KATILAC COATINGS INC.

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KP Series PUREGARD™ Formaldehyde Free Clear Pre-Cat Topcoats

KP Series PUREGUARD™ is a line of formaldehyde-free, HAPs-Free, solvent borne, one component, alkyd/amino resin based conversion coatings. Utilizing KCI's GreenCure™ technology, these advanced products feature a unique cross-linking mechanism that does not contain or liberate formaldehyde during the drying and curing process. They are designed be used in a self-sealing system but may also be used conjunction with KCI's PURESEAL™ Formaldehyde Free Vinyl Sealer.

SUGGESTED APPLICATIONS:

- Cabinets
- Household furniture
- Interior trim and millwork
- Office furniture
- Kitchen and bath components

KEY PERFORMANCE FEATURES

- non-yellowing
- HAPS-Free
- fast dry
- zero formaldehyde
- low odour
- drop-in replacement for most pre-cat top coats
- excellent chemical and moisture resistance
- excellent flow and levelling
- excellent clarity
- excellent mar and scratch resistance
- self sealing
- meets AWMAC System #2 and NKCA standards
- meets LEED, IQA, BIFMA & GREENGUARD Standards for formaldehyde

RELATED PRODUCTS

KCI's PURESEAL™ Formaldehyde Free Vinyl Sealer
B7406 Rich Wiping Stain
B7645 Classic Spray Stain

katilac coatings GREENCURE™ zero formaldehyde technology

PHYSCIAL PROPERTIES

Available Sheens	15,25,35,50,90
Weight Solids	31% ±2
Volume Solids	25% ±2
Viscosity	20-30" @ 25°C Ford 4
Specific Gravity	0.9465 +/- 0.01 gms/cc @ 25°C
VOC	672 g/l
Typical coverage	8 to 10 m^2 / ltr @ 1 mil dry

ADDITIONAL CHARACTERISTICS

Catalyzation:	n/a
Pot-Life:	n/a
Reduction:	Max 10% by weight T5525 HAPs-Free Lacquer Thinner
Retarder:	n/a
Clean-up:	T4420 215 Gun Wash Universal
Shelf-life:	1 year from date of manufacture

Dry Times
26°C (~78°F) 50%RH

To Touch	10 minutes
To Sand	30-60 minutes
To Stack/Pack	18 -24 hours

Note: Drying times will decrease at higher temperatures/lower humidity and will increase at lower temperatures/high humidity

COATING PREPARATION -Ensure product is stirred well and brought to room temperature before use. Product may be sprayed by conventional, airless and air assisted airless spray and is gun ready.

SURFACE PREPARATION - Wood surface should be clean, dry and free from any oil or grease. Moisture content of the wood should be 7-9%. Stains, colour coats, glazes etc. should be applied according to manufacturer's directions should be dried prior to application of sealers/topcoats. Multi-step colourant systems should be avoided unless they are thoroughly tested for adhesion and compatibility. All colour systems should be examined for colour fastness / fade resistance prior to use. For best results use Katilac stains, toners or colourant systems.

APPLICATION - This product is designed to be applied in ambient conditions of 12-32°C (~55-90°F) and below 50% relative humidity. PUREGUARD™ topcoats can be used self-sealing or in conjunction KCI's PURESEAL™ Formaldehyde Free Vinyl Sealer Apply product in full uniform coats ideally applied at a rate of 3 to 4 mils wet. Total film thickness of the finished system (sealer and topcoat) should not exceed 4 dry mils. Coating should be thoroughly dried and sanded smooth between coats. Sand with 240-320 grit professional finishing stearated, silicone carbide sandpaper. It is recommended that the finished item be conditioned for 24 hours at room temperature prior to stacking and packing.

SAFETY – During application, always wear eye protection, gloves and appropriate work clothing to minimize contact. Use a respirator and safety glasses at all times when spraying. Explosion proof ventilation is required with special consideration for enclosed or confined areas. Use caution when handing flammable liquids and eliminate sources of ignition and uncovered containers from the work place. Vapours formed from this product may travel or be moved by air currents and ignited by pilot lights, light switches, other flames, smoking, sparks, heaters, electrical equipment, static discharges or other ignition sources at locations distant from the product.

KP Series PUREGUARD™ Formaldehyde Free Clear Pre-Cat Topcoats (cont'd)

PERFORMANCE TESTING / FILM CHARACTERISTICS
All performance testing is based on a composite of ASTM, AWI, ANSI and KCMA Standards

Household Chemical Resistance (ASTM D1308)
- test samples consist of 1 mil dry film on glass
- aged 7 days at room temperature prior to testing
- testing was performed by placing 1 milliliter of reagent on the surface of the dry film, under a watch glass for time as noted

Distilled Water (D1308. 6.1.1)	24 hrs	No effect
Ethyl Alcohol (D1308.6.1.3)	24 hrs	No effect
Coffee @ 180F (D1308.6.1.13)	24 hrs	No effect
Vinegar (D1308.6.1.4)	24 hrs	No effect
Mustard (D1308.6.1.12)	2 hrs	No effect
Vegetable Oil (D1308.6.1.11)	24 hrs	No effect
Dish Detergent (D1308.6.1.8)	24 hrs	No effect

Hot Print Resistance (ASTM D 2091-96)
- test samples consisted of 1 mil dry film aged for 24 hours at room temperature prior to print testing
- duck cloth under a weight of 4 psi was then placed on dry film surface for a defined temperature/time

72F (18 hrs) 4 psi…pass
120F (1 hr) 4 psi…..pass
140F (1 hr) 4 psi…..pass

Hot/Cold Cycling Test (ASTM D 1211-97)
- test samples were coated on red oak at 4 mils dry and aged 21 days at room temperature prior to testing.
- one cycle consisted of:
  - 120F / 70% RH for 1 hour room temperature for 1 hour
  - -5F for 1 hour
- specimens examined for discolouration, blistering, cold cracking and film failure

No signs of failure at 10 cycles

Flammability Testing (ASTM E 84- 08a) Surface Burn Rating
- test samples consisted of fiberglass reinforced cement board coated with 4 mils dry of KP Series PUREGUARD™
- samples were aged for 21 days at room temperature prior to testing

Flame Spread Index…….5.0 Class 1 / Class A
Smoke Development……...5.0 Class 1 / Class A

KCMA Testing (ANSI/KCMA A161.1.1.2000)
Test samples consist of solid red oak coated at 4 mils dry and aged for 21 days at room temperature

A. Chemical Testing
- Vertical position for 24 hrs, water washed, dried, examined

Vinegar	Pass	Lemon Juice	Pass
Orange Juice	Pass	Grape Juice	Pass
Ketchup	Pass	Coffee	Pass
Olive Oil	Pass	100 proof alcohol	Pass
Mustard	Pass		

B. Detergent & Water Resistance Test
- Test panel edge immersed in KCMA detergent solution 24hrs
- Removed, dried and examined

PASS – no signs of blistering, whitening, delamination, swelling

C. Heat Resistance Test
- Test panel placed in test chamber @ 120F/70% RH for 24hrs

PASS – no signs of discolouration, whitening, delamination or swelling

D. Hot/Cold Cycle Test
- One cycle consists of 1 hr @ 120F / 30 min room temp / 1 hr -5F

PASS – 10 cycles with no signs of discolouration, blistering, cold checking or any film failure

Additional Stain Tests
Testing conducted according to AWI, ASTM & KCMA Standards
- test samples consist of 1 mil dry film on glass
- aged for 21 days at room temperature
- testing was performed by placing 1 milliliter of reagent on the surface of the dry film, under a watch glass for time as noted

Ketchup	24 hrs	5	Windex	24 hrs	5
Palmolive Sol.	16 hrs	5	Mustard	1 hr	5
50% Ethanol	24 hrs	5	Acetone	1 hr	4
4% NaOH	1 hrs	5	Water	24 hrs	5
Olive Oil	24 hrs	4	Boiling Water	16 hrs	5
Tomato Juice	16 hrs	5	Motor Oil	16 hrs	5
2% Ammonia	24 hrs	5	Grease/Oil	16 hrs	5
Nail Polish Rem.	1 hr	4	Lighter Fluid	16 hrs	4
Lemon Juice	24 hrs	5	Vinegar	24 hrs	5
Red Wine	24 hrs	5	1% Tide Sol.	16 hrs	5
Coffee @ 180°F	24 hrs	5			

Rating: 1-poor 2-fair 3-good 4-very good 5-excellent

DISPOSAL - Disposal of chemicals and their solutions should be done according to local, provincial and federal regulations. Product Material Safety Data Sheets are available and should be consulted when handling products. These products are for Industrial and professional use only; Application directions must be followed.

WARRANTY – Katilac Coatings Inc. warrants that its products are free from defects in manufacture for a period of one (1) year from date of purchase, if used prior to expiration date and applied and used in accordance with Katilac Coatings' most current published specifications applicable to such products. Katilac Coatings Inc. expressly disclaims all other warranties, express or implied, including the implied warranties of merchantability and fitness for purpose. Katilac Coatings Inc. disclaims all liability for incidental, consequential or indirect damages of any nature whatsoever. This warranty cannot be changed or modified whether by course of dealing, custom or trade or otherwise, unless agreed to in writing by Katilac Coatings Inc.

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