

# ESSENTIAL R5191

## SELF CROSS-LINKING ACRYLIC EMULSION

Essential R5191 is a self cross-linking acrylic polymer that can be formulated into <50 g/l concrete sealers. When formulated properly the finish exhibits excellent wet adhesion properties, is non-blushing, non-yellowing and shows excellent chemical and stain resistant properties.

Can be formulated into interior and exterior wet look sealers.

### KEY BENEFITS

- Wet adhesion properties
- Resistant to acids, bases and stains
- Formulate to < 50 g/l
- Non-blushing
- Compares favorably with solvent-based acrylic system
- Excellent water resistance
- Passes ASTM C309

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### TYPICAL PROPERTIES\*

Appearance .....	Translucent
Tg .....	6°C
Acid Number .....	40
Solids, % by Weight .....	41
Viscosity, cP @ 25°C .....	200
Density, Lbs./Gal.....	8.70
VOC Level (As Supplied)	
Lbs./Gal. ....	0.0
G/L.....	2.3

\*These values should not be interpreted as specifications.



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# ESSENTIAL R5191

Self-Cross-Linking Acrylic Emulsion

## Starting Point Formulation - ALW063

<u>Materials</u>	<u>Pounds</u>
Essential R5191	608.00
Dynol 604	2.90
<i>Pre-blend water and solvent, then add.</i>	
Water	344.80
PPH	7.90
BYK 028	0.50
Capstone FS-65	1.00
<b>Total:</b>	<b>1000.00</b>

## Formulation Attributes

Solids, % by weight .....	25
pH.....	7.95
Viscosity (CPS) .....	< 50
VOC(g/L).....	46.1
Wt/gal .....	8.49

## Performance Information

Tests performed on CRS panels (1-mil dry).

Konig Hardness (seconds):      **1 day - 31**      **7 day - 47**

Cross Hatch Adhesion (7 Day):      **Dry - 5B**      **Wet - 4B**

## Supplier Information

<u>Product</u>	<u>Description</u>	<u>Supplier</u>
Dynol 604	Leveling agent	AirProducts
Tego Foamex 825	Defoamer	Evonik

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## Stain & Chemical Resistance Properties

Tested after 7 days, 1 Hour Test, 1 Hour Recovery

### Stain Testing

Coffee .....	No Effect
Red Wine .....	No Effect
Ketch-up .....	No Effect
Mustard .....	Slight Yellowing/Recovers
Iodine 7.5% .....	No Effect

### Chemical Testing

Water .....	No Effect
Motor Oil .....	No Effect
NaOH 10% .....	Slight Softening/Recovers
NaCl 10% .....	No Effect
CaCl <sub>2</sub> 10% .....	No Effect
TSP 3% .....	Moderate Softening/Recovers
Ammonia 10% .....	Slight Softening/Recovers
HCl 5% .....	No Effect
Brake fluid .....	No Effect
EtOH 50% .....	Moderate Softening/Recovers
Gas .....	Slight Softening/Recovers
Skydrol .....	Moderate Darkening & Softening/Does Not Recover

## Water Resistance Testing – Comparative Study

Procedure – 2 coats of sealer are applied to a red quarry tile. The coats are allowed to dry for 2 hours. After the second coat is dried the tile is partially submersed into water for 16 hours.

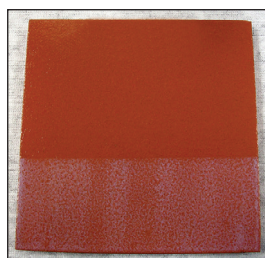
The pictures below show the results. As you can see R5191/ALW063 compares very favorably to the typical solvent-based wet look sealer and out performs an existing commercially available water-based sealer.



Solvent-based  
wet look sealer



R5191/ALW063



Water-based sealer