried additional 16 hours
- Performance tests
 - Crosshatch adhesion – ASTM D3359B
 - Thermal cycle (20 cycles) – ANSI/KCMA A161.1 2012 sec 9.3 (-40 to 120F / 70% RH)
 - Post-thermal cycle crosshatch – test ASTM D3359B after thermal cycles

Results: Crosshatch adhesion of the five topcoats tested over White LCM Primer was 5B, the highest/best rating. No adhesion failure, checks or cracking was observed after 20 thermal cycles, and all of the topcoats exhibited 5B crosshatch adhesion tested after the thermal cycles. No adhesion failure was observed at any time with any of the five topcoats tested over White LCM Primer.

<u>CIC Code</u>	<u>Description</u>	<u>Type</u>	<u>Crosshatch</u>	<u>Thermal Cycle (20 cycles)</u>	<u>Post-Thermal Cycle Crosshatch</u>
			ASTM D3359B	ANSI/KCMA A161.1 2012 sec 9.3	ASTM D3359B
WB-882920	AquaTop	Latex Enamel	5B	Pass - no checks or cracks	5B
BE-300420	Strong RTS	Conversion Varnish Enamel	5B	Pass - no checks or cracks	5B
IB-781120	EnviroTop	Pre-cat Enamel	5B	Pass - no checks or cracks	5B
IB-7817	Cicryl	Solvent Acrylic Enamel	5B	Pass - no checks or cracks	5B
BTZ7050	Clear Acrylic Topcoat	2k Urethane Clear	5B	Pass - no checks or cracks	5B

Conclusions: Each of the five topcoat + primer coating systems tested exhibited excellent crosshatch adhesion to the maple substrate before and after thermal cycle exposure. For decorative applications these topcoats are suitable for use with this primer. If special performance is required each coating system must be tested according to the requirements of that system on the particular substrate that will be used.

Suggested marketing statement: The following types of topcoats have been tested successfully over this primer: Latex, conversion varnish, pre-cat lacquer, solvent acrylic, 2k urethane. Always test performance of the complete coating system before beginning production.