



Product Information

Opticlear

431-90XX

PRODUCT DESCRIPTION

431-9020	Low Gloss
431-9035	Satin
431-9050	Semi-Gloss
431-9090	Gloss

Opticlear is a one-component, precatalyzed lacquer especially developed for surface treatment of furniture where a beautiful appearance with good resistance properties is desired.

FEATURES

Opticlear is fast drying and well suited for spraying as well as coating by roller and curtain coating. The material is used for an open or semi-open grain finish on all types of wood for interior use. This precatalyzed lacquer has very low odour during the curing process while maintaining its rapid dry and cure properties. Opticlear, when applied as specified, will meet required performance for the NSI/KCMA A161.1 1990 9.0 Finish Tests. To augment the chemical resistance of the product, Opticlear 431-90XX may be catalyzed.

Opticlear has been tested by an Accredited Laboratory using North American test methods to determine formaldehyde emissions after drying. It has been determined that a close correlation exists between the North American test standards and the German "E-1" classifications, with the figure of 0.3 mg/L or less being equivalent to "E-1" rated material. The formaldehyde emission values for the Opticlear in this test are <0.3 mg/L and as such could be classified as "E-1" equivalent when the product is applied as specified in the test method for lacquers in accordance with agreement with the Swedish Paint Manufacturers Association. Deviation from this test method in application, substrate or curing may vary the formaldehyde emission and customer applied systems should be tested to ensure compliance to the E-1 regulation.

SPECIFICATION VALUES

Gloss:	As required
Flash Point:	14°C (57°F)
Specific Gravity:	0.97
Weight per Gallon:	7.7 lbs
Solids by Weight:	30%
Solids by Volume:	23%
Fire Hazard Class:	3
Health Hazard Class:	3
Viscosity at 25°C (77°F):	45" Z#2
VOC:	675 g/l (lb/gal)
Lbs. VOC/Gallon:	5.4 lb/gal
Lbs. VOC/Lbs. Solids:	2.37
Lbs. VHAPs/Lbs. Solids:	0.00

Values at Application: (15% Reducer)

Lbs. VOC/Lbs. Solids:	2.84
Lbs. VHAPs/Lbs. Solids:	0.10

If additional reducers or additives are used, compliance values must be recalculated.

SPECIFICATION INFORMATION

Shelf Life: Three months recommended if unopened and stored between 15°C - 25°C (59°F - 77°F).

Always rotate stock.

Pot Life: If catalyzing, mix only enough for 8 hours use for optimum product performance. Material will remain liquid for several days before gelling. Use of material that has been catalyzed for more than 8 hours may cause failure in film integrity.

Coverage: Coverage is 8-10 m²/L at 1 mil dry and at 100% transfer efficiency. Coverage will vary depending on method of application or coating thickness.

Mixing Ratio: When used as a two-component product, mix in 3% 999-017 hardener by volume.

Reduction: Use 121-803 Reducer or 121-802 Slow Reducer as required.

DIRECTIONS FOR USE

Surface Preparation: Wood substrate should be sanded with 120, 150 or 180 grit paper prior to staining or coating. Sealers should be sanded with 280/320 grit steared paper prior to topcoating. The sealer should be topcoated within eight hours of sanding. An appropriate sealer is 390-001 Chemseal or self-seal. When recoating, the previous coat of Opticlear must be sanded and the next coat applied within eight hours. Stain systems under acid containing coatings should be acid stable. Opticlear can not be used on metal, old oil or cellulose lacquers.

Directions for Use: Agitate material before use. Always mix Opticlear while adding hardener and reducers in the recommended mixing ratios. Opticlear must be agitated thoroughly at all times to ensure product consistency and consistent gloss. Apply at 3-5 mils wet on sanded substrate. Further coats may be applied after complete drying followed by sanding with 280/320 grit steared paper. Contact with metal surfaces should be avoided.

Opticlear must not be polluted with oil, varnish or the like and must not be sanded with steel wool between the coats. Opticlear must not be used and dried at temperatures below 18 C or relative air humidity above 65% as the hardening may otherwise become incomplete. During hardening, the lacquer must not be exposed to ammonia vapours. Ammonia cleaners should not be used for cleaning the finished surface.

Maximum film build of Opticlear should not exceed 4 mils dry. Maximum film build of total coating system must not exceed 4 mils dry. The customer is responsible for following the recommended application procedures. Failure to adhere to the recommendations given in this Technical Data Sheet will likely result in unsatisfactory film appearance or film failure.

The completed coating system should be checked for required properties prior to start-up of production.

APPLICATION**Method of Application:**

- Spray
 - Conventional
 - Airless
 - HVLP

Viscosity

- Z #2/20-25"
- Z #2/20-25"
- Z #2/20-25"
- Z#2/25-35"

Wet Film

- 3-5 mils
- 3-5 mils
- 3-5 mils
- 3-5 mils

Dry Film

- 0.8-1.2 mils
- 0.8-1.2 mils
- 0.8-1.2 mils
- 0.8-1.2 mils

Curtain Coater

All measurements recommended are based on results at temperatures of 20°C(68°F). Viscosity will vary depending on the temperature of the liquid.

Drying Times:

At 20°C (68°F)	(Minimum Required)	At 50°C(122°F)	(Minimum Required)
Tack Free:	10-15 minutes	Tack Free:	Flash off before entering oven
Dry to Sand:	~2 hours	Dry to Sand:	30-45 minutes
Dry to Stack:	~3 hours	Dry to Stack:	60-90 minutes

Note: Dry times are greatly affected by film build, porosity of substrate, air movement as well as heat and humidity. Temperatures are based on actual board temperature. This may vary depending on length of time for boards to reach these temperatures. Minimum curing temperatures of 64°F/18°C must be maintained throughout the curing cycle to achieve the film integrity as stated in product features.

Clean-Up: Use 121-802 or 121-001.