

# GUARDIAN

## AIR AND MOISTURE BARRIER

### Technical Data & Application Instructions

#### PRODUCT DESCRIPTION

GUARDIAN is a fluid-applied, 100% acrylic elastomer designed to waterproof exterior vertical surfaces. It possesses outstanding adhesion to a wide variety of substrates. GUARDIAN 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.

#### BASIC USES

GUARDIAN has been developed to bond tenaciously to wood, stucco, concrete and gypsum substrates, forming a tenacious barrier against moisture intrusion. GUARDIAN, while impervious to moisture, is vapor permeable, thus allowing moisture vapor from within to "breathe" through the outside of the wall. GUARDIAN is also used as a waterproof barrier over Wall-Bond 70 or 90, prior to topcoating with Uni-Tex Finish.

#### ADVANTAGES

- **Single Component:** GUARDIAN is a ready-to-use material requiring no catalyzation. It has no pot life problems.
- **No Solvents:** GUARDIAN is a water-based elastomeric emulsion conforming to all VOC and air pollution standards.
- **High Resin Content:** GUARDIAN contains a higher ratio of acrylic resin to filler pigments than other coatings.
- **Uniform High Film Build:** GUARDIAN'S thixotropic consistency gives it excellent vertical hold, allowing full application in one or two coats.
- **Elastomeric:** Permanent and non-aging, GUARDIAN moves with the building to bridge hairline cracks that may develop.

#### EQUIPMENT REQUIREMENTS

Airless equipment is best for field application, with the following recommended minimums:

**Pump:** ¾ GPM (3 l/m) minimum output capacity.

**Gun:** Any airless hand gun compatible with pump used.

**Screen Size:** 30 mesh or larger.

**Tip:** A reversible, self-cleaning tip with orifice size of .021" to .031" (.5 to .8 mm) and 40° to 60° fan.

#### TYPICAL PROPERTIES TABLE I

Property	Value	Method
Solids by Weight	68% (±2)	ASTM D 2369
Solids by Volume	55%* (±2)	ASTM D 2697
Tensile Strength	150 psi (±25) @ 75°F 400 psi (±25) @ 0°F	ASTM D 412
Elongation	300 (±50) @ 75°F 400 (±50) @ 0°F	ASTM D 412
Hardness	60-70 Shore A	ASTM D 2240
Permeance	7.7 perms at 15 mils	ASTM E 96
Dry Time @ 75°F, 50% R.H.	1½ hrs @ 20 wet mils	ASTM D 1640
Low & High Service Temperature Limits	-30°F to 200°F (-34°C to 93°C)	

#### APPLICATION

GUARDIAN may be applied by roller as well as airless spray equipment. Airless spray the most effective method for obtaining uniform film build.

GUARDIAN is a single component material available in 5-gallon pails (19 liters) and 55-gallon drums (209 liters). Upon extended storage, the product will settle into a two-stage suspension. It is necessary to thoroughly mix all GUARDIAN containers prior to application. Use a slow speed mixer capable of mixing the entire contents.

GUARDIAN 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 minimum temperature of 60°F (16°C).

The theoretical thickness given for coverage is based on smooth, non-porous surfaces. It is the responsibility of the applicator to apply sufficient material to achieve the minimum dry thickness required. GUARDIAN applied at the rate of one gallon per 100 sq. ft. (.4 l/m<sup>2</sup>) will theoretical yield 8.8 dry mils (224 dry microns).

While GUARDIAN has excellent vertical hold, it is virtually impossible to apply more than ½ gallon per 100 sq. ft. (.2 l/m<sup>2</sup>) per coat unless utilizing airless or conventional spray equipment. Therefore, additional coats must be figured in to achieve the required dry film thickness when utilizing roller or brush application.

## APPLICATION (Continued)

Plywood, Exterior Gypsum, and Dense-Glass® Gold substrates require a uniform 14 wet mil application (approximately 100 sq. ft. per gallon/.4 l/m<sup>2</sup>). OSB (Oriented Strand Board) requires two separate coats of **GUARDIAN**. As a waterproof upgrade over **Wall-Bond 70** or **90**, apply **GUARDIAN** at the rate of 150 sq. ft. per gallon (.3 l/m<sup>2</sup>) to achieve 11 wet mils (279 microns). For application over cracked stucco, contact UNITED COATINGS' Technical Service Department for mil thickness necessary to meet warranty requirements.

**GUARDIAN** shall not be applied when one or more of the following conditions exist:

1. If ambient and/or surface temperatures are below 40°F (4°C).
2. If relative humidity is in excess of 95%.
3. If there is a threat of rain or freezing temperatures within 4 hours of application.
4. If the dew point is less than 5°F (3°C) above the surface temperature.

## SURFACE PREPARATION:

Surfaces must be clean and sound. All joints, corners, and rough openings must first be treated with **GUARDIAN JOINT SEALANT** and **Detail Mesh**. Cracks in stucco larger than hairline must first be filled with a polyurethane sealant.

## PERFORMANCE PROPERTIES TABLE II

Property	Test Procedure	Value
<b>Accelerated Weathering– Ultraviolet (U.V.) Resistance</b>	Atlas Carbon Arc Weather-Ometer Type EH - Continuous UV and water spray cycling at elevated temperature. ASTM D 822, ASTM G 23	<b>After 2,000 hours of continuous exposure GUARDIAN showed no deleterious effects, no surface checking, cracking or delamination.</b>
<b>Resistance to Wind Driven Rain</b>	Pressurized test chamber producing 5” (12.7 cm) of water pressure, equivalent to 100 mph wind pressure (161 km/hr). Federal Spec. TTC-555B	<b>During 40 hours of continuous testing, no apparent moisture penetrated the GUARDIAN sample.</b>
<b>Resistance to Salt Spray</b>	Harshaw Salt Spray Cabinet (5% sodium chloride fog solution). ASTM B 117	<b>After 500 hours of continuous exposure GUARDIAN showed no deleterious effects, no surface checking, cracking or delamination.</b>
<b>Resistance to Mildew</b>	Five different fungus cultures grown on potato dextrose agar in an 86°F (30°C) incubator. ASTM G 21	<b>After 14 days, all GUARDIAN samples showed zero fungus growth.</b>
<b>Low Temperature Flexibility</b>	Federal Test Method No. 141a-6221, utilizing Gardener Mandrel set at cryogenic temperatures.	<b>GUARDIAN has the ability to withstand multiple 180° bends over a 1/8” mandrel at -30°F (-34°C).</b>
<b>Elongation After Aging</b>	Atlas Carbon Arc Weather-Ometer Type EH (ASTM D 822, ASTM G 23) and Instron Universal Testing Instrument.	ASTM D 412 <b>After 2,000 hours exposure in the Weather-Ometer, GUARDIAN retained 95% of its elastomeric properties.</b>
<b>Low/High Temperature Stability</b>	Aged films tested in accordance with ASTM D 822 in thermostatically controlled heat chamber and freezer.	<b>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.</b>
<b>Adhesion</b>	Pull Test: EPS over <b>GUARDIAN</b> coated plywood using <b>Insulbond</b> .	<b>EPS breaks cohesively at 6.1 psi or 878 psf. Adhesion of the Insulbond to the GUARDIAN, and GUARDIAN to the plywood remained firm.</b>



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