

# ENCOR® 631

HIGH PERFORMANCE ACRYLIC LATEX FOR ARCHITECTURAL COATINGS



## Product Description

ENCOR® 631 is a high performance 100% acrylic latex that can be formulated from flat to high gloss coatings for both interior and exterior applications. It allows coatings formulators the ability to meet the rigorous demands of interior/exterior coatings and a wide variety of environmental initiatives. ENCOR® 631 latex is certified in the EnVia® program.

## Polymer Design

- 100% acrylic
- No added alkyl phenol ethoxylates (APEO) surfactants
- No added formaldehyde or added formaldehyde donors<sup>1</sup>
- Low VOC capable from 0-50 g/L
- Low odor

## Performance Benefits

- Excellent block resistance
- Outstanding gloss development
- Excellent scrub resistance
- Good washability
- Outstanding adhesion over a wide range of substrates
- Excellent exterior durability

## Typical Properties<sup>2</sup>

Total Solids, % by weight	50
Weight per Gallon, lbs	8.9
pH Value	8.5-9.5
Particle Size, µm	0.13
Viscosity, Brookfield, cP	<500
Minimum Filming Temperature (MFFT), °C	0

<sup>1</sup> Formaldehyde is a trace material in our environment, and there is no accepted regulatory or common definition of "formaldehyde free."

<sup>2</sup> The data provided for these properties are typical values, intended only as guides, and should not be construed as sales specifications.

\* These products meet the standards of Arkema Coating Resin's EnVia® program. These products are designed to assist formulators in meeting their sustainability and regulatory goals in their finished products.



# ENCOR® 631

HIGH PERFORMANCE ACRYLIC LATEX FOR ARCHITECTURAL COATINGS

The following is a list of the starting point formulations for exterior flat and exterior semigloss formulations.

## Starting Point Formulation

### Exterior Flat Paint Formulation

Ingredients	Lbs	Gallons
<b>Pigment Grind</b>		
Water	200.0	24.0
CELLOSIZETM QP-4400	2.0	0.2
Tetrapotassium pyrophosphate (TKPP)	1.5	0.1
TAMOL® 1124	5.0	0.5
PROXEL® GXL	2.0	0.2
TRITON™ CF-10	3.0	0.3
DREWPLUS™ L-475	2.0	0.2
Propylene glycol	12.0	1.4
TI-PURE® R-706	220.0	6.6
MINEX® 4	125.0	5.7
NYTAL® 300	50.0	2.1
Eagle Zinc™ 417W	25.0	0.5

### Thindown

ENCOR® 631	363.0	40.8
DREWPLUS™ L-475	1.0	0.1
AMP™ 95	1.0	0.1
Water	100.0	12.0
ACRYSOL® RM-2020 NPR	5.0	0.6
SKANE® M-8	1.0	0.1
Water	50.0	6.0
<b>TOTAL</b>	<b>1170.5</b>	<b>101.5</b>

### Typical Paint Properties\*

Weight Solids, %	54.1
Volume Solids, %	35.5
PVC,%	41.5
VOS, lb/gal	0.38
VOC, g/L	45.3
Specific Gravity	1.38
Pounds per Gallon	11.48

### Starting Point Formulation

#### Exterior Semigloss Formulation

Ingredients	Lbs	Gallons
<b>Pigment Grind</b>		
Water	110.0	13.2
CELLOSIZETM QP-300	1.0	0.4
Propylene Glycol *** Mix	10.0	1.2
KATHONTM LX 1.5%	1.8	0.2
RHODOLINE® 286N	5.5	0.6
TRITONTM CF-10	3.0	0.3
DREWPLUSTM L-475	2.0	0.2
TIPURE® R-900	240.0	7.2
OMYACARB® UF	60.0	2.7
AMP™ 95	2.0	0.3
POLYPHASE® 633	8.0	0.9

#### Letdown

ENCOR® 631	500.0	56.2
Water	132.0	15.8
AMP™ 95	1.0	0.1
DREWPLUSTM L-475	2.4	0.3
POLYPHOBE® TR116	2.0	0.2
Ester alcohol cosolvent	4.0	0.5
<b>TOTAL</b>	<b>1084.7</b>	<b>100.3</b>

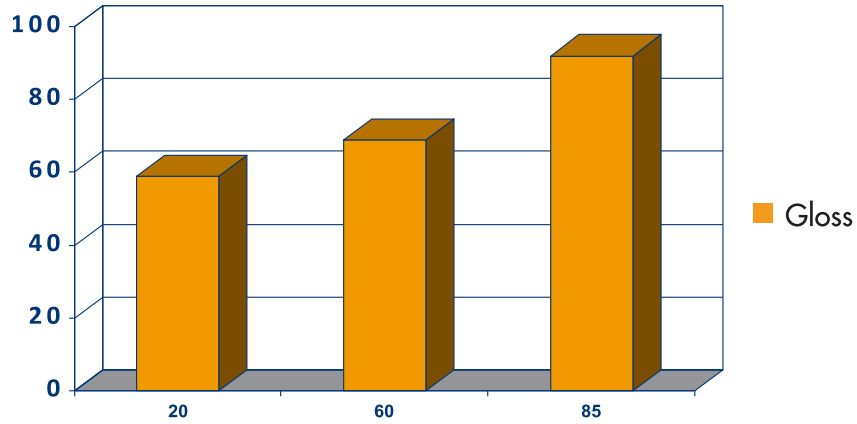
#### Typical Paint Properties\*

Weight Solids, %	54.1
Volume Solids, %	39.0
PVC, %	25.3
VOS, lb/gal	0.40
VOC, g/L	47.7
Specific Gravity	1.30
Pounds per Gallon	10.84

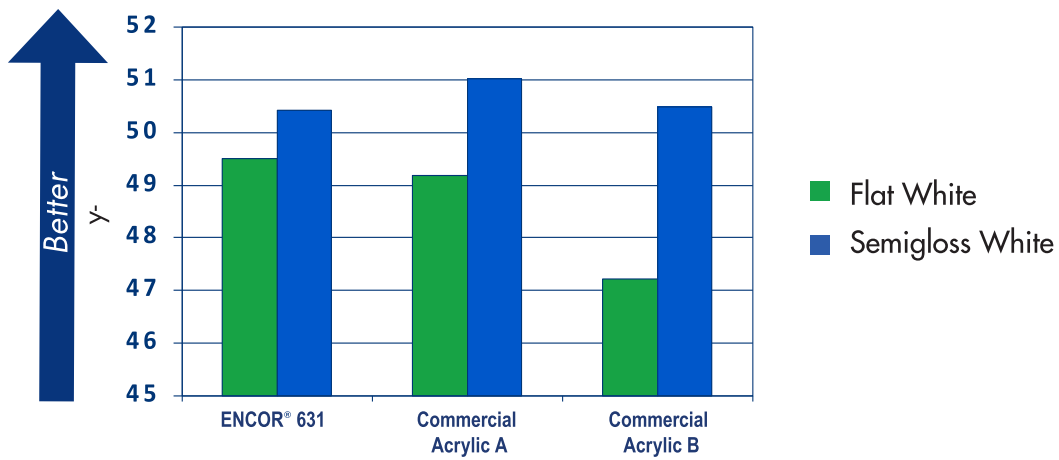
# ENCOR® 631

HIGH PERFORMANCE ACRYLIC LATEX FOR ARCHITECTURAL COATINGS

## Gloss Potential

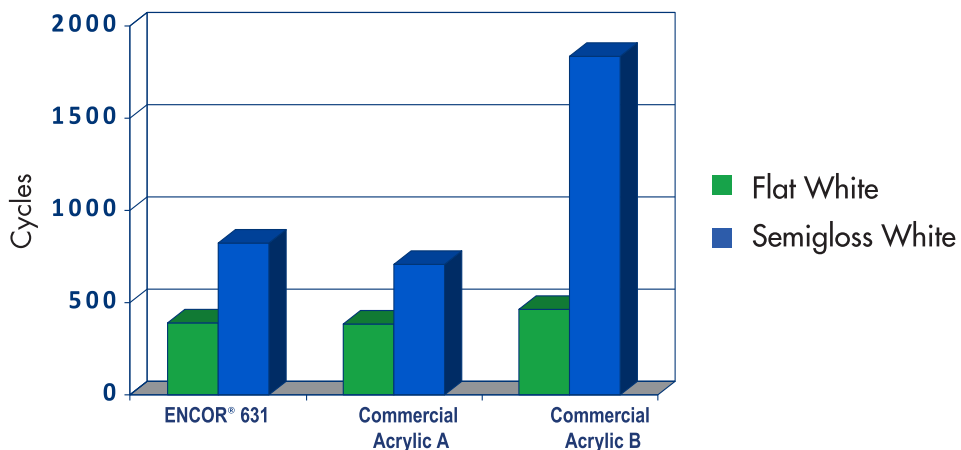


## Tint Strength



ENCOR® 631 offers excellent tint strength consistency.

## Scrub Resistance

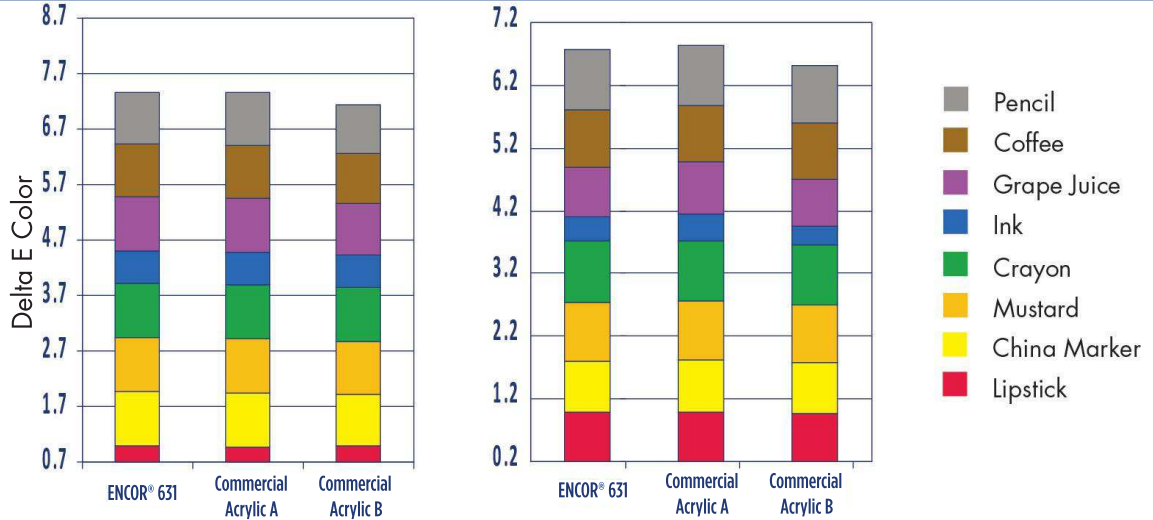


ENCOR® 631 offers good scrub resistance, improved performance is obtainable with formulation.

# ENCOR® 631

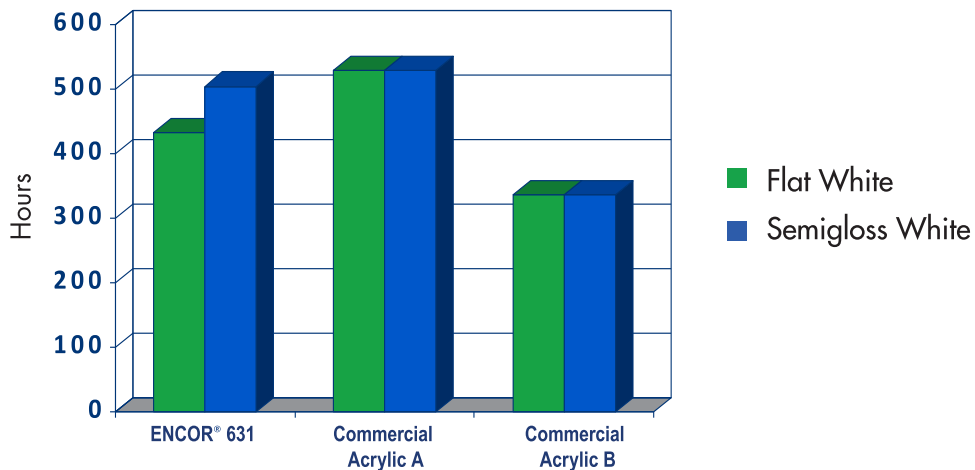
HIGH PERFORMANCE ACRYLIC LATEX FOR ARCHITECTURAL COATINGS

## Washability



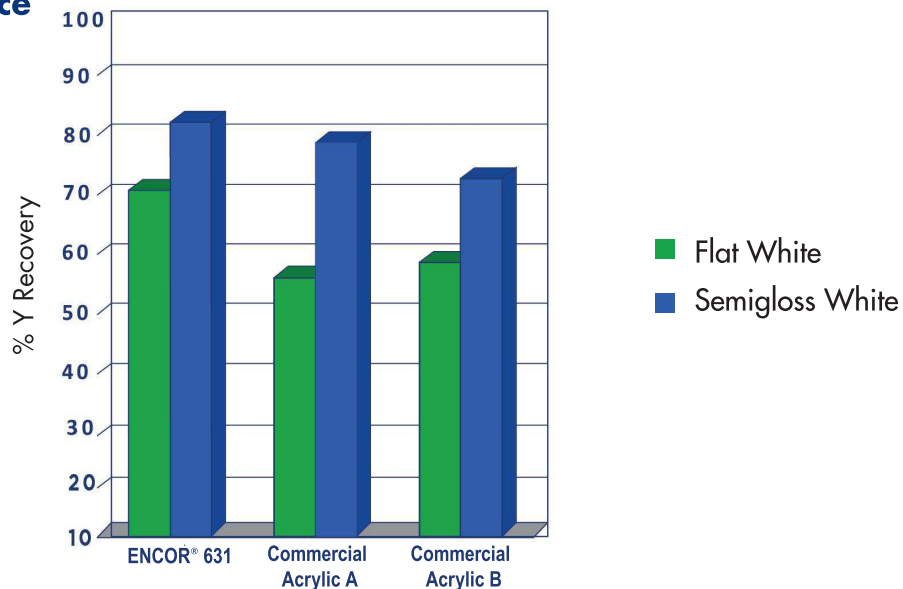
ENCOR® 631 offers equal to better washability than competitive Low VOC latexes.

## Alkali Resistance



ENCOR® 631 offers alkali resistance equal to the commercial acrylic.

## Dirt Pickup Resistance



ENCOR® 631 offers good dirt pickup resistance.

# ENCOR® 631

HIGH PERFORMANCE ACRYLIC LATEX FOR ARCHITECTURAL COATINGS

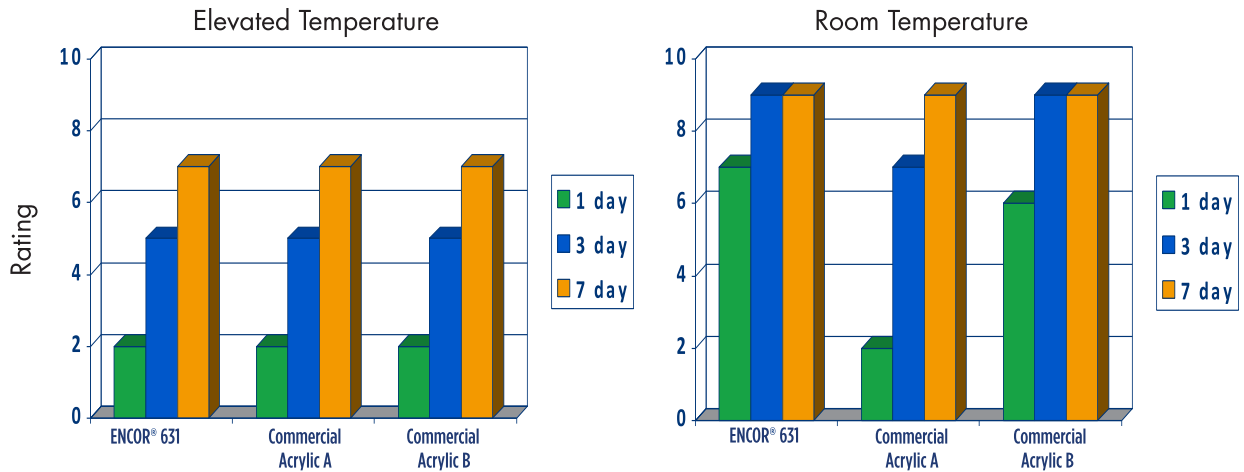
## Exterior Durability – Flat Formulation



ENCOR® 631 offers excellent exterior durability

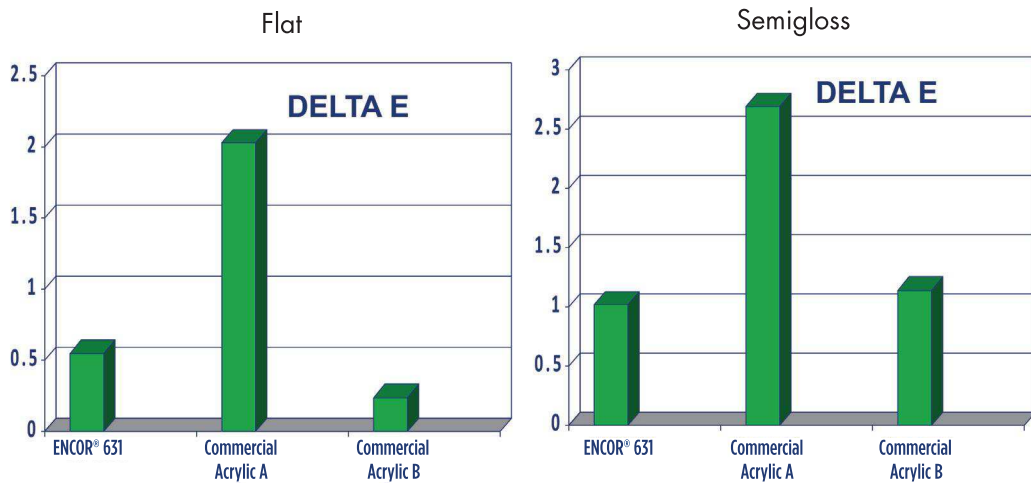
- masonry panels
- 4 plus years of exterior exposure in Cary, NC

## Block Resistance – Semigloss Formulation



ENCOR® 631 has excellent block resistance when evaluated in whites to deep tint base color at both room and elevated temperatures

## Wet Croak - Deep Tint - Color Rub Off

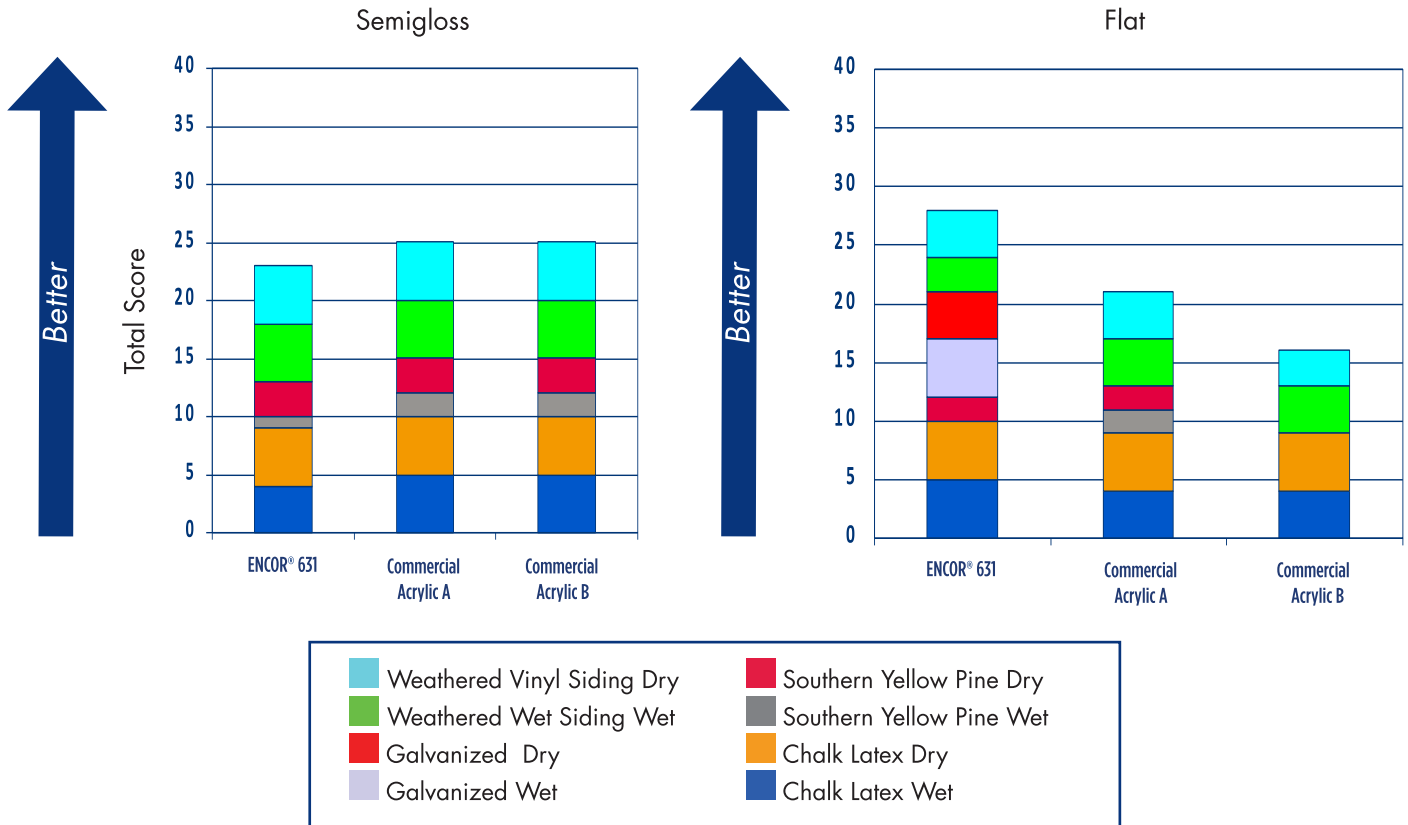


ENCOR® 631 offers excellent color rub off resistance in deep colors

# ENCOR® 631

HIGH PERFORMANCE ACRYLIC LATEX FOR ARCHITECTURAL COATINGS

## Adhesion - Tape Pull



ENCOR® 631 demonstrates equal to better adhesion over a wide selection of substrates

### Product Safety

Before handling the materials listed in this bulletin, read and understand the product MSDS (Material 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 MSDS, or visit our web site: [www.arkemacoatingresins.com](http://www.arkemacoatingresins.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.

Arkema Coating Resins requests that the customer read, understand, and comply with the information contained in this publication and the current MSDS(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".



Arkema Coating Resins  
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:  
[www.arkemacoatingresins.com](http://www.arkemacoatingresins.com)

© 2015 Arkema Inc. All rights reserved. Revised 11/15  
ENCOR® and ENVIA® are registered trademarks of Arkema Inc.  
POLYPHOBE® is a registered trademark of Coatex SAS  
CELLOSIZEM™, TRITON™ and KATHON™ are trademarks of The Dow Chemical Company  
RHODOLINE® is a registered trademark of Solvay  
DREWPLUS™ is a trademark of Ashland Licensing and Intellectual Property LLC.  
TIPURE® is a registered trademark of E. I. Du Pont De Nemours and Company  
OMYACARB® is a registered trademark of OMYA AG  
AMP™ is a trademark of Angus Chemical Company  
POLYPHASE® is a registered trademark of Troy Technology Corporation, Inc.  
MINEX® is a registered trademark of Unimin Canada Ltd.  
SKANE® is a registered trademark of Rohm & Haas Company