

# ENCOR<sup>®</sup> 601

FORMULATE MASONRY COATINGS WITH EXCELLENT RESISTANCE TO SURFACTANT LEACHING



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## Product Benefits

- For interior or exterior masonry coatings
- For low VOC coatings (zero – 50g/l VOC)
- Suitable for flat to gloss formulations
- Offers excellent properties in critical deep tint base formulations

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## Polymer Type

- 100% Acrylic

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## Performance Benefits

- Allows formulation of low VOC coatings with excellent resistance to surfactant leaching
- Displays strong block resistance, hardness and film toughness
- Excellent performance in deep tint base formulations
- Very good scrub, efflorescence and alkali resistance
- Outstanding adhesion in wet or dry application conditions

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## Typical Properties<sup>1</sup>

|  |      |
|--|------|
| Total Solids, % by weight                        | 52   |
| Weight per Gallon, lb                            | 8.8  |
| pH Value   | 8.5  |
| Viscosity, Brookfield, cP, #2 LVT @ 30 rpm, 25°C | <800 |
| Particle Size, µm                                | 0.15 |
| Minimum Film-Forming Temperature (MFFT), °C      | 16   |

<sup>1</sup>The data provided for these properties are typical values, intended only as guides, and should not be construed as sales specifications.



## Surfactant Leaching Resistance

Low VOC coatings formulated with common acrylic latexes are prone to surfactant staining when applied to exterior buildings. Paint application in low temperature / high humidity environmental conditions tends to promote surfactant leaching.

Staining comes from leachate that migrates outward from an applied coating system to a wet environment. Leachates include a wide variety of hydrophilic materials found in a fully formulated coating:

- Surfactants and dispersants: alcohol ethoxylates, polyethylene glycols
- Excess salts
- Biocide and fungicides

Because colorant pigment dispersions contain concentrated amounts of surfactants, deep tinted paints are more susceptible to surfactant leaching than white or light color paints. To reduce leaching potential of coatings:

- Focus on reducing all free hydrophilic species in end formulation – not as simple as reducing surfactant usage in latex
- Latex composition and morphology must enable optimum film formation

## Testing to Assess Surfactant Leaching

Water droplet test

- Described in ASTM D7190-10: Standard Practice to Evaluate Leaching of Water-Soluble Materials from Latex Paint Films
- Place water droplets on paint film drawdown at various stages of drying
- Allow the water to stand for 10 minutes, then tilt up the test panel to allow the water to run-off
- Once dry, evaluate the runoff area for visible streaking defect

Exudate extraction test

- Drawdown test panel is prepared and the weight of dry coating film is determined prior to testing
- There are several ways to force the exudation. One variation is to submerge a pre-weighed coated test panel in water for 1 hour
- Test panel is removed and allowed to dry
- Test panel is re-weighed to determine % leachate extracted from the film

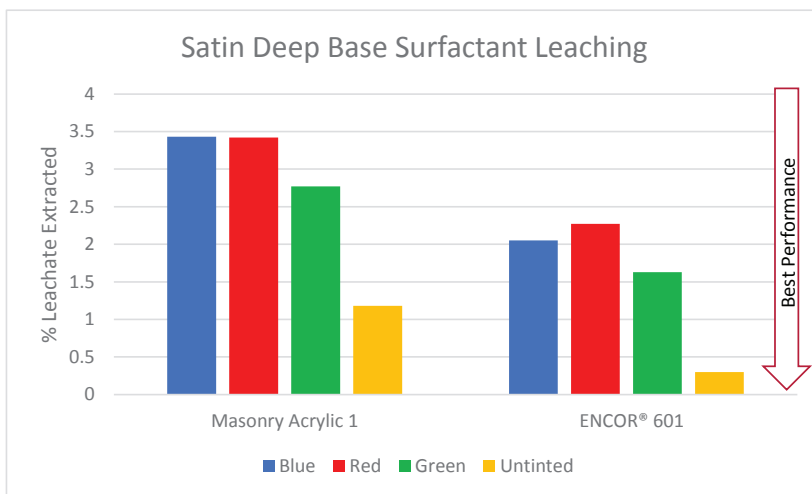
## Film Performance

The information that follows details the performance of ENCOR® 601 acrylic latex in a variety of formulations, compared with similar binders. **Table 1** is a legend that describes the various latex binders included in the testing.

**Table 1**

| Binder            | MFFT °C | % Solids |
|-------------------|---------|----------|
| ENCOR® 601        | 16      | 52       |
| Masonry Acrylic 1 | 16      | 58       |
| Masonry Acrylic 2 | 12      | 58       |
| Gloss Acrylic 1   | <5      | 49       |
| Gloss Acrylic 2   | 24      | 45       |
| Gloss Acrylic 3   | <5      | 45       |

## ENCOR® 601 Acrylic Latex Performance: Satin Deep Base

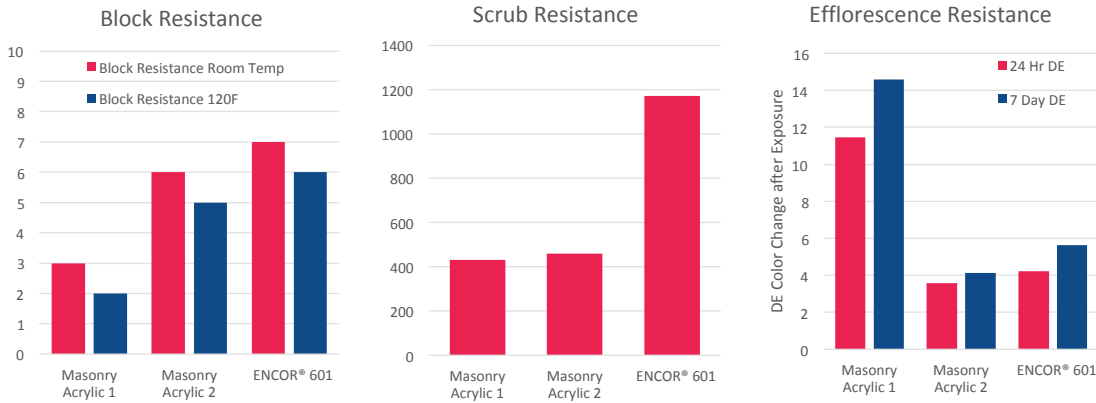


ENCOR® 601 acrylic latex

- 70% Reduction in extracted leachate for an untinted deep base
- 40% Reduction in extracted leachate when tinted

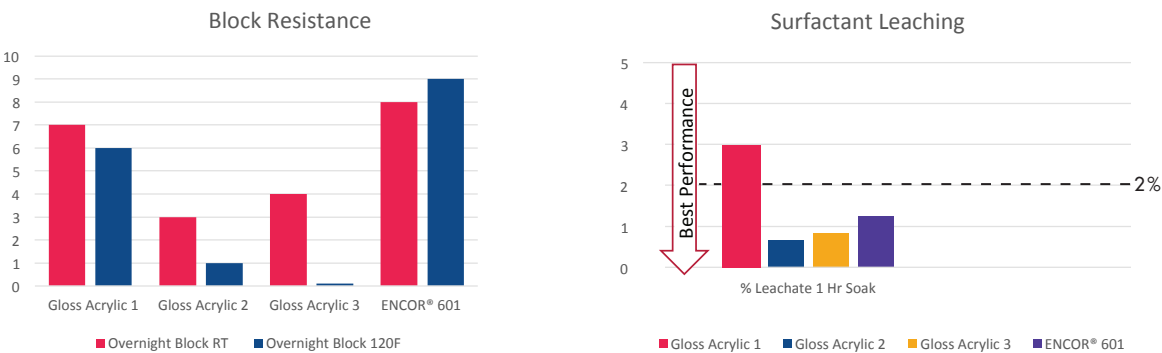
Satin deep base formulation, tinted with individual low VOC colorants at 12 fl oz/gal.

## ENCOR® 601 Acrylic Latex Performance: Satin Mid Base – Brown Tint



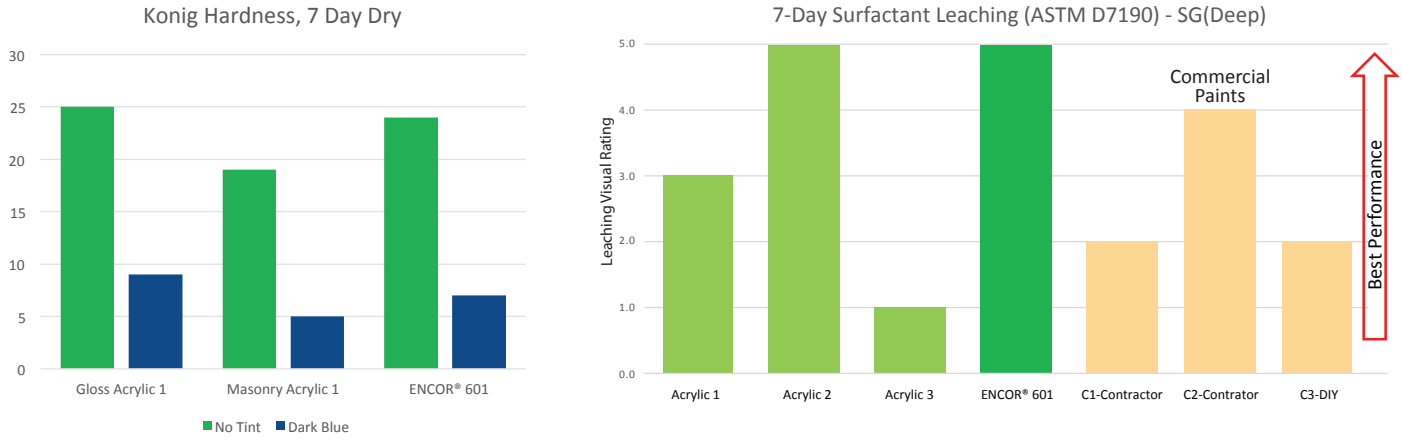
ENCOR® 601 acrylic latex also offers excellent potential for block resistance, scrub resistance and efflorescence resistance.

## ENCOR® 601 Acrylic Latex Performance: Gloss White



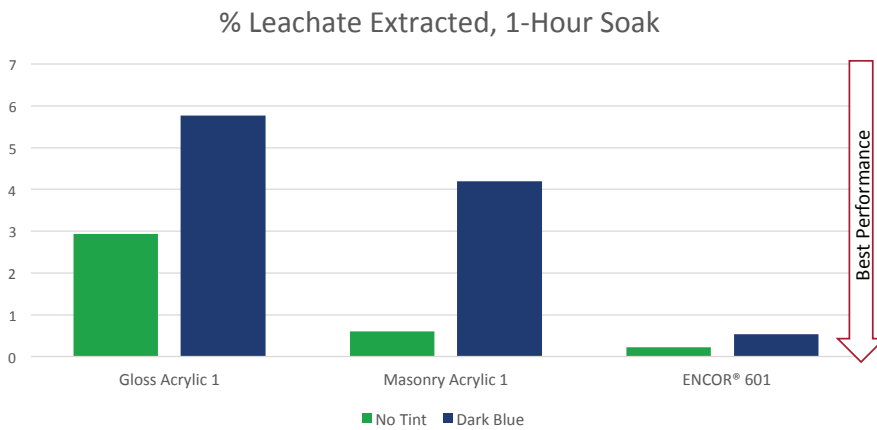
ENCOR® 601 acrylic latex may also be formulated in semi-gloss to high gloss coatings and maintain excellent performance balance for block resistance and surfactant leaching.

## ENCOR® 601 Acrylic Latex Performance: Semi-Gloss Deep Base



ENCOR® 601 acrylic latex matches performance of acrylic binder technology engineered for deep tint hardness and block resistance while offering greatly improved surfactant leaching and water resistance.

## ENCOR® 601 Acrylic Latex Performance: Semi-Gloss Deep Base



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## 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](http://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.

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## Storage and Handling

Follow procedures typically recommended for polymer dispersions. Use corrosion-resistant storage tanks and piping. Air-operated diaphragm pumps are preferred. Avoid temperature extremes. Do not freeze; store between 4-40°C.

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

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



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