WALL MATE ®

EXTERIOR ELASTOMERIC WALL WATERPROOFING

Technical Data & Application Instructions

PRODUCT DESCRIPTION

WALLMATE is a fluid-applied, advanced Acrylic elastomeric designed to waterproof exterior vertical surfaces. It possesses outstanding adhesion to a wide variety of substrates.

WALLMATE is a permanently flexible "breathing" membrane, allowing moisture vapor from the substrate or building interior to escape through the coating while remaining impervious to mass water penetration from the exterior.

WALLMATE cures in a two-stage mode. The exposed surface crosslink's under ultraviolet light, while the sub-surface of the coating is protected from further cross linking and retains a permanent elastomeric bond to the substrate. This eliminates the need for a separate topcoat and allows the system to repel dirt, mildew and pollution without sacrificing flexibility. It contains no plasticizers, and will not harden or slump with age or changes in temperature.

BASIC USES

WALLMATE was specifically developed to
Waterproof vertical concrete and masonry building exteriors. It has the ability to uniformly cover the profile of textured substrates, forming a continuous membrane resistant to all forms of weather and airborne pollutants.

WALLMATE effectively covers existing hairline cracks and repaired areas, and bridges hairline cracking caused by further building movement. It provides long term, aesthetically pleasing waterproofing on all types of concrete and masonry surfaces. **WALLMATE** is also effective over wood and hardboard substrates. It is available in smooth or a wide range of textured finishes.

WALLMATE is also authorized by the USDA for use on surfaces where there is a possibility of incidental food contact.

COLORS

WALLMATE is available in 36 standard natural toned colors. All other colors are custom matched for the specific application. **AWC** has the color tinting facilities to match virtually any color. Color chips or samples must be furnished to **AWC** for all custom colors.

TYPICAL PROPERTIES

TABLE I

Property	Value	Method
Solids by Weight	68% (±2)	ASTM D2369
Solids by volume	55% (±2)	ASTM D2697
Tensile Strength	150 psi (1.0 kPa) (±25) @ 75°CF 400 psi (2.8 kPa) (±25) @ 0°CF	ASTM D412
Elongation	300 (±50) @ 75°CF 400 (±50) @ 0°CF	ASTM D412
Hardness	60-70 Shore A	ASTM D2240
Permeance	7.7 perms at 15 miles (381 microns)	ASTM E96
Dry Time @ 75°F. 50 % R.H	1 ½ hrs @ 20 wet mils (508 microns)	ASTM D1640
Low and High Service Temperature Limits	-30°F to 200°F (-34°C to 93°C)	

ADVANTAGES

- **Single Component: WALLMATE** is a Ready-to-use material requiring no catalyzation. It has no pot life problems.
- **No Solvents: WALLMATE** is a water-based elastomeric emulsion conforming to all VOC and air pollution standards.
- **High Resin Content: WALLMATE** contains a higher ratio of acrylic resin to filler pigments than other coatings.

Uniform High Film Build: WALLMATE'S thixotropic consistency gives it excellent vertical hold, allowing full application in one or two coats.

• **Self Cleaning: WALLMATE** seals and protects, releasing dirt, dust and pollution from its tight surface skin.

• **Elastomeric:** Permanent and non-aging, **WALLMATE** moves with the building to bridge hairline cracks that may develop.

• **Low Temperature Performance: WALLMATE** is unique in that their elongations properties are maintained at cooler temperatures, contributing to its ability to bridge hairline cracks and withstand freeze/thaw cycling.

• **Abrasive Weather Conditions: WALLMATE** will withstand all normal weather conditions.

PERFORMANCE PROPERTIES
TABLE II

Property	Test Procedure	Value
Accelerated Weathering– Ultraviolet (U.V.) Resistance	Atlas Carbon Arc Weather-Ohmmeter Type EH - Continuous UV and water spray Cycling at elevated temperature. ASTM D822	**After 2,000 hours of continuous exposure WALLMATE showed no deleterious effects, no surface checking, cracking or delamination.**
Resistance to Wind Driven Rain	Pressurized test chamber producing 5" (12.7 cm) of water pressure, equivalent to 100 mph wind pressure (161 km/hr). Federal Spec. TTC-555B	**During 40 hours of continuous testing, no apparent moisture penetrated the WALLMATE sample**
Resistance to Salt Spray	Harshaw Salt Spray Cabinet (5% sodium Chloride fog solution). ASTM B117	**After 500 hours of continuous exposure WALLMATE showed no deleterious effects, no surface checking, cracking or delamination.**
Resistance to Mildew	Five different fungus cultures grown on potato dextrose agar in an 86°F (30°C) Incubator. ASTM G21	**After 14 days, all WALLMATE samples showed absolutely no fungus growth**
Low Temperature Flexibility	Federal Test Method No. 141a-6221, utilizing Gardener Mandrel set at cryogenic temperatures.	**WALLMATE has the ability to withstand multiple 180° bends over a 1/8" mandrel at -30°F (-34°C).**
Elongation After Aging	Atlas Carbon Arc Weather-Ohmmeter Type EH (ASTM D822) and Instron Universal Testing Instrument. ASTM D412	**After 2,000 hours exposure in the Weather-Ohmmeter, WALLMATE retained 95% of its elastomeric properties.**
Low/High Temperature Stability	Aged films tested in accordance with ASTM D822 in thermostatically controlled Heat chamber and freezer.	**Films retained their ability to be flexed 180° without cracking at temperatures from -30°F to 200°F (-34°C to 94°C) with no age hardening or slump.**

SURFACE PREPARATION

NEW OR UNPAINTED: Bare concrete, brick, stucco or masonry must be structurally sound, clean, dry, fully cured, and free from dust, curing agents or form release agents, efflorescence, scale or other foreign materials. On new poured-in-place concrete, use a non-staining form release agent that is either easily removed or is designed to be compatible with surface coatings. **WALLMATE** may be applied directly to clean, sound surfaces of concrete, brick or stucco, as well as wood, siding and exterior wallboard. Concrete surfaces exhibiting high alkalinity should first be primed using AWC'S **Primer 80**.

Prior to application over masonry block, high quality acrylic block filler should be utilized to fill the pores and achieve a pinhole-free surface. Application of block filler will maximize the effectiveness of the **WALLMATE** topcoat.

The amount of block filler required to uniformly fill or surface a masonry block or other porous substrate will depend upon the texture and porosity of the surface. The average application rate

will be 1 Kg per 25 sq.ft. per Coat For additional information, refer to specific block filler manufacturer's application instructions.

PREVIOUSLY PAINTED: All dust, dirt, efflorescence and loosely adhering paint or coating shall be removed. Paints which show failure due to alkalis and moisture, which is recognizable by flaking, peeling and white deposits, must be completely removed. Chalky or oxidized surfaces must be washed with **AWC Cleaning Concentrate (ACC)** or equal, and thoroughly power rinsed with clean, fresh water prior to application of WALLMATE **ACC** is a biodegradable cleaner formulated with penetrates from wetting agents and surfactants. It is non-toxic, non-polluting and will not harm ground vegetation, septic tanks or sewer systems. **ACC** should be diluted at a 10 to 1 ratio with water. The diluted cleaning solution is then applied to the substrate at 150 to 200 sq. ft. per 5ltrs and allowed to stand for a minimum of 15 minutes. The cleaning solution is then rinsed from the surface with water under high pressure utilizing either airless spray or pressure washing equipment. A sample application of **WALLMATE** should then be applied to test for adhesion. If test indicates poor or marginal adhesion, surfaces shall be primed with AWC's **Primer 80. Primer 80** is a resinous acrylic designed to lock down residual chalkiness on sound, previously painted surfaces. Any existing painted surfaces that are not tightly adhered must be removed by sandblasting, water blasting or other mechanical means.

CONCRETE REPAIRS

SPALLED OR DELAMINATED CONCRETE:
All delaminated and/or spelled areas in the concrete shall be repaired prior to the application of **WALLMATE**. Locations of delaminated concrete shall be determined in the field by tapping the concrete with a sounding rod or hammer.

Remove all unsound concrete with electric or pneumatic chipping hammers or with hand tools as required. Size of hammers shall be such so as not to damage sound concrete adjacent to repair area. Care shall be taken to avoid damage to embedded steel reinforcement. Sandblast all exposed embedded reinforcement to remove corrosion and old concrete, replacing reinforcement as required. Sandblast the cavity and the immediate surrounding concrete area to remove laitance, dirt, grease, chalk, curing compounds, paint and other contaminants. Blow the cavity clean with compressed air to ensure that all loose particles have been removed. Thoroughly coat all areas of exposed steel reinforcement with a two component epoxy resin.

Fill cavities using AWC'S **Uni-Crete** or other high quality polymer-modified cement mix. After predampening cavity surface with clean water, latex modified Portland cement mortar shall be scrubbed into the surface. Immediately following, latex-modified Portland cement concrete patching mix shall be worked into the cavity and compacted adequately to ensure that no voids remain in the patch.

Patch thickness shall be a maximum of 1½" (3.8 cm) and a minimum of 1/8" (3 mm). Finished surface of patches shall be flush with and shall match texture of existing surface. For major repairs involving deterioration greater than 2" (5 cm) in depth, and/or severe corrosion of the reinforcement, consult a structural engineer for repair procedure.

CONCRETE CRACK REPAIRS: All cracks larger than hairline shall be considered as "moving", and shall be routed and sealed. Mark all cracks with chalk to provide visibility of the crack during routing. Rout out full length of crack to form a ¼" (6 mm) wide by ¼" (6 mm) deep

joint centered on the crack. Thoroughly blow out the joint with compressed air or flush the joint with clean water to remove all grinding dust. Routed surface must be clean, sound and square.

Remove all failed caulking material previously applied over cracks and clean thoroughly. Remove any existing paint as required to provide a clean, sound concrete surface prior to repairing cracks. Apply bond breaker along entire length at the bottom of the joint, taking care to avoid applying bond breaker to the sides of the joint. Fill the full length and depth of the joint with a high quality acrylic or single package urethane sealant. Tool the sealant as recommended by the Manufacturer to ensure bonding, consolidation and uniform appearance. The sealant must be completely cured prior to application of the **WALLMATE**.

APPLICATION

WALLMATE may be applied by roller as well as conventional or airless spray equipment. A brush or pad may also be used for touch-up and edging work, or for small areas unsuitable for spray application. Airless spray and rolling are the most effective methods for obtaining uniform film build.

WALLMATE is a single component material available in 20 Kg Pack. Upon extended storage, the product will settle into a two-stage suspension. It is necessary to thoroughly mix all **WALLMATE** containers prior to application. Use a slow speed mixer capable of mixing the entire contents.

WALLMATE has a rich thixotropic consistency. The addition of water reduces this thixotropic nature and decreases the ability to achieve heavy film builds with good vertical hold. The material is easily pumped and sprayed without thinning, provided equipment is in good working condition, and coating is properly mixed and maintained at a maximum temperature of (30°C).

All surfaces should be sprayed with multi-directional spray passes to assure positive coverage. On applications requiring two or more coats, subsequent coats shall be applied in a direction perpendicular to the previous coat after it has dried. All surfaces must be uniformly coated and free from voids, pinholes or blisters.

The theoretical thickness given for coverage is based on smooth, non-porous surfaces. Actual gallons required to achieve the minimum dry film thickness will depend upon the surface texture, method of application and weather conditions. It is the responsibility of the Applicator to apply sufficient material to achieve the minimum dry thickness required.

WALLMATE applied at the rate of one Kg per 20 sq. ft. will theoretical yield (124 dry microns). For issuance of a 7-year waterproofing warranty, AWC requires two coats of **WALLMATE** applied at a nominal thickness of (254 dry microns) at any location after curing. Coverage rates can be used as a guide in figuring material requirements for 5 and 10 year warranties:

TABLE III

Substrate	Per Kg/20 sq. ft. for 7-yr.	
Concrete (smooth)	1.5 Kg(20 Sft)	
Plastered Surface over Bricks	1Kg(20 Sft)	
Texture Surface over Plastered surface	1.5 Kg(20 Sft)	
Ruff Cast Finish	2.5 Kg(20 Sft)	

APPLICATION (Continued)

As work proceeds, the Applicator must periodically check the number of gallons used and compare to square feet coated. If adequate gallon age has not been used, adjust accordingly and apply additional material to previously coated areas. Allow 15 to 30% more material for structures with grooved design or recessed mortar joints.

WALLMATE shall not be applied when one or more of the following conditions exist:
1. If ambient and/or surface temperatures are below 7°C or above (45°C)
2. If relative humidity is in excess of 95%.
3. Threat of rain or freezing temperatures within 4 hours of application.
4. The dew point is less than 3°C above the surface temperature.

In addition, caution must be exercised when applying **WALLMATE** in dark colors under high heat conditions. Surfaces exposed to direct sunlight should be coated with thin passes during the morning or late afternoon hours. Application of dark colors under extreme direct sunlight can cause blistering and/or excessive cellular structure within the cured coating film.

WALLMATE has been applied over a wide variety of substrates, utilizing many different brands, types and sizes of conventional and airless spray equipment. Airless equipment is best for field application, with a minimum of ¾ GPM (2.8 l/minute) and reversible .021" to .031" (.5 to .8 mm) tip.

Larger equipment will always increase production capabilities.

AWC recommends that a sample area be applied by the Contractor using the desired **WALLMATE** color and texture, and approval be obtained prior to any general application of the material. This will help determine proper coverage rate and application technique. Final appearance will be affected by surface texture and porosity, as well as application technique.

WALLMATE is also available in a light texture finish. AWC also has the ability to match a wide variety of custom textures. When utilizing a textured finish, it is recommended that a minimum of two coats be applied, with the first being non-textured, or smooth **WALLMATE**. This will provide a monolithic, waterproof membrane underneath the textured topcoat(s).

Use water and **AWC Cleaning Concentrate** or equal to thoroughly flush equipment. Purge the water from the system using Mineral Spirits or Cello solve solvent. Leave the solvent in the lines and equipment until next use.

WALLMATE BASECOAT

WALLMATE is also available in a lower cost, **Basecoat** formulation, which can be used for up to ½ of the required total dry film thickness requirement on applications requiring a more economical system. **WALLMATE Basecoat** exhibits excellent adhesion and elongation qualities over concrete, masonry and wood substrates. It does not, however, possess the UV and weather resistance of standard **WALLMATE**, which must be used as the final coat on any applications utilizing **WALLMATE Basecoat**.

APPLICATION TIPS

Whenever **WALLMATE** is ordered, every effort is made to supply the coating from a single batch. However, due to fluctuations in inventory levels, there are occasions when different batch numbers of the same color are sent to complete an order. Whenever this occurs, it is the sole responsibility of the Applicator to make certain that only one batch number is used on any one side of the building. Different batch numbers cannot be used on the same wall unless they are "boxed" or mixed together to ensure total color uniformity.
Partially full containers of **WALLMATE** may surface skin under hot conditions. Examine before mixing and remove skin (if present). To prevent skinning during application in hot weather or in partially full containers, pour a thin layer of water on surface after mixing.

While **WALLMATE** has excellent vertical hold, it is virtually impossible to apply more than ½ Kg per 20 sq. ft. (.2 l/m²) per coat unless utilizing airless or conventional spray equipment. Therefore, additional coats must be factored in to achieve the required dry film thickness when utilizing roller or brush application.

LIMITATIONS & PRECAUTIONS

WALLMATE should generally not be used over cold storage tanks or buildings where a vapor barrier coating is required. **WALLMATE** shall not be used for interior applications in place of a thermal barrier.

WALLMATE will freeze and become unusable at temperatures below 32°F (0°C). Do not ship or store unless protection from freezing is available.

WALLMATE requires complete evaporation of water to cure. Cool temperatures and high humidity retard cure. Do not apply if weather conditions will not permit complete cure before rain, dew or freezing temperatures occur. Do not apply in the late afternoon if heavy moisture condensation can appear during the night.

Do not apply **WALLMATE** at temperatures below 45°F (7°C), or when there is a possibility of temperatures falling below 32°F (0°C) within a 4 hour period after application.

For additional information, refer to OSHA guidelines and **WALLMATE** Material Safety Data Sheet.

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