

PRODUCT DATA

9 09 97 23 **Elastomeric Coatings**

THOROLASTIC® A+

Algae-resistant, water-based smooth 100% acrylic elastomeric waterproof coating

Description

Thorolastic® A+ is an algae-resistant, high-build, water-based, elastomeric, 100% acrylic, waterproof coating. Its resistance to algae growth makes it appropriate for humid environments.

Yield

50 – 100 ft²/gallon (1.2 – 2.4 m²/L) per coat, depending on substrate porosity and texture.

Theoretical film thicknesses are listed on page 3.

Packaging

5 gallon (18.9 L) pails

Color

Thorolastic® A+ is available in 4 bases (pastel, medium, ultra, and neutral) and 48 standard colors through the Elements color program. Color formulations are available through the electronic Thoro® Tint Manual. Custom colors are available upon request. For further information, please consult your local Thoro® distributor or representative.

Texture

Smooth

Shelf Life

1 year when properly stored.

Storage

Store in a clean, dry place away from direct sunlight until ready for use. Keep from freezing temperatures.

Features

- Algae resistant
- Over 300% ultimate elongation
- 98% elongation recovery
- Flexibility at very low temperatures
- Internally plasticized
- Resistant to wind-driven rain
- Breathable
- Carbon-dioxide diffusion barrier
- Excellent color retention and UV resistance
- Recoatable
- VOC compliant

Benefits

- Resists algae growth on the coating; suitable for humid conditions
- Bridges dynamic cracks
- Offers durable performance
- Suitable for all climates
- Retains flexibility for durable service
- Helps prevent water penetration into the substrate
- Allows water vapor to escape from the structure; prevents peeling and blistering
- Protects embedded steel from corrosion
- Long-term durability; resists color fading
- Easy and cost-efficient to maintain
- Environmentally friendly

Where to Use

APPLICATION

- For protecting and decorating

LOCATION

- Vertical
- Exterior
- Above grade

SUBSTRATE

- Stucco
- Concrete structures
- Portland cement plaster
- Brick and concrete masonry units (CMU)
- EIFS

How to Apply

Surface Preparation

1. Surface should be clean and sound. Concrete substrates should have a minimum 28 day cure and be free of all bond-inhibiting contaminants.

2. High-pressure water blast (or abrasive blast on hard, dense surfaces) surface to medium grit sandpaper texture (reference ICRI guide 03732 SP 3).
3. Repair any holes, spalled and damaged concrete with appropriate BASF Construction Chemicals repair materials. Remove any protruding concrete accessories and smooth out any irregularities.
4. Some stains may require chemical removal. Be sure to neutralize the compounds and rinse with clean water.
5. Remove any blisters or delaminated areas and sand edges to smooth rough areas and provide transition to old paint areas.
6. Check adhesion of old paint using ASTM D 3359, measuring adhesion by Tape Method A.
7. Treat cracks greater than 1/32" with (Thorolastic) Knife Grade or Brush Grade patching compound. Treat cracks larger than 1/4" as expansion joints and fill with appropriate BASF Construction Chemicals sealant.



Technical Data

Composition

Thorolastic® A+ contains water, acrylic emulsion, fillers, and other proprietary ingredients.

Test Data

PROPERTY	RESULTS	TEST METHODS
Density , lbs/gal (kg/L)	11.2 – 12.2 (1.34 – 1.46)	ASTM D 1475
Solids* , %		ASTM D 5201
By weight	64.2	
By volume	50	
Viscosity , KU	127 – 135	ASTM D 562 (Stormer)
VOC content , lbs/gal (g/L)	0.32 – 0.42 (38 – 50)	ASTM D 3960

* Value for white.

THOROLASTIC® A+ APPLIED AT 16 MILS DFT

PROPERTY	RESULTS	TEST METHODS
Anti-algae resistance	Passed	Singapore Test, SS 345: 1990
Ultimate elongation , %	344	ASTM D 412
Elongation recovery , %		ASTM D 412
After 10 minutes	96.9	
After 24 hours	98.4	
Ultimate tensile strength , psi (MPa)	220 (1.5)	ASTM D 412
Crack bridging , mils (mm)		PR EN 1062-7
-77° F (-60° C)	12 (0.3)	
32° F (0° C)	19.5 (0.5)	
73° F (23° C)	27.5 (0.7)	
Flexibility , in (mm) mandrel, at -30° F (-34° C)	1/8 (3)	ASTM D 522
Pull-off strength adhesion , psi (MPa)	210 (1.4)	ASTM D 4541
Wind-driven rain	Passes	TT-C-555B
Water-vapor permeance , perms	10	ASTM D 1653
Carbon-dioxide diffusion , R (equivalent air-layer thickness), ft (m)	263 (80)	PR EN 1062-6
Sc (equivalent concrete thickness) in (cm)	8 (20)	
Accelerated weathering , 5,000 hrs	Passes	ASTM G 23, Type D
Freeze/thaw resistance , 60 cycles	Passes	ASTM C 67
Salt spray resistance , 300 hrs	Passes	ASTM B 117
Mildew resistance	No growth	ASTM D 3273 / 3274

Test results are averages obtained under laboratory conditions. Reasonable variations can be expected.

Theoretical Film Thicknesses

COVERAGE RATE FT ² /GAL (M ² /L)	SMOOTH		FINE		COARSE	
	WET MILS (MICRONS)	DRY MILS (MICRONS)	WET MILS (MICRONS)	DRY MILS (MICRONS)	WET MILS (MICRONS)	DRY MILS (MICRONS)
50 (4.6)	32 (813)	16 (406)	32 (813)	18 (457)	32 (813)	19 (483)
80 (7.4)	20 (508)	10 (254)	20 (508)	11 (279)	20 (508)	12 (305)
100 (9.3)	16 (406)	8 (203)	16 (406)	9 (229)	16 (406)	9 (229)

Actual DFT to achieve the stated performance properties is 16 mils.

CONCRETE

1. New concrete must be cured a minimum of 28 days before application.
2. In addition to removing laitance and all contaminants, remove all form-release agents or previously applied sealers.
3. Remove all form tie wires and repair holes, small voids, and spalls using the appropriate repair product.
4. Abrasive blast very slick, dense concrete surfaces or prime with Thoro[®] CM Primer (see Form No. 1019088).
5. To check for proper adhesion, a test area is recommended.

BRICK AND CONCRETE MASONRY UNITS (CMU)

1. All new CMU should be laid true and fully cured to full load-bearing capacity.
2. Remove all mortar splatter and excess mortar before coating application.
3. Repoint or fill all voids with the appropriate Thoro[®] patching product.
4. New CMU must have a base coat of Thoro[®] Block Filler (see Form No. 1019087) or Thoro[®] Intermix.

PLASTER AND STUCCO

1. Clean the surface and remove all debonded or delaminated plaster or stucco and repair with Thoroseal[®] Plaster Mix (see Form No. 1019908) modified with Acryl 60[®] (see Form No. 1019073).
2. Allow new plaster or stucco to cure a minimum of 14 days at 70° F (21° C) and 50% relative humidity or until the pH level has reached 10. Allow longer cure times if temperatures are lower or relative humidity is higher.
3. After cleaning and profiling, prime chalky surfaces with Thoro[®] Primer 2K (see Form No. 1019090) and allow primer to dry.

EXTERIOR INSULATION AND FINISH SYSTEMS (EIFS)

1. Refasten or re-adhere any delaminated or loose expanded polystyrene (EPS) insulation following manufacturer's approved methods.
2. Replace or patch any missing or damaged EPS to its original condition.
3. Finish with a trowel acrylic finish to match and blend with the existing texture.
4. Allow repaired areas to fully cure.
5. Refer to the EIFS manufacturer's product data sheets for appropriate repair and other procedures.

EXISTING ACRYLIC COATINGS

1. Sand or grind the edges of any remaining coating to ensure adhesion and a smooth transition with the new material. Sand the edges of the area to a featheredge.
2. Wash down and allow to completely dry.
3. Chalky surfaces should be primed with Thoro[®] Primer 2K.

CRACK PREPARATION AND PRETREATMENT

1. Locate and identify all cracks.
2. For cracks larger than 1/32" (0.8 mm) and up to 1/16" (1.6 mm), use Thorolastic[®] Brush Grade, an acrylic crack filler (see Form No. 1019033).
3. For cracks larger than 1/16 by 1/16" (1.6 by 1.6 mm) but less than 1/4 by 1/4" (6 by 6 mm), use Thorolastic[®] Knife Grade, an acrylic crack filler (see Form No. 1019033).
4. If using a product other than Thorolastic[®] Knife Grade or Brush Grade, always apply a test application in a low visibility area to ensure compatibility with the patching products.
5. For moving cracks larger than 1/4 by 1/4" (6 by 6 mm), use an internally plasticized polyurethane sealant. Consult with the sealant manufacturer to ensure compatibility.
6. Always apply a test application to an inconspicuous location to ensure compatibility and aesthetic approval.

Mixing

1. Mechanically mix Thorolastic[®] A+ at slow speed with a drill and mixing paddle to ensure uniform color and aggregate disbursement, and to minimize air entrapment.
2. In multi-pail applications, mix the contents of each new pail into the partially used pail to ensure color consistency and smooth transitions from pail to pail.

Application

1. Pretreat all cracks as detailed in the crack preparation section.
2. Apply Thorolastic[®] A+ in 2 coats by brush, spray, roller, or spray-and-backroll.
3. Apply Thorolastic[®] in 2 coats to achieve a total dry-film thickness (DFT) of 16 – 20 mils.
4. Proper wet-film thickness (WFT) must be maintained during application to ensure the performance characteristics desired (see coverage rates section).
5. Always work to a natural break and maintain a wet edge during application.
6. The objective is to obtain a pinhole-free consistent film build on all treated surfaces.

ROLLER

1. Use a quality 3/4 – 1-1/4" (19 – 32 mm) nap roller cover (lamb's wool preferred).
2. Completely saturate the roller and keep it loaded with the coating to build the required mils. Never dry roll.
3. Roll the coating in a consistent fanlike pattern to achieve uniform mil thickness.
4. Cross roll to achieve uniform thickness and maintain a wet edge. Backroll in one direction as stroke variations may result in uneven color and texture.

BRUSH

1. Application by brush is recommended only for small inaccessible areas, e.g., on touch-ups.
2. Use a nylon brush only.

SPRAY

1. Large airless equipment is required. Contact Technical Service for recommendations.
2. Backrolling after spray application is recommended.

Drying Time

1. Drying time to touch is 6 hours at 70° F (21° C) and 50% relative humidity when applied at 18 – 20 mils
2. Recoat in a minimum of 12 – 24 hours.
3. Thorolastic® A+ requires ultraviolet (UV) light to cure.
4. Drying time will be significantly extended in cool or damp weather.
5. Protect the freshly applied Thorolastic® A+ coating from rain and condensation for a minimum of 24 hours.

Clean Up

Clean all tools and equipment with soap and water immediately after use. Clean any splatters or spills with water before material dries. Once dried, Thorolastic® A+ will be difficult to remove and may require mechanical removal.

For Best Performance

- Protect all plants and vegetation from overspray.
- Do not use on interior applications, undersides of balconies, soffits, below-grade applications, or for immersion service.
- Protect product from freezing.
- Do not apply to frozen or frost-covered surfaces or at temperatures (substrate or ambient) at or below 40° F (4° C) or when temperatures are expected to drop below 40° F (4° C) within 24 hours after application.
- Do not apply if rain is expected within 24 hours of application.
- Do not use where there may be hydrostatic water transfer from the backside of the substrate.
- Do not apply to improperly sealed substrates that are subject to rising dampness or migrating moisture.
- Do not apply Thorolastic® A+ to sloped (less than 60°) or horizontal surfaces.
- Application of nonelastomeric topcoats could reduce the performance properties of Thorolastic® A+.
- Apply a 4 by 4 ft (1.2 by 1.2 m) test area to verify acceptable color, texture, and adhesion before proceeding with any project. The test method for measuring adhesion is ASTM D 3359, Measuring Adhesion by Tape, Method A. On the 0 – 5 scale, a minimum adhesion rating of 4A is required.
- Make certain the most current versions of product data sheet and MSDS are being used; call Customer Service (1-800-433-9517) to verify the most current version.
- Proper application is the responsibility of the user. Field visits by BASF personnel are for the purpose of making technical recommendations only and not for supervising or providing quality control on the jobsite.

Health and Safety

THOROLASTIC® A+

Caution

Thorolastic® A+ contains ethylene glycol, zinc oxide and crystalline quartz silica.

Risks

May cause skin, eye or respiratory irritation. Ingestion may cause irritation. Repeated ingestion may cause kidney damage.

Precautions

KEEP OUT OF THE REACH OF CHILDREN. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Keep container closed when not in use. DO NOT take internally. Use only with adequate ventilation. Use impervious gloves, eye protection and if the TLV is exceeded or used in a poorly ventilated area, use NIOSH/ MSHA approved respiratory protection in accordance with applicable federal, state and local regulations.

First Aid

In case of eye contact, flush thoroughly with water for at least 15 minutes. In case of skin contact, wash affected areas with soap and water. If irritation persists, SEEK MEDICAL ATTENTION. Remove and wash contaminated clothing. If inhalation causes physical discomfort, remove to fresh air. If discomfort persists or any breathing difficulty occurs or if swallowed, SEEK IMMEDIATE MEDICAL ATTENTION. Refer to Material Safety Data Sheet (MSDS) for further information.

Proposition 65

This product contains material listed by the state of California as known to cause cancer, birth defects, or other reproductive harm.

VOC Content

0.32 – 0.63 lbs/gal or 38 – 75 g/L, less water and exempt solvents

**For medical emergencies only,
call ChemTrec (1-800-424-9300).**

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