ENCOR® 496

Styrene Acrylic Latex for Exterior Insulating Finishing Systems

ARKEMA
INNOVATIVE CHEMISTRY

Product Description

ENCOR® 496 is designed for use as a binder for air-moisture barriers and as a cement modifier in adhesive/base coats and dirt resistance finish coats. It is an excellent choice for use in exterior insulation and finish systems (EIFS) with drainage systems due to its excellent resistance to bulk water intrusion while allowing the passage of water vapor, and for its adhesion to a variety of construction substrates.

ENCOR® 496 also offers distinct early grab or "green strength", which allows expanded polystyrene adhered with an adhesive coat based on ENCOR® 496 to be rasped in a few hours, depending on ambient conditions.

ENCOR® 496 provides excellent dirt pickup resistance, good high temperature pot life and good flexibility.

Polymer Design

- Styrene acrylic

Performance Benefits

- Good water-resistive properties
- Good adhesion to a variety of substrates
- Universal utility air-moisture barrier, adhesive/base coat and finish coat
- Early grab property
- Good elongation and crack bridging
- Dirt pick up resistance
- Cement compatible

Typical Properties[1]

Total Solids, % by weight	50.0
Latex Weight per Gallon, lb	8.9
pH Value	8.0
Particle Size, microns	0.2
Viscosity, Brookfield, cP	300
Glass Transition Temperature (Tg), °C	-7

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

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Applying the right air/moisture barrier

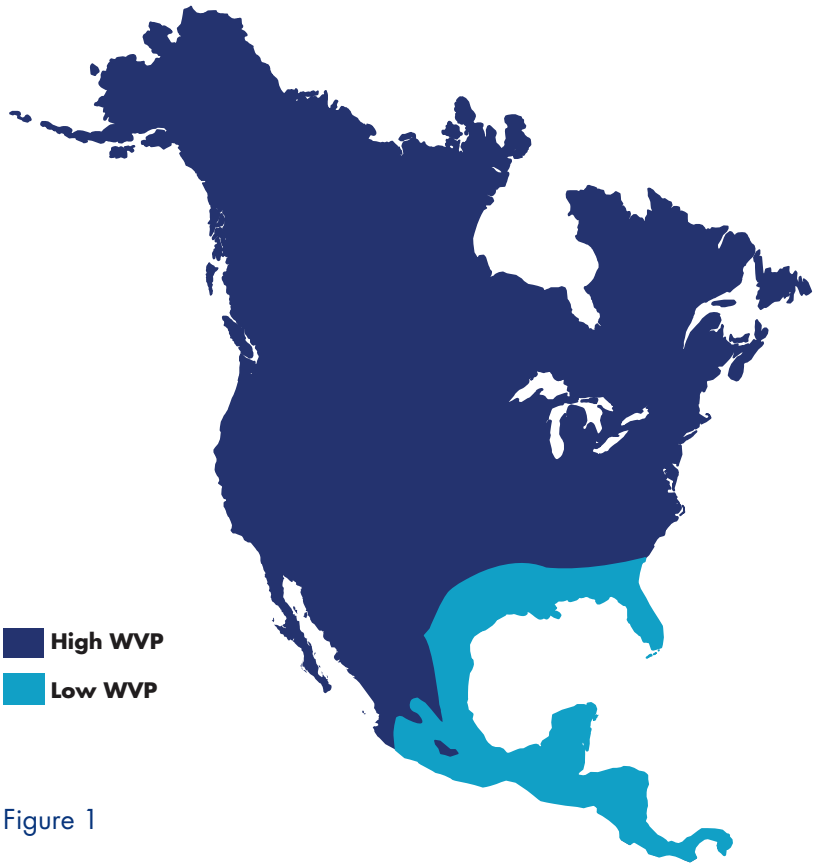

Figure 1

Uncontrolled air leakage and rain penetration cause a wide range of building problems: wasted energy, uncomfortable drafts, mold growth and premature deterioration of the building. Air/moisture barrier systems are used to make the building perform better. An air/moisture barrier system wraps the building shell and ensures that it protects the building from the effects of air and water infiltration.

The water vapor permeability (WVP) of the air/moisture barrier should be dictated by climate region. For building in most parts of North America, where winter heating conditions predominate, the air/moisture barrier should be highly permeable (>25 PERMS) to water vapor to allow any moisture which enters the wall cavity to easily exit. In humid regions where warm-weather cooling predominates within buildings, the air/moisture barrier should have a lower permeability (10 PERMS) to minimize the entry of moisture into the wall cavity.

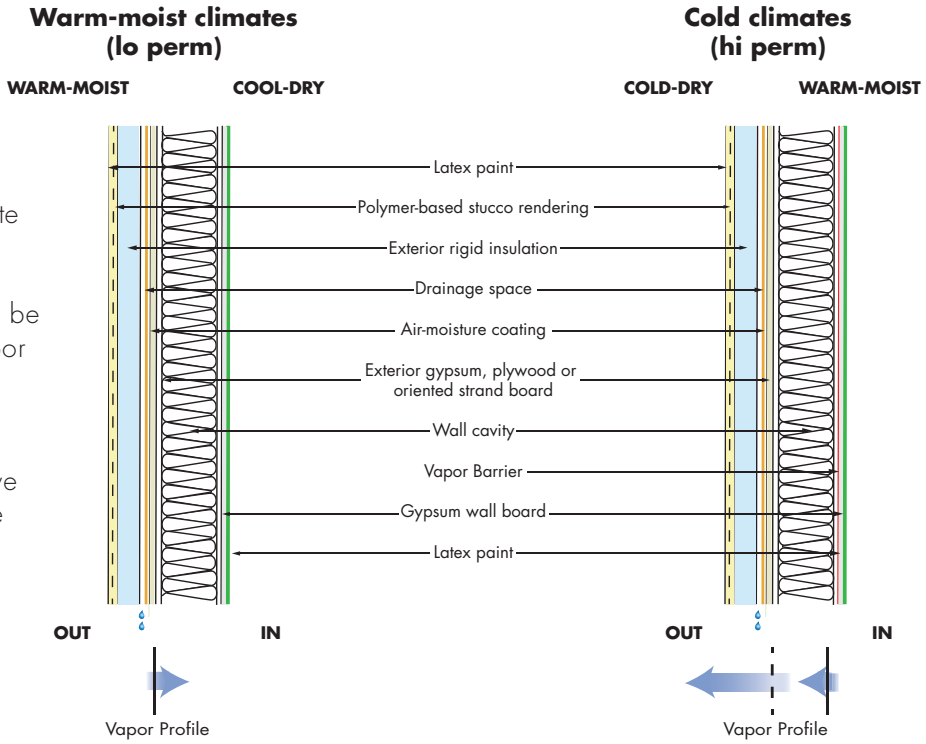

Figure 2

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AIR/MOISTURE BARRIER FORMULATIONS

High vapor transmission rate

Ingredients	Lbs
Water	98.8
COADIS™ BR-40	7.9
KTPP	1.9
Surfonyl 104HE	2.4
Propylene Glycol	18.4
FOAMSTER®r NXZ	1.4
TI-PURE® R-960	94.0
DRIKALITE™	369.1
POLYPHASE® 663	6.7
ENCOR® 496	527.3
TEXANOL™	3.9
FOAMSTER® NXZ	3.9
Ammonium Hydroxide	1.5
COAPUR™ XS-52	1.9
COAPUR™ 2025	1.9
Medium Fine Sand	57.5
TOTAL	1191.7

Low vapor transmission rate

Ingredients	Lbs
Water	126.4
COADIS™ BR-40	23.7
KTPP	2.3
Surfonyl 104HE	17.8
Propylene Glycol	1.4
FOAMSTER® NXZ	92.9
TI-PURE® R-960	334.5
DRIKALITE™	23.2
POLYPHASE® 663	6.5
ENCOR® 496	511.1
TEXANOL™	3.8
FOAMSTER® NXZ	3.8
Ammonium Hydroxide	1.5
VISCOTEX™ 730	4.1
COAPUR™ XS-71	5.6
Medium Fine Sand	55.8
TOTAL	1214.5

Performance characteristics

Tensile Strength, PSI	99	233
Elongation at Break, %	946	198
Tear, lbf/in	100	85
Dry Peel Adhesion, lbf		
Aluminum	7.6	7.9
Gypsum	Delamination	Delamination
Wet Peel Adhesion, lbf		
Aluminum	6.4	6.3
Gypsum	1.3	1.5
Prohesion, PSI		
Aluminum	36.7	39.5
Gypsum	Delamination	Delamination
Cement	26.4	23.5
OSB wood	20.1	19.8
Freeze/Thaw, 10 cycles	Pass	Pass
WVP, Perms	27.5	7.6
Water Resistance, %	8.1	11.2
Wind Driven Rain, g	4.8	5.5

ADHESIVE/BASE COAT FORMULATION

Ingredients	Lbs
Water	286.5
HEC	6.0
Sand, medium fine	437.5
ENCOR® 496	235.3
Portland Cement	762.5
TOTAL	1727.8

FINISH COAT FORMULATION

Elastomeric finish coat

Ingredients	Lbs
Water	123.0
COADIS™ BR-40	8.2
KTPP	2.0
Surfonyl 104HE	2.5
Propylene Glycol	19.2
FOAMSTER® NXZ	1.5
TI-PURE® R-960	10.0
MINEX® 7	95.2
Sand, fine	60.0
DRIKALITE™	350.0
Eagle Zinc™	25.0
POLYPHASE® 663	7.0
ENCOR® 496	502.7
TEXANOL™	4.1
FOAMASTER® NXZ	1.5
Ammonium Hydroxide	1.6
Water	10.0
VISCOTEX™ 730	6.2
COAPUR™ XS-71	2.5
TOTAL	1184.8

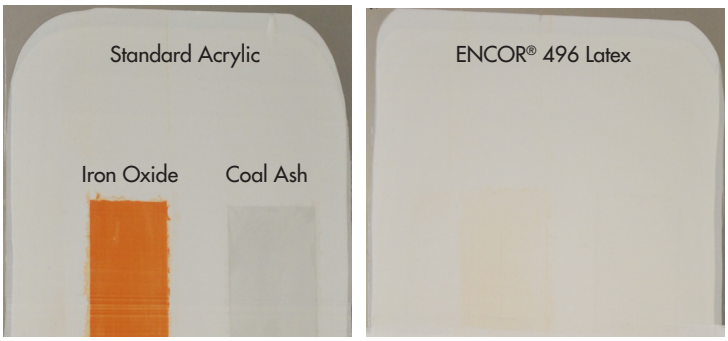

Figure 3

Comparison of dirt pick resistance of a standard EIFS panel with that based on ENCOR® 496.The EIFS assemblies were coated with an iron oxide and coal ash dirt in the form of a slurry. The slurry stain was allowed to dry on the assembly for one day and then were washed with running water. The ENCOR® 496 system demonstrates exceptional resistance when compared to the standard EIFS panel.

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

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 40-90ºF (4-32ºC).

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

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