



EUCLID CHEMICAL

BARACADE M.E.

SILICONE MICRO EMULSION WATER REPELLENT

DESCRIPTION

BARACADE M.E. is an oligomeric alkyl alkoxy siloxane concentrate. When diluted with water, BARACADE M.E. self-emulsifies into a unique product capable of repelling water on concrete or masonry surfaces. BARACADE M.E. is a breathable, non-staining, colorless material which penetrates deep into the surface to seal out moisture, reduce efflorescence and minimize the damaging effects of freeze-thaw cycles. BARACADE M.E. protects without altering the appearance or texture of the treated surface and improves resistance to airborne dirt, smog and other air pollutants.

PRIMARY APPLICATIONS

BARACADE M.E./9 is mixed 9 parts water to 1 part BARACADE M.E. for vertical applications such as:

- Precast & prestressed
- Above grade
- Exposed aggregate
- Poured-in-place
- Concrete block

BARACADE M.E./4.5 is mixed 4.5 parts water to 1 part BARACADE M.E. for horizontal applications such as:

- Sidewalks
- Ramps
- Parking decks
- Bridge decks
- Industrial floors

TECHNICAL INFORMATION

Typical Engineering Data

The following are typical values obtained under laboratory conditions. Expect reasonable variation under field conditions.

Material Properties* @ 75°F (25°C)

Flash point of concentrate	77°F
Flash point after dilution	None
Active Content (by weight) (after dilution)	
BARACADE M.E./9	10%
BARACADE M.E./4.5	18%
Appearance of Liquid	pale yellow
Appearance when dry	clear
Resistance to UV	excellent
Abrasion Resistance	excellent
Water permeance ASTM E 514	
BARACADE M.E./9	passes

Baracade M.E. Test Results NCHRP 244 Series II Tests

	Minimum Requirement	BARACADE M.E./4.5
Reduction in water absorption	75%	80%
Water vapor transmission	100%	121%
Reduction in chloride ion intrusion	75%	83%

California Test Method (Cal trans)

Water absorption, 24 hours	1% max	0.65%
Freeze thaw cycles	200 max	433
VOC Content, ASTM D3960	400 max	349 g/L

PACKAGING

BARACADE M.E. is packaged in 55 gal (208 L) drums, 5 gal (18.9 L) pails and 1 gal (3.8 L) units.

SHELF LIFE

1 year in original, unopened container

COVERAGE

Because of variations in surface density, the following coverage rates are approximate and are intended for estimating purposes only. Use test applications on actual surfaces to accurately determine coverage rates. Extremely porous surfaces may require two coats.

Vertical Applications

Surface Type	BARACADE M.E./9		
	# of Coats	1st Coat	2nd Coat
Poured and Precast Concrete	1	120 to 170 (2.9 to 4.2)	-
Slump Block	1	70 to 80 (1.7 to 2.0)	-
Brick and Stucco	1	80 to 125 (2.0 to 3.1)	-
Plaster and Stone/Tile	1	200 to 300 (4.9 to 7.4)	-
Standard Block ASTM C 90 Grade N Type I)	2	40 to 80 (0.98 to 2.0)	60 to 120 (1.5 to 2.9)
Split Faced Block	2	40 to 80 (0.98 to 2.0)	60 to 120 (1.5 to 2.9)

Horizontal Applications

Concrete	2	100 to 150 (2.4 to 3.7)	100 to 150 (2.4 to 3.7)
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DIRECTIONS FOR USE

Surface Preparation: Cure new concrete a minimum of 3 days before application. Surface must be clean, dry, structurally sound, free of curing or form release compounds, and other contaminants that will prevent the proper penetration of BARCADE M.E.. Prior to application, joints or cracks in movement must be properly sealed with an elastomeric joint sealant. Non-moving cracks or voids wider than 1/64 inch (0.4 mm) must be filled with a suitable patching material. Do not apply BARCADE M.E. to a wet surface. Surfaces must dry a minimum of 24 hours following rain or other moisture. Install caulking before BARCADE M.E. application. Mask or protect adjacent surfaces, including grass, plants, shrubs, glass, rubber, and asphalt from overspray or drips.

Mixing: BARCADE M.E. is supplied in a concentrated form and must be mixed with clean, potable water immediately before application. Prepared solutions must be applied within 12 hours of mixing.

Vertical Surfaces: BARCADE M.E./9 has a 9:1 mix ratio. (9 gal (34 L) water to 1 gal (3.8 L) BARCADE M.E.)

Horizontal Surfaces: BARCADE M.E./4.5, has a 4.5:1 mix ratio. (4.5 gal (17 L) water to 1 gal (3.8 L) BARCADE M.E.) **Special Conditions:** For extremely dense, porous, or surfaces to be painted, contact your local Euclid Chemical representative.

Equipment: BARCADE M.E. should be applied with low pressure, non-atomizing, airless spray equipment using no more than 15 to 20 psi (0.103 to 0.138 MPa) air pressure. For proper application to most porous substrates, use spray tips with an orifice size no smaller than 0.035 inch (0.9 mm). Some dense vertical surfaces may require smaller orifice sizes to prevent sags and run downs.

Application: Each coat consists of a light fog spray followed immediately with a flood coat. The fog spray wets the surface to break the surface tension and allows the flood coat to deeply penetrate the surface. The flood coat must be applied before the fog coat dries.

Dense Vertical Surfaces: On precast concrete and other dense surfaces, apply BARCADE M.E. in several fog coats to the point of saturation with no "run down". Roll out excess material to prevent surface build-up and curtaining.

Porous Vertical Surfaces: Spray a fog coat and follow immediately with the flood coat of BARCADE M.E. applied with uniform, overlapping, horizontal strokes. Use sufficient material for saturation and to cause an 8 to 10 inch (20.3 to 25.4 cm) rundown from the point of contact. Fully saturate mortar joints. One coat of material is generally sufficient, but very porous surfaces such as normal weight concrete block may require two coats. Excess material that remains on the surface may result in a glossy or discolored appearance.

Horizontal Surfaces: Apply two coats of BARCADE M.E. in a uniform coat "wet on wet basis" to the point of saturation. Do not apply more material than can be absorbed into the surface within 10 seconds. Remove

CLEAN-UP

Clean drips, runs and overspray residue while still wet, with detergent and water. Dried material may require solvent for removal. Clean application and spray equipment with detergent and water immediately following use.

PRECAUTIONS/LIMITATIONS

- Do not overdilute BARCADE M.E.
- Do not apply BARCADE M.E. to frozen or frost filled surfaces, or when the ambient or surface temperature falls below 40°F (4°C).
- Do not apply BARCADE M.E. to surfaces warmer than 95°F (35°C).
- Store between 40°F to 85°F (4°C to 29°C).
- Do not apply BARCADE M.E. if rain is forecast within 12 hours.
- Do not apply BARCADE M.E. to non-absorbent materials such as glass, metal, glazed brick, or glazed tile.
- Do not allow BARCADE M.E. to puddle. All product should penetrate the substrate with no surface build-up.
- A small (6' x 6') test area is strongly recommended prior to starting full application, in order to ensure desired performance results, aesthetics, and coverage rates. Allow 5 to 7 days for product to fully react before evaluating.
- In all cases, consult the Safety Data Sheet before use.

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