ENCOR® 5650

(Experimental EX 90-032)

ALL-ACRYLIC LATEX FOR CLEAR AND PIGMENTED CONCRETE COATINGS **ARKEMA COATING RESINS**

Product Benefits

ENCOR® 5650 is an all-acrylic, self-crosslinking, nanoparticle size latex designed for clear and pigmented concrete coatings. ENCOR® 5650 offers many performance benefits, including:

- Adhesion over cement and quarry tile substrates
- Blush resistance over a variety of substrates
- Flexibility and durability to endure exterior application
- Excellent QUV stability
- Resistance to automotive and household chemicals
- Resistance to hot tire pickup

ENCOR® 5650 acrylic meets EnVia® standards. It is produced without APEO, benzophenone, formaldehyde or PFAS and is low VOC capable (0-50 g/L).[1]

Typical Polymer Properties[2]

Total Solids, % by weight	47.5
Weight/Gallon, (lbs)	8.8
pH Value	9.0
Viscosity, Brookfield. cP, #3LVT at 60 rpm, 25±1 °C	<1000
Minimum Film Forming Temperature, °C	9
Particle Size, microns	<0.10

[1] 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.

[2] The data provided for these properties are typical values, intended only as guides, and should not be construed as sales specifications.

Product Safety

Please refer to the corresponding Safety Data Sheet.

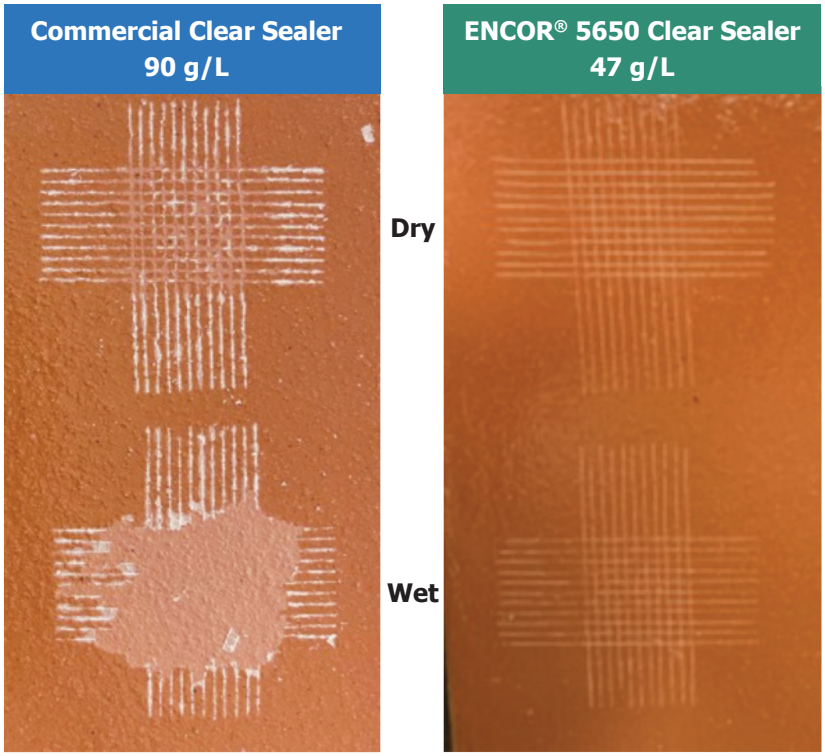
Storage & Handling

ENCOR® 5650 should be stored indoors in the original, unopened and undamaged container, in a dry place at storage temperatures not exceeding 85 °F (30 °C). Exposure to direct sunlight should be avoided.

The product is protected to prevent any microbial deterioration during normal conditions of storage but care should be taken to avoid accidental contamination during subsequent handling and processing.

ENVIA® ENCOR®

ENCOR® 5650 Maintains Dry and Wet Adhesion On Quarry Tile and A Variety of Substrates



High gel content and optimized morphology of ENCOR® 5650 balance wetting and adhesion

ENCOR® 5650 Has Excellent Blush Resistance and Water Beading For Exterior Applications

Appearance during rain event after 3 month test fence exposure in Cary, NC

ENCOR® 5650

ALL-ACRYLIC LATEX FOR CLEAR AND PIGMENTED CONCRETE COATINGS

ENCOR® 5650 Has Exceptional Exterior Durability

Quarry Tile: 3 Winter Months

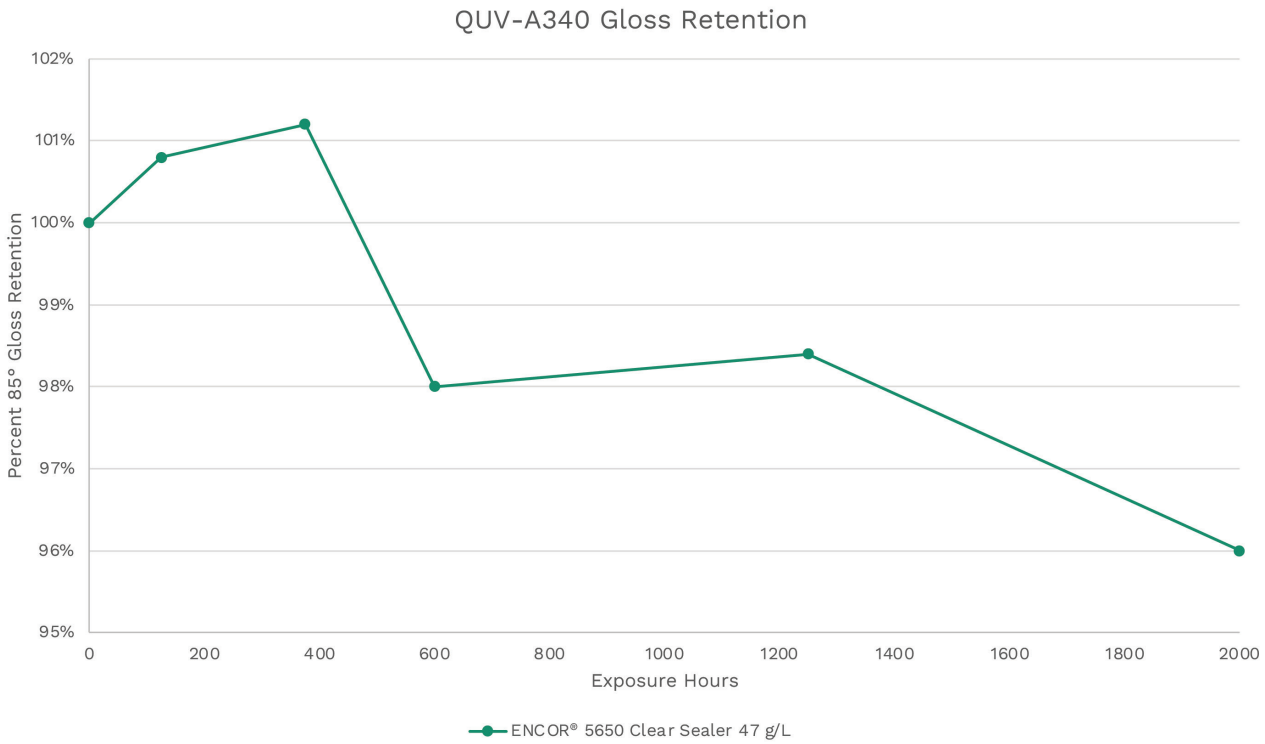
Commercial Clear Sealer 90 g/L	ENCOR® 5650 Clear Sealer 47 g/L

Quarry Tile: 18 Months

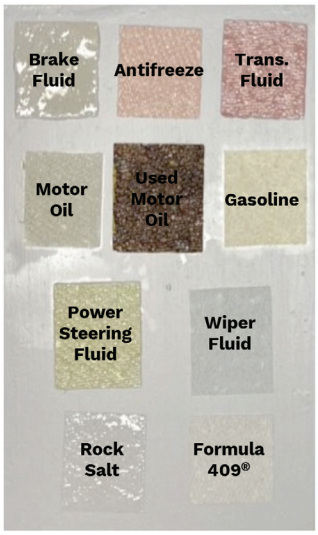
Commercial Clear Sealer 90 g/L	ENCOR® 5650 Clear Sealer 47 g/L

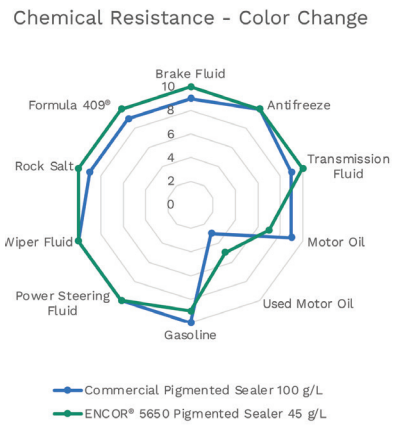
- ENCOR® 5650 is resilient in initial 3 month exposure to winter conditions
- ENCOR® 5650 maintains adhesion and gloss after 18 month test fence exposure in Cary, NC

ENCOR® 5650 Maintains High Gloss In Accelerated Weathering Tests



ENCOR® 5650 Shows Minimal Staining and Good Film Integrity After Exposure To Harsh Automotive Fluids





ENCOR® 5650 has better chemical resistance and no softening compared to 100 g/L commercial sealers

ENCOR® 5650 Has Very Good Hot Tire Pickup Resistance At A Low VOC

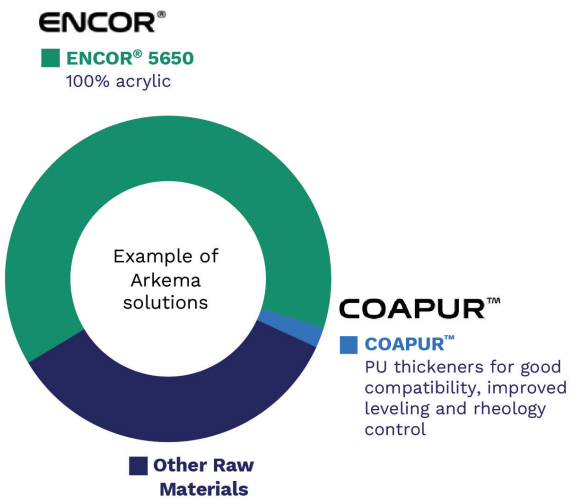
ENCOR® 5650 shows excellent imprint resistance and does not delaminate after wet compression of 150 PSI for one hour

ENCOR® 5650

ALL-ACRYLIC LATEX FOR CLEAR AND PIGMENTED CONCRETE COATINGS

Arkema Solutions Meet Market Expectations While Delivering Required Performance

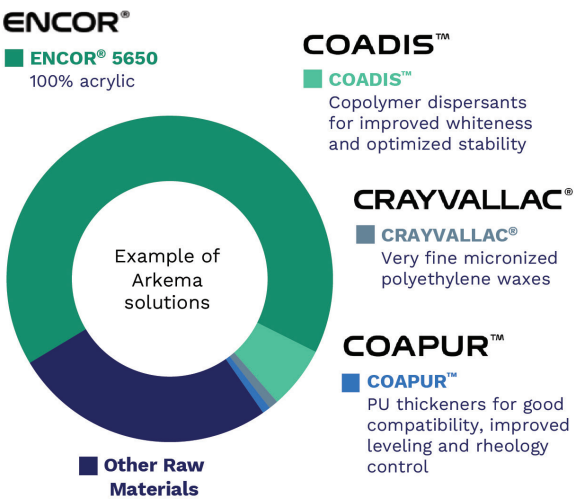
ENCOR® 5650: Clear High Gloss Sealer



MARKET EXPECTATIONS

- Safer
- Good adhesion
- Durable
- Water & chemical resistant

ENCOR® 5650: Grey Pigmented Sealer



ENCOR® 5650: Clear High Gloss Sealer Starting Point Formulation

Ingredient	Weight (Pounds)	Volume (Gallons)
ENCOR® 5650	559.2	63.5
Water	289.6	34.7
Surfynol® 104 PG 50	2.9	0.3
Texanol™ Ester Alcohol	5.0	0.6
BYK® 024	2.9	0.3
Ammonium Hydroxide, 28% Solution	2.9	0.4
COAPUR™ 2020 W	2.0	0.1
Propylene Glycol	1.1	0.1
Total	**865.6**	**100.0**

Formulating tips:

- Premix Texanol™ and Surfynol® 104 PG 50 for ease of incorporation
- Agitate thoroughly under high shear for 30 minutes
- Allow sufficient time for equilibration
- Note: Improved blush resistance seen with ENCOR® 5650 at lower VOC content

Property	Value
Weight solids (%)	32.4
Volume solids (%)	32.2
VOC, g/L	47

ENCOR® 5650: Gray Pigmented Sealer Starting Point Formulation

Ingredient	Weight (Pounds)	Volume (Gallons)
Grind Base		
Water	40.0	3.93
AMP-95™	2.4	0.25
COADIS™ 123 K	10.0	0.93
BYK® 022	0.5	0.05
SURFYNOL® 104 PG 50	3.0	0.27
Attagel® 50	2.0	0.08
Ti-Pure™ R-900	100.0	2.29
3M™ Ceramic Microspheres W-410	45.0	1.84
Minex® 3	50.0	1.89
Spherilex® DP-0112	25.0	1.12
Water	24.0	2.36
Thindown		
Water	143.0	14.06
BYK® 024	0.5	0.05
ENCOR® 5650	500.0	66.00
DPnB Glycol Ether	9.0	0.11
Polyphase® 663	1.5	0.13
Proxel ™ AQ	3.0	0.28
CRAYVALLAC® WN-2950	1.5	0.14
Colortrend® 808-9907 Lamp Black	33.0	3.33
Aquaflow™ NHS-310	8.0	0.77
COAPUR™ 2020 W	2.0	0.12
Total	**1003.4**	**100.0**

Property	Value
Weight solids (%)	48
Volume solids (%)	36
PVC (%)	28
Theo. Density	10.25
VOC, g/L	44.9

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