

Maclac Product Line Information Sheet

R. J. MCGLENNON CO. INC.
198 UTAH STREET
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80 SERIES PRECATALYZED WATERWHITE UNICOAT LOW VOC LACQUER

Description

80 series Low VOC Precatalyzed Unicoat Lacquers are a water-white compliance system wherein the lacquers may be used both as the sealer and the topcoat. However, for better sanding and enhanced water resistance on hardwoods we recommend using the S-148 Sanding Sealer first. Additionally, in some cases you may want to use S-156 low solids wash coat. The S-156 will give maximum penetration into hardwood grain thereby giving maximum moisture resistance.

Topcoats used as sealers should be thinned for sealer applications – see the information presented below.

This compliance lacquer system has exceptional build and toughness. (Note: The gloss lacquer does not contain any sanding aid, so it will not sand as easily when used as a sealer). The 80 series is recommended for use on all commonly used woods. For exotic or tropical woods see your technical representative. Most lacquers in this product line are also available with Ultraviolet Light Blocker.

Available in the following sheens:

G-158	Gloss	G-160	Gloss / U.V.
F-252	Semi-Gloss	F-254	Semi-Gloss / U.V.
F-238	Rubbed Effect	F-237	Rubbed Effect / U.V.
F-253	Satin Flat	F-255	Satin Flat / U.V.

Specifications

Note: below represent typical values only - see specific Product Data Sheets for exact values.

Weight per Gallon: 7.3 - 7.4	Max. Coating VOC: 550 G/L (4.58 Lb/gal)
Solids by Weight % 24 - 28	Material VOC: 270 - 285 G/L (2.3 - 2.4 Lb/gal)
Solids by Volume %: 17 - 21	VOC Weight Ratio = 1.3 Lb VOC/Lb Solid (Avg.)
Coverage @ 1 mil = 280 - 310 SqFt./Gal.	
Viscosity: 21 - 25 Seconds Zahn 2	

Surface Preparation

Apply over properly sanded wood surfaces. Ensure that any stains used are compatible with this system. Surfaces must be clean and free of dirt, grease and water. Remove any wax or old finish. The use of any other product as a sanding sealer will severely limit the durability and the re-coat properties of these products. No Maclac paint product has ever contained any lead. But if you are preparing previously painted surfaces with unknown paints please observe the following precautions. Warning! If you scrape, sand, or remove old paint, you may release lead dust. LEAD IS TOXIC. EXPOSURE TO LEAD DUST CAN CAUSE SERIOUS ILLNESS, SUCH AS BRAIN DAMAGE, ESPECIALLY IN CHILDREN. PREGNANT WOMEN SHOULD ALSO AVOID EXPOSURE. Wear a NIOSH-approved respirator to control lead exposure. Clean up carefully with a HEPA vacuum and a wet mop. Before you start, find out how to protect yourself and your family by contacting the National Lead Information Hotline at 1-800-424-LEAD or log on to www.epa.gov/lead.

Mixing & Thinning

80 Series Low VOC products are supplied at ready to spray viscosity for many applications. Sealer S-148 is supplied at a low viscosity for good penetration into the wood. S-156 low solids wash coat gives better penetration into hardwoods. If you use a topcoat as a sealer, it might require some additional thinning for penetration – see below.

Under certain application conditions (such as very cool and damp, or very hot) and with some application equipment the addition of some solvent may help. The addition of T-314 Retarder (& blush preventive) will help alleviate blushing in cool and damp conditions. Normally about 5% volume addition of T-314 will help blushing and increase lacquer flow out.

NOTE: some California air quality district regulations allow additional thinning during adverse environmental conditions, while others do not. The rules vary depending on the regulation and air district - check with your local air district first.

LIMITED WARRANTY

The information contained herein is offered to assist customers in determining whether our products are suitable for their applications. We request that customers examine our products before use and satisfy themselves as to their suitability. We warrant that our products will meet our written specifications. Since application circumstances, substrate condition and product intermix are beyond our control, we cannot guarantee results under all possible situations. R.J. McGlennon Co. Inc. makes no representation as to the results the user will achieve.

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Otherwise, if any reduction of solids or viscosity is desired or required for a particular application, then you may add some Acetone – or other non-VOC solvent, as this will not change the VOC content. Care should be used when adding acetone – as this may contribute to blushing in cool and damp conditions.

Any thinning with a non-exempt thinner will raise the VOC content.

Thoroughly mix the material by stirring or shaking prior to application.

For a faster dry and cure rate we now offer a booster catalyst that may be added to the 80 Series prior to application.

See product data sheet for **LVC-1 80 Series Booster Catalyst**.

Application & Dry

80 Series Lacquers are designed for spray application only. These lacquers may be applied with conventional, airless, air-assist airless or HVLP spray equipment.

It is vital that the first coat of lacquer that is applied is done so as to achieve thorough penetration of the lacquer into the wood. This is true whether or not the lacquer is a sealer or a topcoat – and also true whether the wood is natural or stained. The first coat of lacquer must penetrate the grain and the pores in order to achieve adhesion and moisture resistance. Low viscosity wet coats applied so as to flow into the wood will work best. The applicator should consider using S-148 Sanding Sealer and/or S-156 Wash Coat in conjunction with the finish coats for maximum performance (especially on hardwoods).

Note: See "Maclac Lacquers for Wood, Then and Now" article at www.maclac.com for further discussion.

Also see individual product data sheets for these products.

Note: laboratory testing has indicated that this product does not have precise re-coat limitations. However because of the great variety of application conditions - we offer the following information to help the applicator make informed decisions regarding a specific coating operation.

For trouble free application R.J. McGlennon Company recommends that all coats be applied within 48 hours. The reasons follow:

All pre-catalyzed lacquers dry as described below:

1. The lacquer thinner (solvents) evaporate from the coating.
2. The drying coating begins to cure and form a more durable coating.

The drying action starts at the surface of the applied coating and proceeds down through the film. In a partially cured coating the surface will be cured, but the remaining coating underneath will not yet be cured, and may still have some solvent trapped within. Then, if another coat is applied, the strong lacquer thinner on the top will begin to re-dissolve the partially cured coating underneath, and this will cause the first coat to swell and lift (or wrinkle). Heavy application of the 1st. (or prior) coat combined with forceful drying conditions (strong, warm air flow) will especially aggravate the tendency to self-lift upon application of the next coat.

Because application conditions vary greatly, it is recommended that you test a small area for acceptance of the next coat prior to recoating the entire part. Apply a full coat to a small representative area and observe it for at least 15 minutes to see if it begins to lift or wrinkle.

We recommend total film thickness of 2 - 5 mils DFT. Less than 2 mils will not provide full protection and more than 5 mils may be prone to cold checking.

Performance & Durability

The 80 Series Lacquers form a tough and durable finish coat with exceptional resistance to ultraviolet light degradation. This lacquer is designed as a water white quality lacquer. Note: whereas any nitrocellulose lacquer system will yellow with a time, R.J. McGlennon Co. recommends using this water white system over natural, light or white stains.

The Maclac 80 Series Precatalyzed Lacquers have been laboratory tested to the finish specifications required by the Kitchen Cabinet Manufacturers Association under American National Standards Institute ANSI A161.1-1990 test protocols.

All testing is performed on properly applied finishes.

These lacquers have passed the following ANSI test as specified by KCMA:

9.1 Shrinkage And Heat Resistance

PURPOSE: To test ability of the finish to withstand high heat for long periods, such as inside truck, box car or other transport or storage facility, or in service under normal kitchen conditions.

REQUIRED PERFORMANCE: By visual examination, the door finish shall show no appreciable discoloration and no evidence of Blistering, checks, or other film failure after exposure to 120 Deg F. at 70% RH for 24 hours.

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RESULTS: (After 24 Hours test)

Initial Examination - Pass

14 Day Reexamination - Pass

9.2 Hot and Cold Check Resistance

PURPOSE: To test ability of the finish to with stand hot and cold cycles for prolonged periods.

REQUIRED PERFORMANCE: The finish shall show no appreciable discoloration and no evidence of Blistering, cold checking, or other film failure when subjected to temperatures variations of -5 Deg. F. to +120 Deg. F. for 5 complete cycles.

RESULTS: (After 11 cycles) **Pass: No Cracking or discoloration**

9.3 Chemical Resistance

PURPOSE: To test ability of finish to withstand substances typically found in the Kitchen and Bath.

REQUIRED PERFORMANCE: There shall be no appreciable discoloration, stain, or whitening that will not disperse with ordinary polishing.

<u>Chemical</u>	<u>Exposure Time</u>
Vinegar	24 Hrs.
Lemon Juice	24 Hrs.
Orange Juice	24 Hrs.
Grape Juice	24 Hrs.
Catsup	24 Hrs.
Coffee	24 Hrs.
Olive Oil	24 Hrs.
Alcohol	24 Hrs.
Mustard	One Hour

RESULTS:

Initial Examination - Pass

10 Day Reexamination - Pass

10.0 Detergent And Water Resistance

PURPOSE: To test the door edge for proper application of the finish.

REQUIRED PERFORMANCE: There shall be no Delamination or swelling. The finish shall show no appreciable Discoloration and no evidence of Blistering, checking, whitening or other film failure after the door edge is soaked for 24 hours in an ANSI specified solution of detergent and water.

RESULTS:

Initial Examination - Pass

10 Day Reexamination - Pass

Proper cleaning and maintenance of these finishes is required for good service life. It is imperative that the owners properly maintain the finish in order to achieve expected performance.

The most common problem associated with improper maintenance is water damage. This is due to excessive water exposure. If Water is allowed to remain on the surface for long enough time it may migrate under the finish where it soaks into the wood. Once the water soaks into the wood, the wood swells up and breaks the coating loose. Those areas where the lacquer coating has broken loose will look white or milky. The lacquer itself has not been directly damaged by water, but rather the lacquer has been broken loose due to the swelling action of the wood. It is the wood that has been damaged under the lacquer.

When Maclac lacquers have been properly applied to wood, the wood surface becomes water resistant but NOT WATERPROOF. This means the surface will withstand temporary water exposures, but not long term water soaking. Any drops, puddles or standing water must be removed immediately.

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The 80 Series lacquers are best cleaned with mild household cleaning agents. The waterborne cleaning solutions are the least aggressive. We have not found any adverse effects as long as the recommended cleaning directions are followed. After a light application of cleaning agent it is essential to dry the area with a soft cloth.

After cleaning it is vital to apply a wood treatment in order to give the surface water resistance. We recommend you use a waterborne oil soap designed for wood surfaces. Another choice that works well is a lemon oil polish in a mineral spirits base. Both types will penetrate well and give the surface water resistance. Always test a small area first to note any adverse reactions. Note that many wood products will both clean and polish. Do not use any abrasive-cleaning agents on these lacquer surfaces.

Environmental & Safe Handling

Warning: flammable mixture. Do not use near heat, sparks, flames, or any ignition sources. Do not cut empty containers. Use only with adequate ventilation.

Since air quality regulations are not consistent throughout the country, or even within the state of California, always check with your local air quality district prior to using these products.

Soak up spills with inert absorbent. Since hazardous waste regulations are not consistent throughout the country contact your local hazardous waste agency with information from the MSDS to get instructions for proper disposal. Section 2 of the MSDS contains components considered hazardous in the product as supplied. See the material safety data sheet for more information.

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