

ENCOR[®] RAIN

APE, Ammonia and Metal-Free, High Molecular Weight Floor Finish Polymer
Safer Choice* Recognized

Emulsion Polymer Description

ENCOR[®] RAIN is the next generation APE-free, ammonia-free and metal-free polymer. ENCOR[®] RAIN bridges the performance gap between metal containing and metal-free finishes, while providing floor finish manufacturers with the very best in sustainable chemistry.

Finishes formulated with ENCOR[®] RAIN have outstanding durability, black heel mark and hand sanitizer resistances, and comply with the stringent requirements of leading environmental certifications, including Green Seal, Safer Choice*, EcoLogo, and CARB2011 VOC requirements.

ENCOR[®] RAIN is certified in the EnVia[®] program**.

Performance Characteristics

- High Gloss
- Extremely Durable
- Low Odor

Recommendations for Use

- High Off-The-Mop Gloss
- Low Odor
- Excellent Leveling
- Superior Durability
- Excellent Black Heel Mark Resistance

Typical Properties

% Solids	42.0
pH	7.50
Viscosity (cps)	<150
Weight/Gallon (lbs)	8.80
Heat Stability	Excellent
Freeze-Thaw Stability	Passes 3 Cycles
MFFT (°C)	85°C
Appearance	Milky White Emulsion

* Safer Choice is a program of the US Environmental Protection Agency

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

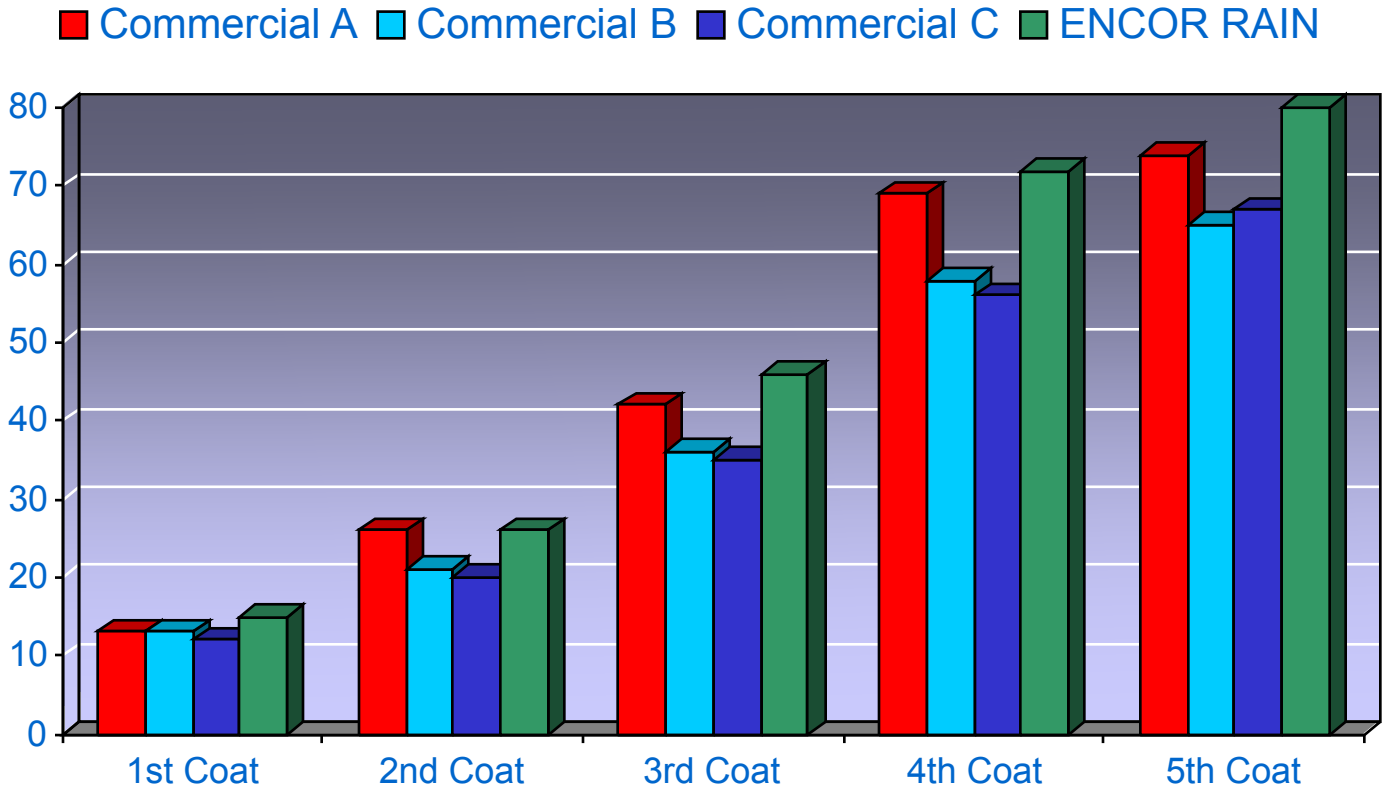
ENCOR® RAIN

APE, Ammonia and Metal-Free High Molecular Weight Floor Finish Polymer

Benchmarking Against Market Leading Green Seal-Certified Finishes

Initial 60° degree gloss

20% Solids Floor Finish



Finishes were applied in a controlled environment (75°F / 52% humidity) using a conventional mop. 60° gloss measurements were recorded every 30 minutes.

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Green Seal (GS) Formulation at 20% Total Solids

- High Gloss
- Extremely Durable
- Low Odor

ENCOR® RAIN formulation provides excellent off-the-mop gloss without buffing or burnishing. ENCOR® RAIN yields unparalleled durability and black heel mark resistance. The GS formulation meets Green Seal guidelines and California Air Resource Board (CARB) 2011 VOC regulations.

Raw Material	Weight %	Lbs./100 gal.
Water	50.00	427.51
Diethylene Glycol Ethyl Ether (DE-LGV)	5.25	44.88
Tributoxyethyl Phosphate	3.00	25.65
CAPSTONE FS-61	0.03	0.26
SE-21 Defoamer ² (As Supplied)	0.02	0.17
ENCOR® RAIN (42% solids)	40.00	342.00
Nonionic HDPE Wax Emulsion (35% Solids)	1.13	9.66
Nonionic Polypropylene Wax Emulsion (40% Solids)	0.55	4.70
Preservative	0.02	0.17
<i>Total</i>	100.00%	855.00

¹ – DuPont ² – Wacker Silicones

After adding the top five ingredients (Water through SE-21 Defoamer), allow to mix for 30 minutes before adding the remaining ingredients. Add all ingredients in the order prescribed and under constant agitation. Allow to mix for minimum 30 minutes.

Note: Pre-dilute SE-21 1:1 with water to help incorporation into pre-mix.

FORMULATION CONSTANTS:

Total Solids:	20%
Polymer/Resin/Wax Ratio:	96/0/4
Weight per Gallon:	8.55 lbs. /gal



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Safer Choice and CARB-compliant formulation at 20% Total Solids

Raw Material	Weight %	Lbs./100 gal.
Water	48.96	429.39
Propylene Glycol (PG)	3.25	28.50
Dipropylene Glycol Methyl Ether (DPM)	0.90	7.89
Propylene Glycol Phenyl Ether (PPH)	1.15	10.09
Tributoxyethyl Phosphate	3.00	26.31
CAPSTONE FS-61 ¹	0.04	0.35
SD-10 Defoamer ² (As Supplied)	0.03	0.26
ENCOR® RAIN (42% solids)	39.00	342.03
Nonionic HDPE Wax Emulsion (35% Solids)	1.40	12.28
Nonionic Polypropylene Wax Emulsion (40% Solids)	2.25	19.73
Preservative	0.02	0.17
Total	100.00%	877.00

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After adding the top five ingredients (Water through SE-21 Defoamer), allow to mix for 30 minutes before adding the remaining ingredients. Add all ingredients in the order prescribed and under constant agitation. Allow to mix for minimum 30 minutes.

Note: Pre-dilute SE-21 1:1 with water to help incorporation into pre-mix.



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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: 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 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

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



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