

ENCOR® 310

VERSATILE BINDER WITH HIGH SCRUB RESISTANCE FOR LOW VOC ARCHITECTURAL COATINGS



Product Description

ENCOR® 310 represents the next generation of general purpose vinyl acrylic binders for architectural coatings, bringing together product performance with the need for binders that can be used for low VOC, sustainable formulations.

Polymer Design

- Vinyl Acrylic

Performance Benefits

- Broad formulating flexibility
- Delivers very high scrub resistance performance
- Formulations show very good touch-up properties
- Can be used for blending with a wide variety of polymer technologies
- EnVia® certified¹.

Typical Properties²

Total Solids, % by weight	55
Density, pounds per gallon	8.9
pH Value	4.5 – 5.5
Particle Size, μm	0.20 – 0.35
Viscosity, Brookfield, cP	<500
Minimum Filming Temperature (MFFT), °C	<4
Glass Transition Temp. (Tg), midpoint °C	<5

¹ These products meet the standards of Coating Resins – Arkema’s EnVia® program. These products are designed to assist formulators in meeting their sustainability and regulatory goals in their finished products.

²Typical values not to be construed as sales specifications.



ENCOR® 310

VERSATILE BINDER WITH HIGH SCRUB RESISTANCE FOR LOW VOC ARCHITECTURAL COATINGS

Performance Evaluations

The information that follows details paint performance of two formulations, each prepared using three different polymers:

- ENCOR® 310
- ENCOR® 300
- Commercially available competitive latex

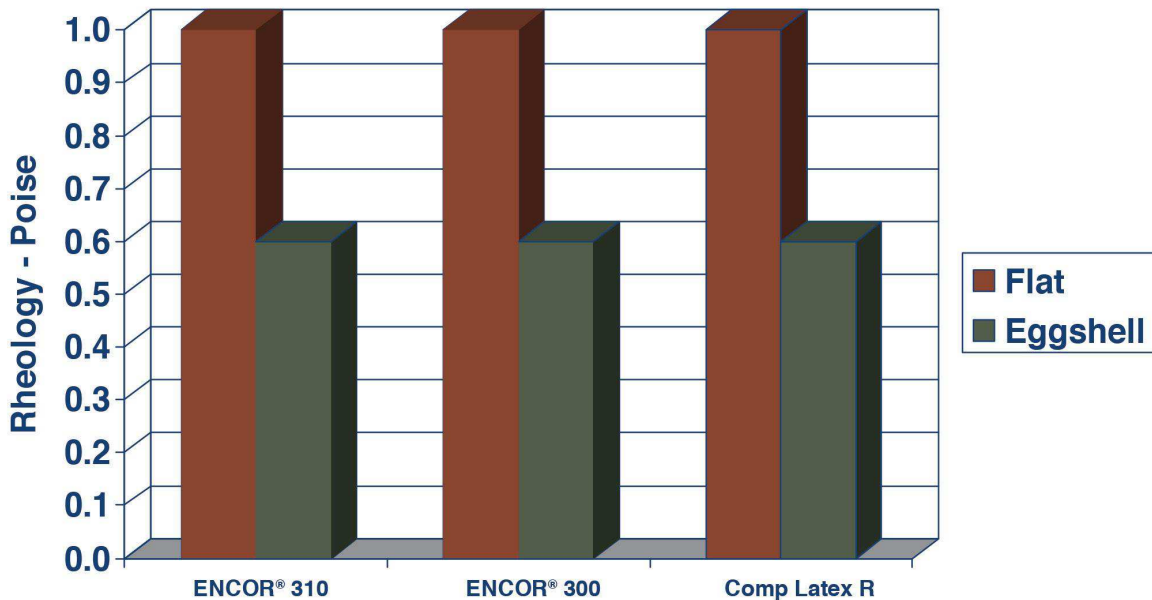
Eggshell Formula – zero VOC

Flat Formula – above CPVC, <50g/L VOC

Each formula was evaluated for these performance properties:

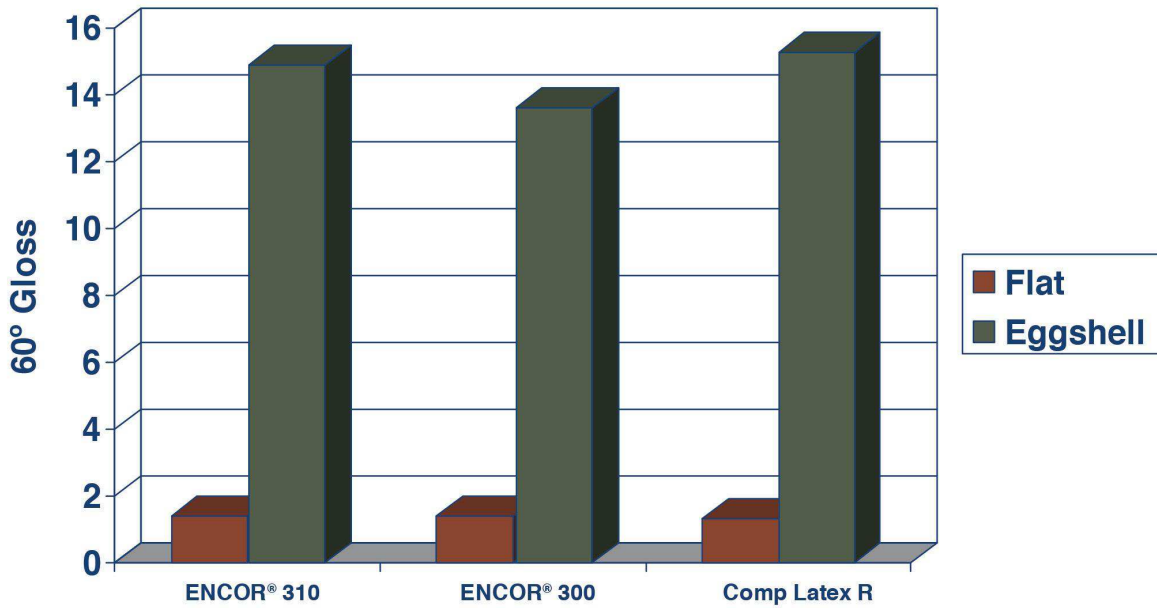
- Rheology
- Scrub resistance
- Tint strength
- Contrast ratio
- Gloss
- Low temperature film formation
- Low temperature touch-up

Rheology – Film Build



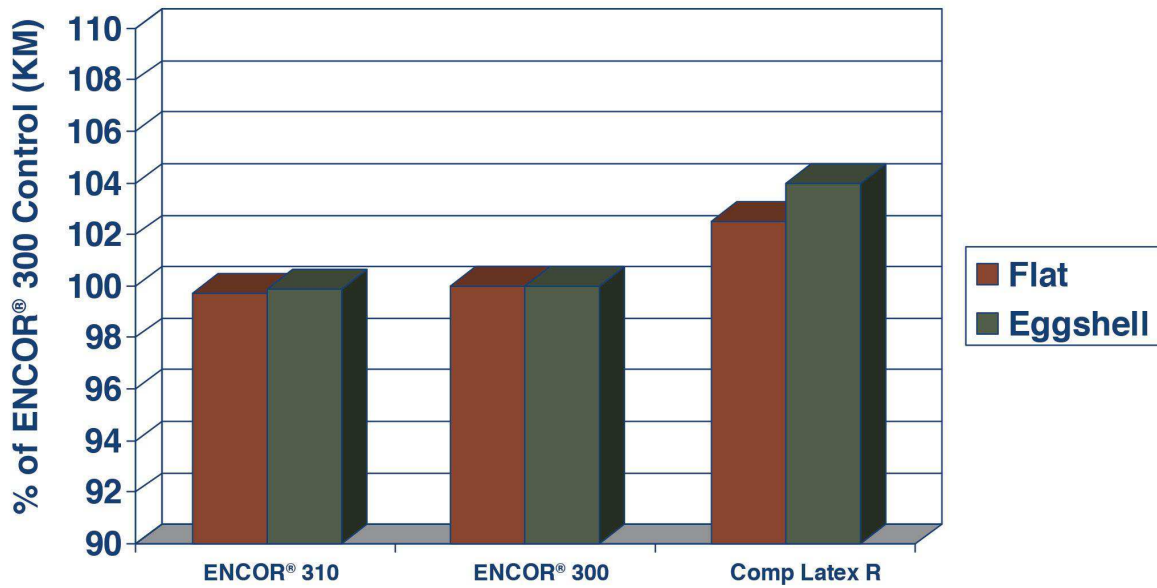
ENCOR® 310 demonstrates similar thickening efficiency to ENCOR® 300 and a Competitive latex.

Gloss Development



ENCOR® 310 demonstrates similar gloss development to ENCOR® 300 and a Competitive latex.

Tint Strength

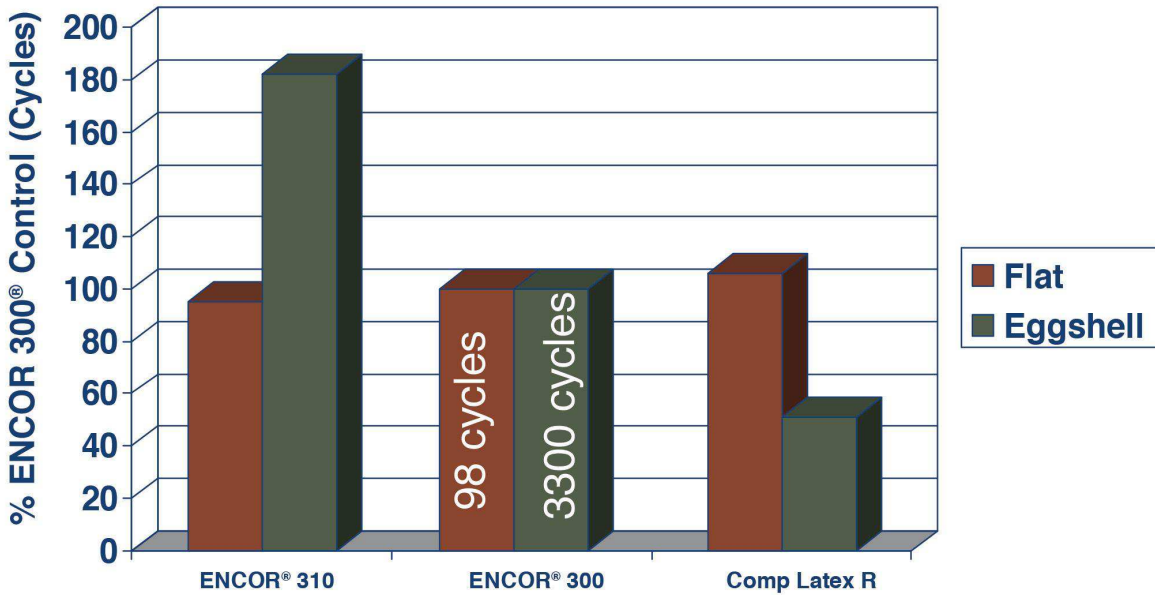


ENCOR® 310 demonstrates similar tint strength to ENCOR® 300 and a Competitive latex.

ENCOR® 310

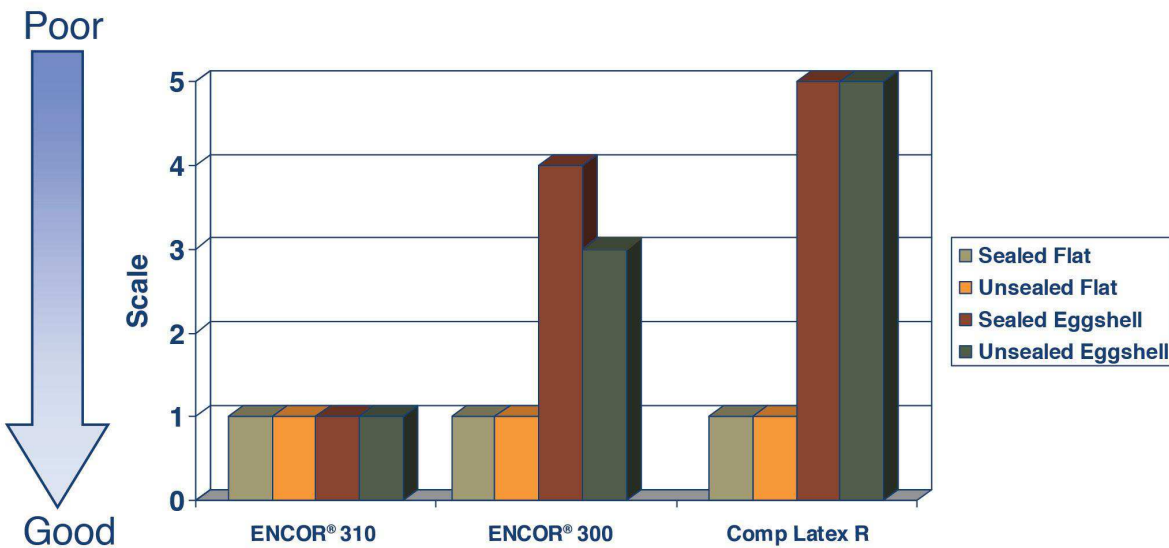
VERSATILE BINDER WITH HIGH SCRUB RESISTANCE FOR LOW VOC ARCHITECTURAL COATINGS

Scrub Resistance

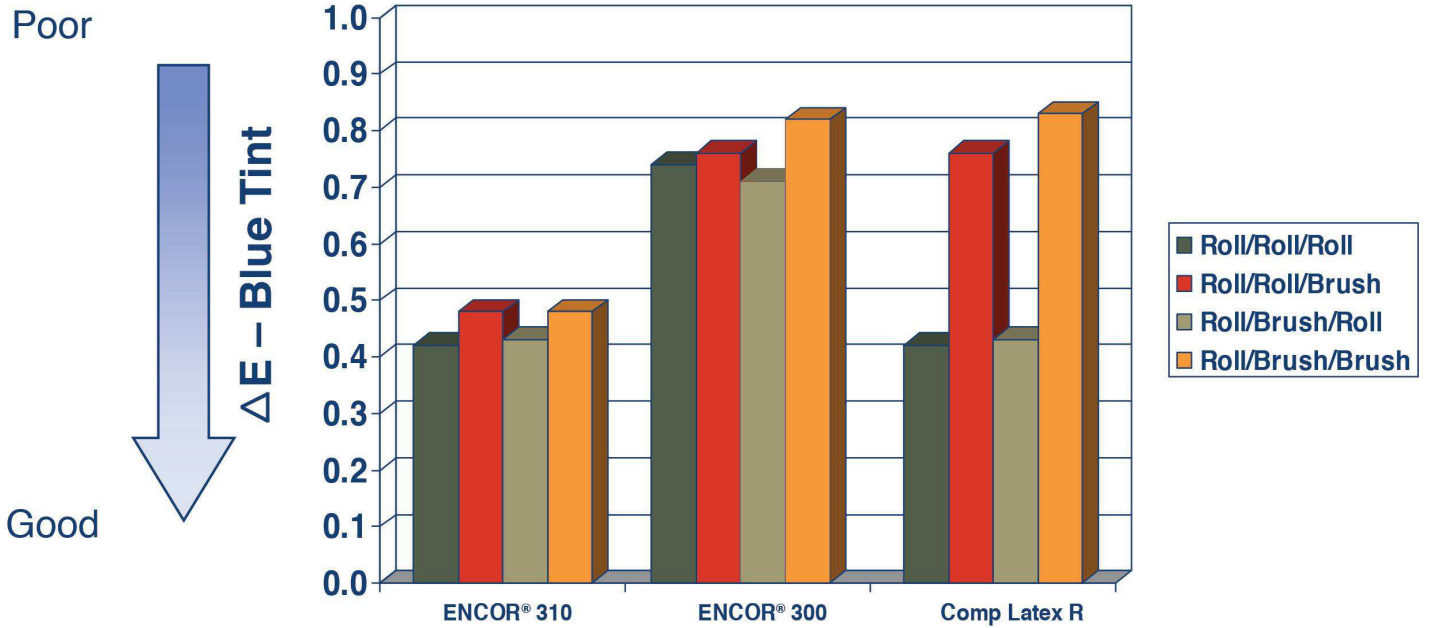


ENCOR® 310 offers widest range of scrub performance versus a Competitive latex and improvement to ENCOR® 300.

Low Temp Film Formulation – Flat

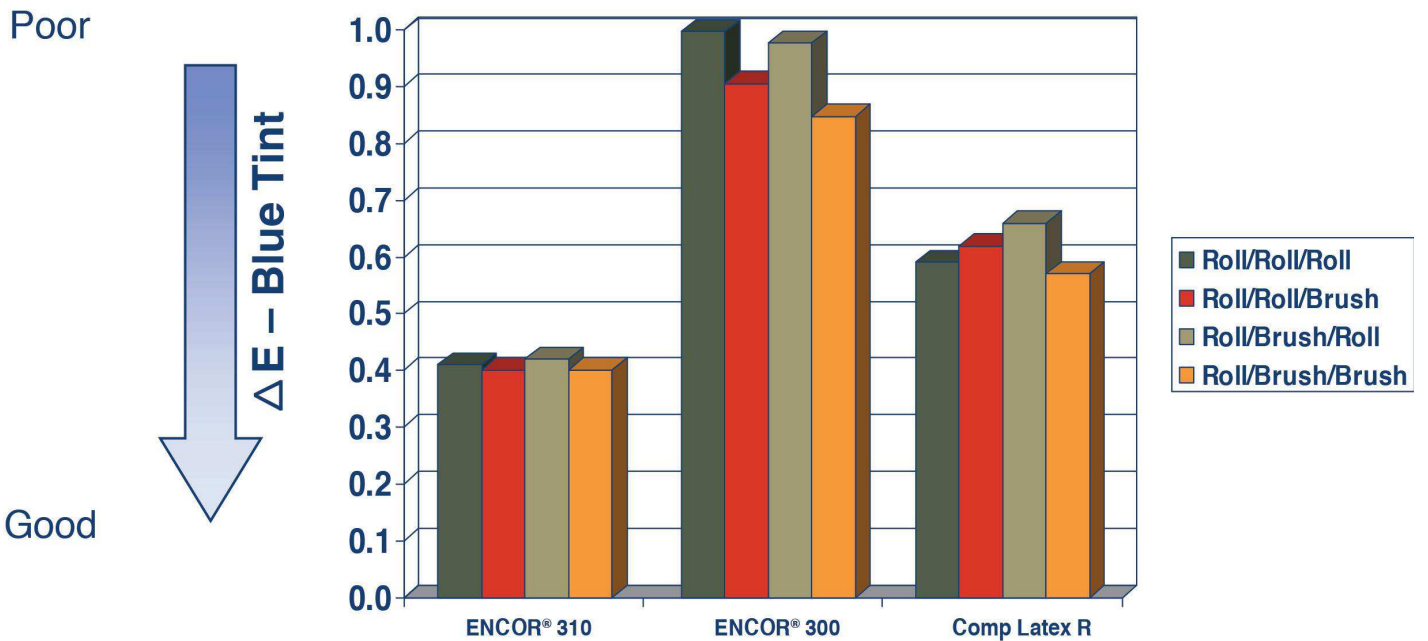


Touch Up – Flat – Cold/Room Temperature



ENCOR® 310 demonstrates slightly improved touch up.

Touch Up – Eggshell – Cold/Room Temperature



ENCOR® 310 demonstrates slightly improved touch up.

ENCOR® 310

VERSATILE BINDER WITH HIGH SCRUB RESISTANCE FOR LOW VOC ARCHITECTURAL COATINGS

Formulation Suggestions ENCOR® 310 Flat Formulation

Ingredients	Lbs	Gallons
Water	150.0	18.00
Natrosol Plus 330	5.0	0.43
Sodium Carbonate	15.0	1.52
Potassium Tripolyphosphate K TPP	2.0	0.25
Drew PLUS L-475	1.9	0.22
Tamol 731	3.0	0.34
Kronos 2310	4.0	0.33
Minex 10	210.0	9.66
Kathon LX 1.5%	200.0	10.26
<i>Common Paste Letdown</i>		
ENCOR® 310	360.0	40.45
Drew PLUS L-475	2.0	0.25
Water	136.0	16.33
Rheotech XP-1915	9.1	1.04
Propylene glycol	8.0	0.92
	1106.0	100.00

Paint Specifications:

Viscosity - KU:	111-115
Viscosity - ICI	0.9-1.1
Gloss - 60°:	5.6
pH:	8.0
Scrub Resistance:	6000+

Paint Properties:

Weight Solids %:	54.9%
Volume Solids %:	37.0%
PVC %:	41.0%
VOS (#/Gal) :	<25
Pounds per Gallon:	11.06

Formulation Suggestions ENCOR® 310 Eggshell Formulation

Ingredients	Lbs	Gallons
Water	263.0	31.60
Natrosol Plus 330	5.0	0.50
Sodium Carbonate	2.0	0.10
Potassium Tripolyphosphate K TPP	2.0	0.10
Drew PLUS L-475	4.0	0.50
Tamol 731	8.2	0.90
Kronos 2310	300.0	9.00
Minex 10	145.0	6.70
Kathon LX 1.5%	1.5	0.20
<i>Common Paste Letdown</i>		
ENCOR® 310	395.0	44.40
Water	51.0	6.10
	1176.7	100.10

Paint Specifications:

Viscosity - KU:	83-88
Viscosity - ICI	.4-.8
Gloss - 60°:	7-13
Gloss - 85°:	12-18
pH:	8.5-9.5
Scrub Resistance:	>5000

Paint Properties:

Weight Solids %:	55.2%
Volume Solids %:	37.8%
PVC %:	40.5%
VOS (#/Gal) :	<25
Pounds per Gallon:	11.57

Product Safety

Before handling the materials listed in this bulletin, read and understand the product SDS (Safety Data Sheet) for additional information on personal protective equipment and for safety, health and environmental information. For environmental, safety and toxicological information, contact our Customer Service Department at 1-866-837-5532 to find an SDS, or visit our web site: coatingresins-arkema.com

No chemical should be used as or in a food, drug, medical device, or cosmetic, or in a product or process in which it may contact a food, drug, medical device, or cosmetic until the user has determined the suitability and legality of the use. Since government regulations and use conditions are subject to change, it is the user's responsibility to determine that this information is appropriate and suitable under current, applicable laws and regulations.

Coating Resins – Arkema requests that the customer read, understand, and comply with the information contained in this publication and the current SDS(s). The customer should furnish the information in this publication to its employees, contractors, and customers, or any other users of the product(s), and request that they do the same.

Storage and Handling

Follow procedures typically recommended for polymer dispersions. Use corrosion-resistant storage tanks and piping. Air-operated diaphragm pumps are preferred.

Packaged material should be stored indoors in the original unopened and undamaged container, in a dry place. Exposure to direct sunlight should be avoided.

Avoid extreme temperatures. Do not freeze; store between 40-90°F (4-32°C).

For more details, refer to "Storage and Handling of Arkema Coating Resins Products – A Basic Guide".



Coating Resins – Arkema
410 Gregson Dr.
Cary, NC 27511
Telephone:
1.800.777.8227

IMPORTANT: The statements, technical information and recommendations contained herein are believed to be accurate as of the date hereof. Since the conditions and methods of use of the product and of the information referred to herein are beyond our control, Arkema expressly disclaims any and all liability as to any results obtained or arising from any use of the product or reliance on such information; NO WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE, WARRANTY OF MERCHANTABILITY OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, IS MADE CONCERNING THE GOODS DESCRIBED OR THE INFORMATION PROVIDED HEREIN. The information provided herein relates only to the specific product designated and may not be applicable when such product is used in combination with other materials or in any process. The user should thoroughly test any application before commercialization. Nothing contained herein constitutes a license to practice under any patent and it should not be construed as an inducement to infringe any patent and the user is advised to take appropriate steps to be sure that any proposed use of the product will not result in patent infringement.

DISCLAIMER: Please consult Arkema's disclaimer regarding the use of Arkema's products on <http://www.arkema.com/en/products/product-safety/disclaimer/index.html>

Visit our website:
coatingresins-arkema.com

© 2019 Arkema Inc. All rights reserved. Revised 9/19
ENCOR® and ENVIA® are registered trademarks of Arkema Inc.