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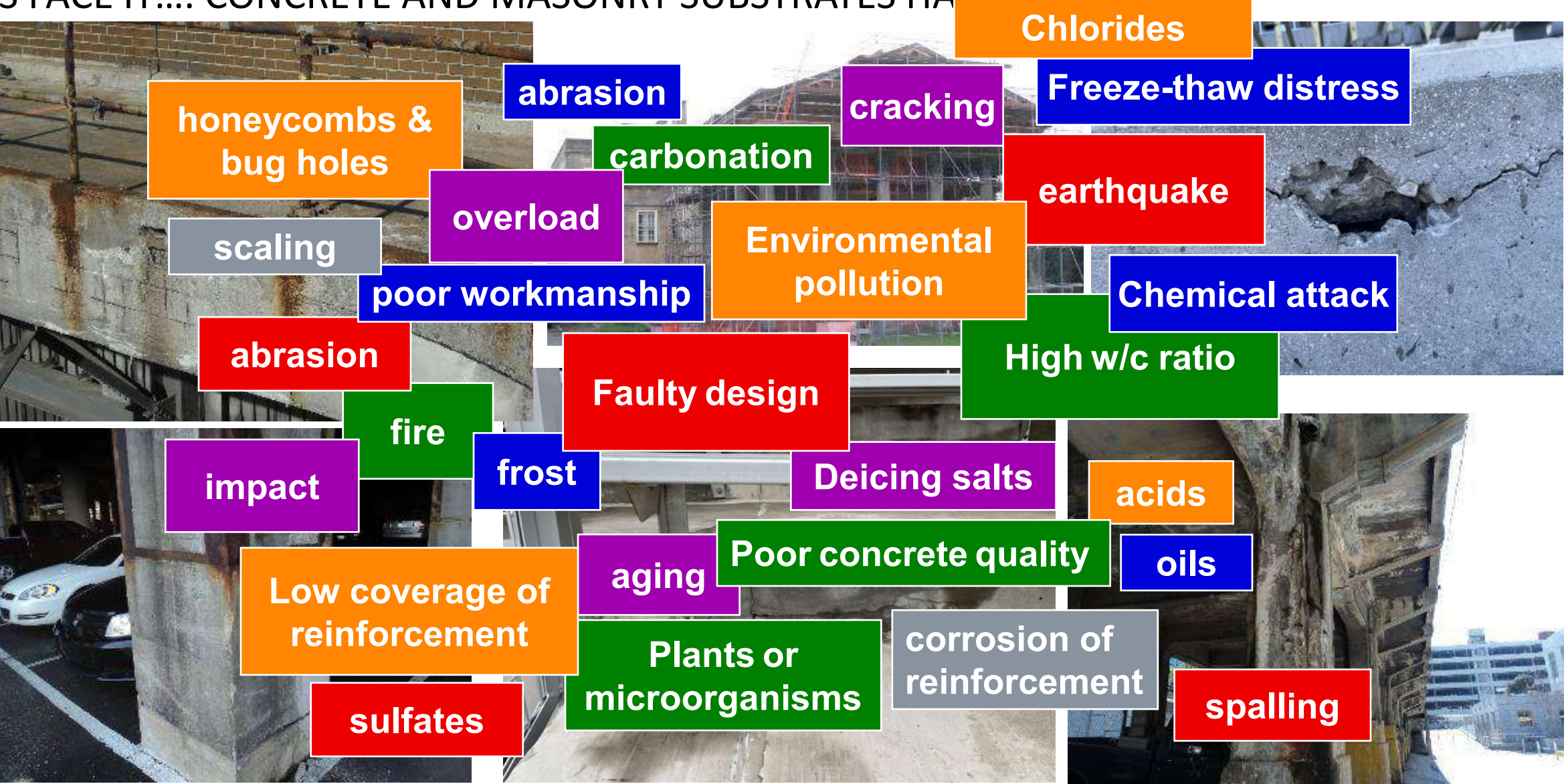
BUTTERFIELD 
COLOR
Engineered Concrete Performance

 **RMAX** A SIKA COMPANY

BUILDING TRUST



BEYOND THE REPAIR
LET'S FACE IT.... CONCRETE AND MASONRY SUBSTRATES HAS ISSUES



WALL COATINGS WHY NOT PAINT?

Durability Property	Coatings	Paints
Wind driven rain	> 98 mph	< 60 mph
Accelerated weathering	14 years	5 years
Flexibility	Good	Poor
Carbonation protection	Yes	No
Mild chemical attack	Yes	Poor
Mask substrate flaws	Yes	No
Elongation + recovery	Yes	Poor
Wet adhesion promoter	Yes	No
Permeability	Yes	??

Coatings

- Primary function is protection
- Formulated for exterior substrates
- Higher quality polymers
- Generally higher film build materials*

Paints

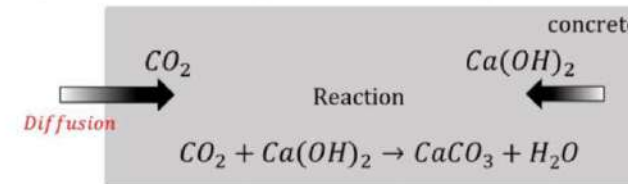
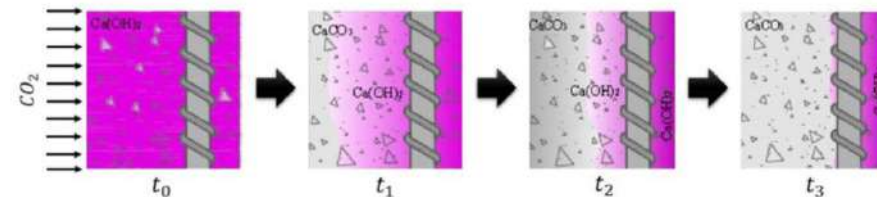
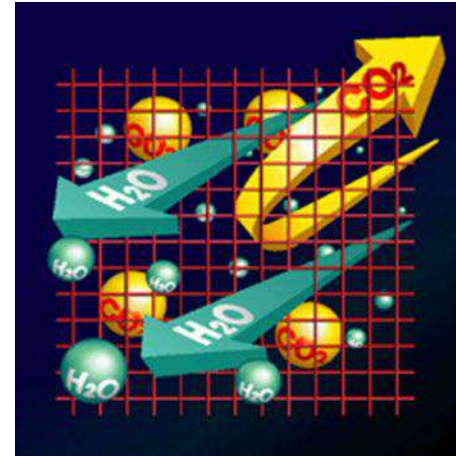
- f* Primary function is aesthetic
- f* Interior and exterior, multi-surface use
- f* Often formulated with resin blends
- f* Generally thinner film build materials



BEYOND THE REPAIR ANTI-CARBONATION

Key concepts

- f* Carbonation of concrete (corrosion):
 - f* Reaction between acidic gasses in atmosphere and the products of cement hydration in concrete
- f* Contributing factors:
 - f* High levels of CO_2
 - f* Moisture
 - f* Presence of calcium hydroxide



Label:

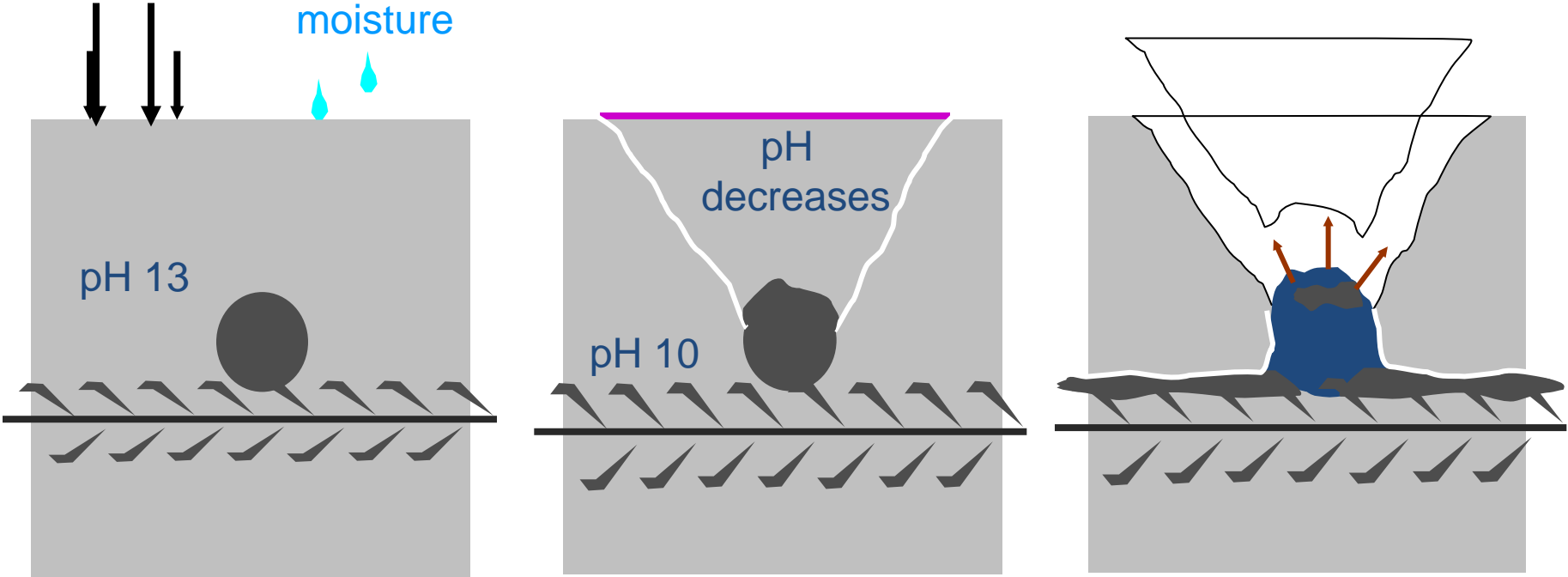
■ Non-carbonated zone ■ Partially carbonated zone ■ Carbonated zone

Diffusion of dilute carbon dioxide in concrete

BEYOND THE REPAIR ANTI-CARBONATION

How carbonation happens

Atmospheric Carbon dioxide



NATURAL IRON ORE CONTAMINATION IN THE CONCRETE MIX: MUST DRILL OUT AND PATCH WITH REPAIR MATERIAL TO RECOAT WITH WALL COATING.



ANTI-CARBONATION EQUIVALENT CONCRETE "COVER"

8-10 mils of a high build coating is equal to 8 inches of concrete

Certificate of Test Page 1 of 3

Title: MasterProtect HB 200LR
Determination of Carbon Dioxide Gas Diffusion

Certificate of Test Number: 23605

Customer's Name & Address:
BASF (USA)
889 Valley Park Drive
Shakopee
Minnesota, 55379
United States

Our Ref: N950/TR0042
VTC Job No: 3TL1 - 1.011.16
Your Ref: PO 4923197733, dated: 01 June 2015
Date: 12 August 2015
Date samples received: 04 June 2015
Samples received from: BASF (USA)
Sample Nos: 149747 B

If unsigned by the tester this is because the tester is site based and therefore unable to sign this Certificate of Test. However, all work has been checked, validated and approved prior to inclusion.

Written by: J Palermo (position: Technician)
Authorised by: S Moxon (position: Head of Operations)

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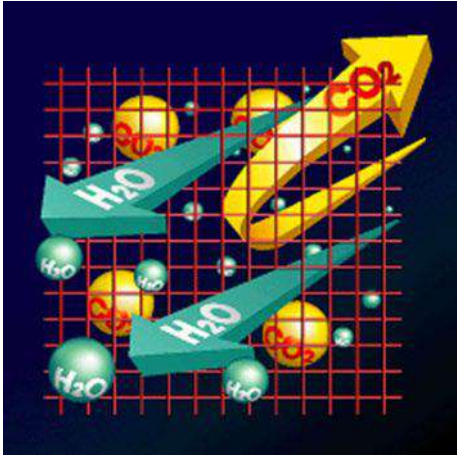
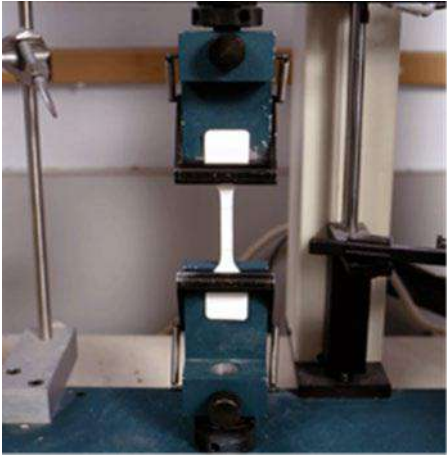
 **TECHNOLOGY CENTRE**



Concrete with inadequate cover can be protected with coatings

WALL COATINGS KEY PERFORMANCE PROPERTIES

- f* Movement
 - f* Flexibility vs. Elongation
- f* Permeability
- f* Anti-Carbonation-Alt. Cover
- f* Solids Content
- f* UV Resistance- Fading Resistance
- f* Dirt Pick Up
- f* Waterproofing- WDR
- f* Fungus/ Mildew Resist
- f* Color/ Texture
- f* Light Reflectance



Read the data sheet!

Test Data

PROPERTY	RESULTS	TEST METHOD
Salt spray (fog) resistance, 300 hrs	Passed	ASTM B 117
Carbon-dioxide diffusion		PR EN 1062-6
R (equivalent air-layer thickness), ft (m)	1,318 (402)	
Sc (equivalent concrete thickness), in (cm)	39 (100)	
Flexibility, 1" mandrel	No cracking	ASTM D 522
Dirt pick-up, % after 6 months exposure	92.02, passed	ASTM D 3719
Sand abrasion resistance, at 3,000 L	Passed	ASTM D 968 Method A
Impact resistance, at 30 in-lbs	Passed	ASTM D 2794
Fungus resistance	No growth Meets requirement	ASTM D 3273
Mildew resistance		Fed Spec. TT-P-29 (Fed. Std. 141, Method 6152 and 6271.1)
Aspergillus oryzae, 7 days	No growth	
Aspergillus niger, 21 days	No growth	
Surface burning characteristics		ASTM E 84
Flame spread	1	
Smoke	4	
Fuel contribution	7	
Flash point, °F (°C)	> 200 (93)	ASTM D 56 Tag Closed Tester

8-10 mils of a high build coating is equal to 8 inches of concrete

WHAT ARE THE COATING OPTIONS?

f HB Elastomeric Coatings

f Best for substrates that may crack (thermally dynamic wall)
Elongation + Recovery

f HB Flexible Coatings

f Best adhesion to substrate,
highest carbonation protection(monolithic walls)



Elastomeric Coatings have lower adhesion properties so they can stretch and recover

WALL COATINGS FLEXIBILITY VS. ELONGATION

Importance: Accommodate thermal movement within substrate

Key concepts

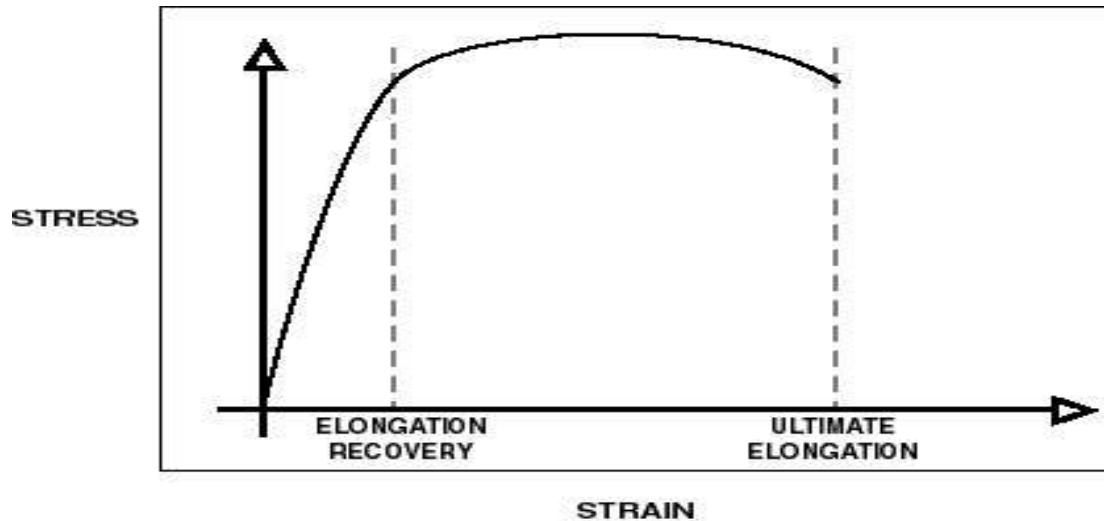
- f* Crack bridging:
 - f* The ability of a coating to bridge existing cracks in a substrate
- f* Contributing factors:
 - f* Ambient temperature
 - f* Coating thickness
 - f* Ultimate elongation %
 - f* Elongation recovery

BEWARE of coatings that report elongation without recovery %

WALL COATINGS

ELONGATION RECOVERY

- f* The elongation recovery (%) governs crack bridging because the ability of sustaining cycles of crack movements over time is linked with the elastic performance of materials.
- f* Ability to stretch and recover= long term performance.



- f* Elongation of less than 300% will not withstand thermal cracking to bridge cracks

WALL COATINGS

FLEXIBLE (NON-ELASTOMERIC) COATINGS

ASTM D-522 (mandrel bend) tests coating film flexibility because the ability of sustaining cycle movements over time is linked with the flexible performance of coatings.

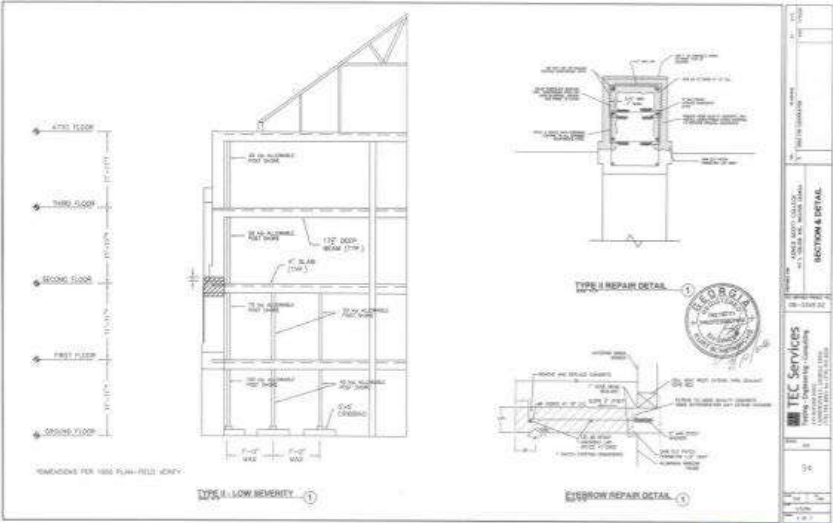
Flexibility of these coatings shows that they can bend and stretch without cracking on monolithic substrates like concrete and masonry.



BEYOND THE REPAIR CONCRETE REPAIR FUNDAMENTALS

- f Determine the problem
- f Evaluate the cause
- f Engineer the appropriate solution
- f Complete the preparation
- f Complete long-term repair
- f **APPLY PROTECTIVE COATING**
 - f Extends life of the repair by actively protecting it
 - f Actively mitigate corrosion at the steel
 - f Prevent future ingress of aggressive chemicals
 - f Enhances aesthetics

Save The Best For Last



The figure and photos above show a typical repair detail and different phases of the repair process.

Agnes Scott College- Decatur, GA

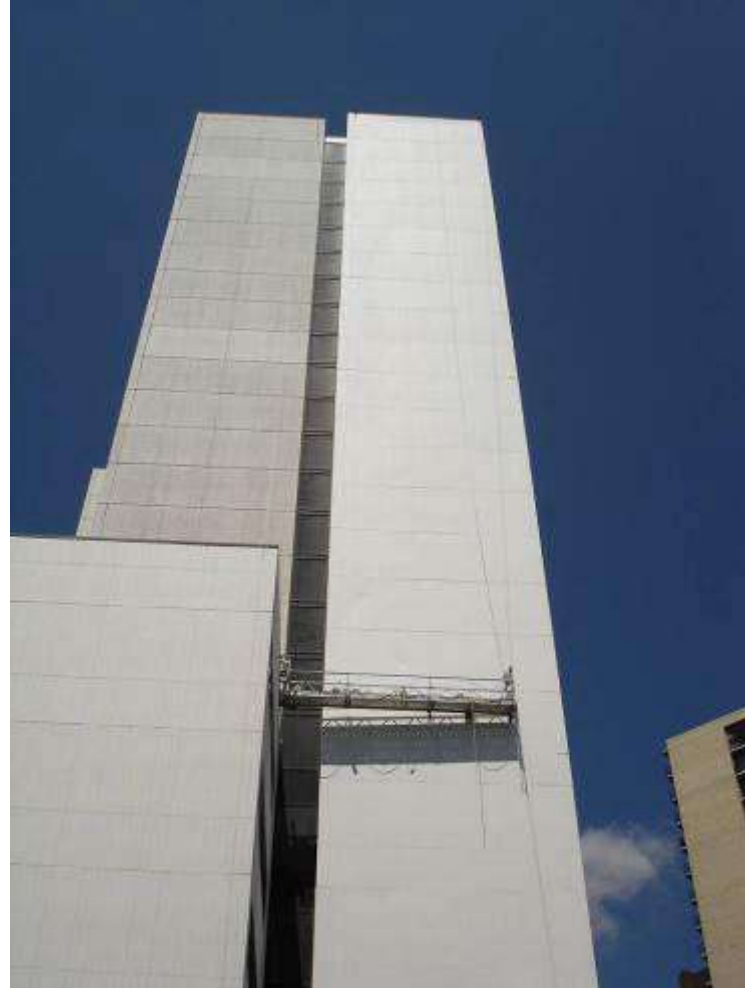
WALL COATINGS TYPES

Categories

- f*Elastomeric
- f*High Build
- f*Rigid
- f*Thin film
- f*Low temperature

Chemistries

- f*Acrylic
- f*Silicone modified
- f*Solvent



WALL COATINGS OPTIONS



f Masking Texture with textured coatings (after two coats)

TOPICS

MATERIAL INSTALLATION



- f* Surface Preparation
- f* Equipment
- f* Installation Methods
- f* Coating Selection

EQUIPMENT REVIEW



DRY SUBSTRATE

SURFACE PREPARATION METHODS

- f* Power Washing Masonry Will Inject Water. Allow For Adequate Dry Time
- f* Surface moisture content of 12% or below



RECOAT GUIDELINES

SURFACE PREPARATION METHODS

ASTM D3359

- » High build coating has been applied and allowed to cure a minimum of 5 days at 50 +degrees
- » Razor utility knife to cut a 2" X through the coating
- » Once you have assured the tape has good adhesion, pull it down and off the wall.
- » Once the tape has been removed you should inspect the area of the X cut. You should only see small chips of the product (less than 1/8"), at the intersection of the X.

Adhesion Testing



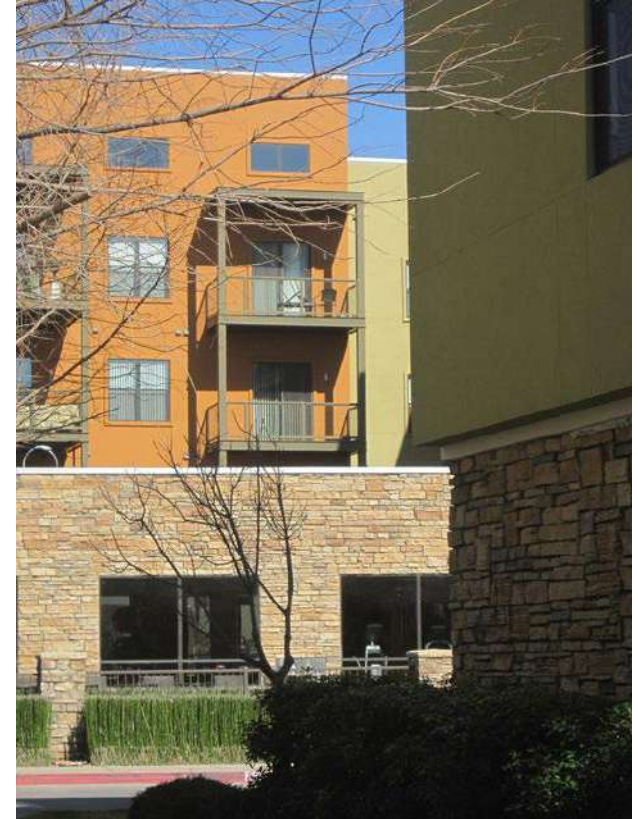


PREPARATION

MATERIAL INSTALLATION

Prepare coating before application:

- f* Mixing coating on the jobsite
- f* Ensure proper drill and mixing paddles
- f* “Box Mix” material
- f* Keep material in protected, covered area
- f* Have proper tools ready to go



BOXING MATERIAL COLOR UNIFORMITY

- » Use an extra five-gallon bucket
- » Continuous box mixing provides color consistency on a job
- » Box mix minimum of 3 trips
- » Distributors use accutinter and plants use the same software
- » **JORSKI tip: Measure off a touch pail and label for specific drop and area on the building.**

EQUIPMENT REVIEW

ROLLER COVERS

- » Roller covers are not all created equal
- » Natural fibers; made from lamb's wool or mohair
- » Synthetic fabric covers; made from nylon or polyester
- » Blended covers; polyester/wool blend
- » Sizes range from 2" to 18"
 - » Most common is 9"
- » Pile depth; thickness of the cover
 - » Smooth foam (metal doors & plaster)
 - » ¼" smooth
 - » 3/8" semi smooth
 - » ½" semi rough
 - » ¾" rough
 - » 1-1 ¼" very rough



EQUIPMENT REVIEW

- » Loose hairs always end up in the wet coating
- » Pre-condition your covers for better use and coverage rates

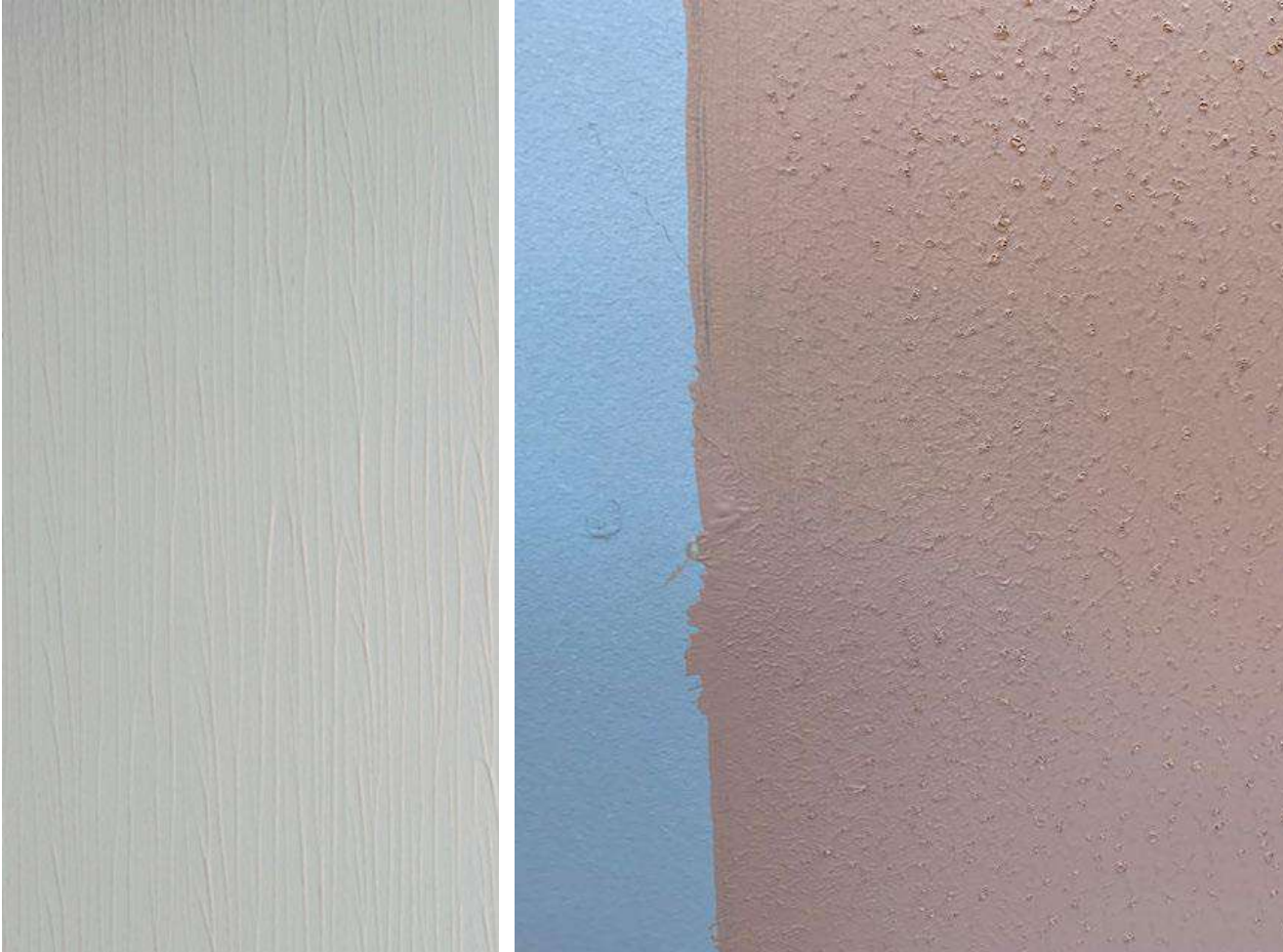
CUT IN AND EDGING

APPLICATION METHODS

- » Cut in – details
- » Load up 2” of the brush to avoid drippage
- » Work down with a slight twist of the wrist
- » Light stipple to integrate in with your roller and back roll
- » **JORSKI tip: light stipple cut in and touch ups to blend in with your roller texture.**

METHODS

MATERIAL INSTALLATION



Roller Stipple

f Textured pattern left in the paint by the roller

Cause

f Use of incorrect nap or low-quality roller cover

f Use of lower grades of paint

f Use of incorrect rolling technique

Solution

f Avoid too long a nap for the paint and substrate

f Pre-dampen roller covers, shake out excess water

f Don't allow paint to build up at roller ends

ROLLER APPLICATION

KEY PERFORMANCE PROPERTIES



JORSKI tip – Only put pressure when rolling the material up the wall. Finish stroke down, do not put excess pressure.

METHODS

MATERIAL INSTALLATION



Wet Edge / Stopping Points

Solution

- f* Pick natural stopping points on the building (i.e., control or expansion joints, feature lines, exterior or interior corners, etc.)

PRIMERS

SURFACE PREPARATION METHODS

Sika Thorocoat 100 Primer (MasterProtect P 100)

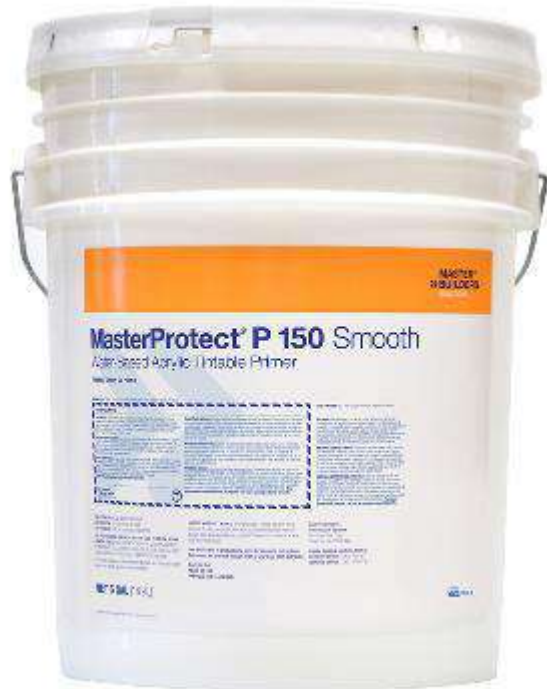


- »» A water-based modified acrylic primer
- »» Consolidates weak, dusting substrates for improve adhesion and durability
- »» 300-375 ft² per gallon
- »» For surfaces that exhibit slight chalking after cleaning
- »» Less than 100 g/L VOC content
- »» Dries to recoat in 2 – 4 hours

PRIMERS

SURFACE PREPARATION METHODS

Sika Thorocoat 150 Primer (MasterProtect P150)



- » A water-based modified acrylic primer
- » Seals substrate to improve adhesion and workability
- » Available in smooth and fine texture
- » Can be tinted for better hide
- » 175-275 sq.ft per gallon depending on substrate
- » Dries to recoat in 2 – 4 hours

PATCHING COMPOUNDS

SURFACE PREPARATION METHODS

Sika Thorocoat 748 (MasterProtect FL748)



- » A 100% acrylic crack bridging material that is compatible with all our high build coatings
- » Fill voids in vertical substrates
- » FL 748: Knife grade smooth
- » Available in 1 gallon and 5 gallon packaging

JORSKI tip-you can put the material in a bulk gun to speed up application.

PATCHING COMPOUNDS

SURFACE PREPARATION METHODS

Sika Thorocoat 748 (MasterProtect FL748)



Installation

- » Cracks up to 1/16”
- » Apply with damp sponge to fill crack
- » Cracks between 1/16 and 1/4”
- » Rout to 1/4” x 1/4”
- » Fill using putty knife and float with trowel to remove
- » Allow to dry a min. 4 hours prior to placing second lift if required
- » Allow to dry a minimum of 12 hours prior to coating

FILLERS

SURFACE PREPARATION METHODS

Sika Thorocoat 749 Block filler (MasterProtect FL749)



- » An acrylic based block filler used to prime and fill porous masonry
- » Apply by roller or airless sprayer
- » 35-100 ft²/gallon
- » Can be applied to damp substrates
- » Moisture resistant; will not degrade in the presence of wet-dry cycles

BLOCK FILLER

SURFACE PREPARATION METHODS: SIKA THOROCCOAT 749 BLOCK FILLER

Installation

- » Brush, Roll or Spray
- » Back Brush or Back Roll
- » Can pre-Dampen
- » Recoat 12-24 hours



TYPES OF COATINGS

Exterior coatings for concrete, masonry, stucco and EIFS



Thin Mil

- » Primary function*: aesthetics
- » Film build: 4-5 DFT
- » Common called “paints”
- » Primary use: recoats
- » Limitations: waterproofing, crack bridging



High Build

- » Primary function: protection
- » Film build: 12-20 DFT
- » Commonly called “coatings”
- » Primary use: weatherproofing
- » Limitations: crack bridging

Elastomeric

- » Primary function: waterproofing
- » Film build: 12-20 DFT
- » Commonly called “elastomeric”
- » Primary use: above grade waterproofing
- » Limitations: bond, soiling

WALL COATING PORTFOLIO-THE “THORO” NAME IS BACK!!!

Thin Mil Coatings

- » Sika Thorocoat 250 (MasterProtect C 250)
- » Sika Thorocoat 350 Aquasol (MasterProtect C 350)



High Build Coatings

- » Sika Thorocoat 100 TW (MasterProtect HB 100)
- » Sika Thorocoat 200 (MasterProtect HB 200)
- » Sika Thorocoat 200 LR (MasterProtect HB 200 LR)
- » Sika Thorocoat 300 Artic (MasterProtect HB 300 SB)
- » Sika Thorocoat 400 (MasterProtect HB 400)

Elastomeric Coatings

- » SikaThorolastic 750 (MasterProtect EL 750)
- » SikaThorolastic 850 (MasterProtect EL 850)
- » Sikagard 570

THIN MIL COATINGS

WALL COATING PORTFOLIO

SikaThorocoat250 (MasterProtect C 250)

- f* Smooth, water-based 100% acrylic
- f* Highly permeable (19 perms)
- f* Ideal for recoats
- f* Cost effective solution

SikaThorocoat350 Aquasol (MasterProtect C 350)

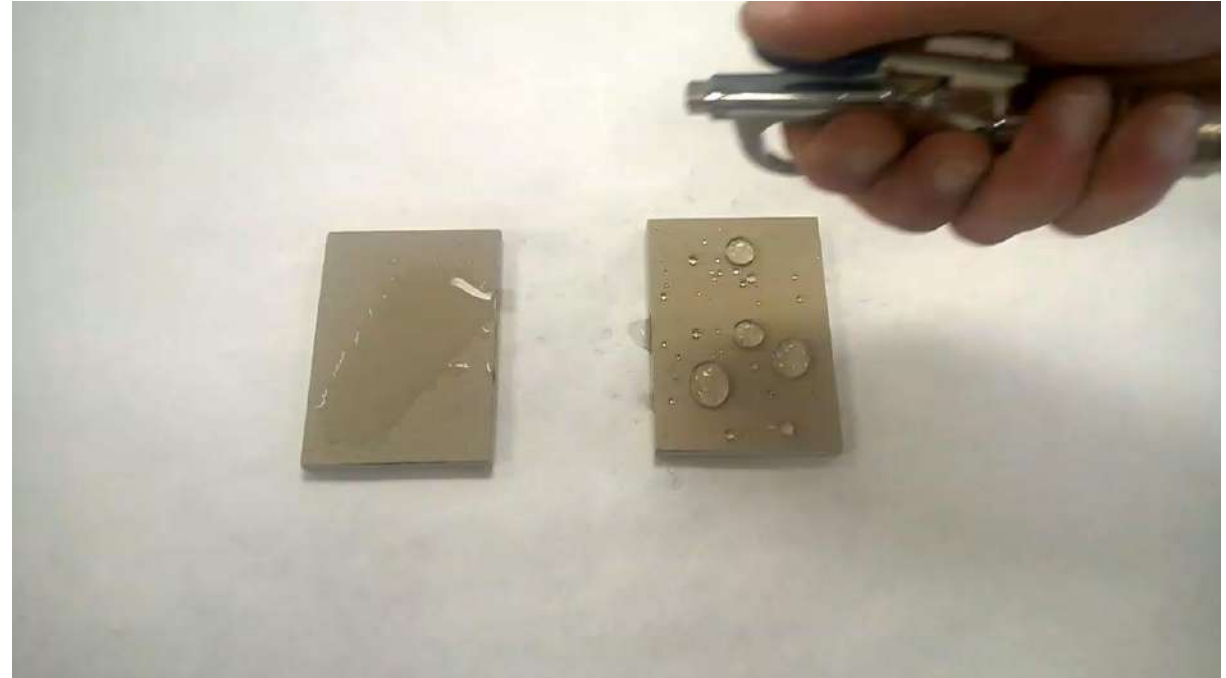
- f* Highly hydrophobic, 100% acrylic
- f* Water repellent, soil resistant
- f* Smooth, matte finish
- f* Added value solution

Commonuses + benefits

- f* Substrates
 - f* Concrete
 - f* Masonry
 - f* Stucco
 - f* Existing coatings
- f* Application method
 - f* Brush
 - f* Roll
 - f* Spray
- f* Broad color range, available in 4 tint bases

SIKA THOROCCOAT 350 AQUASOL (MASTERPROTECT C350)

WALL COATINGS PORTFOLIO



HIGH BUILD COATINGS

WALL COATING PORTFOLIO

SikaThorocoat100 TW (MasterProtect HB 100)

- f* Textured, water-based acrylic
- f* Hides surface imperfections
- f* Medium tint base
- f* Cost effective solution
- f* Texture rig spray application only

SikaThorocoat200 (MasterProtect HB 200)

- f* Smooth, water-based, 100% acrylic
- f* “Airless sprayer friendly”
- f* Highly permeable (25 perms)
- f* Durable, abrasion resistant finish
- f* Broad color range, 4 tint bases

Commonuses + benefits

- f* Substrates
 - f* Concrete
 - f* Masonry
 - f* Stucco
- f* Application method
 - f* Brush
 - f* Roll
 - f* Spray
- f* Mask surface imperfections
- f* Excellent weathering
- f* Resistance to wind driven rain

SIKA THOROCCOAT 100 TW-HIGH BUILD, COARSE TEXTURED COATING



SIKA THOROCCOAT 200-CAST IN PLACE CONCRETE GARAGE RECOAT: MULTIPLE COATS OF EXISTING COATING



HIGH BUILD COATINGS

WALL COATING PORTFOLIO

SikaThorocoat200 LR (MasterProtect HB 200 LR)

- f* Smooth, water-based, 100% acrylic
- f* Highly reflective coating
- f* Reduces energy costs
- f* Enhanced security

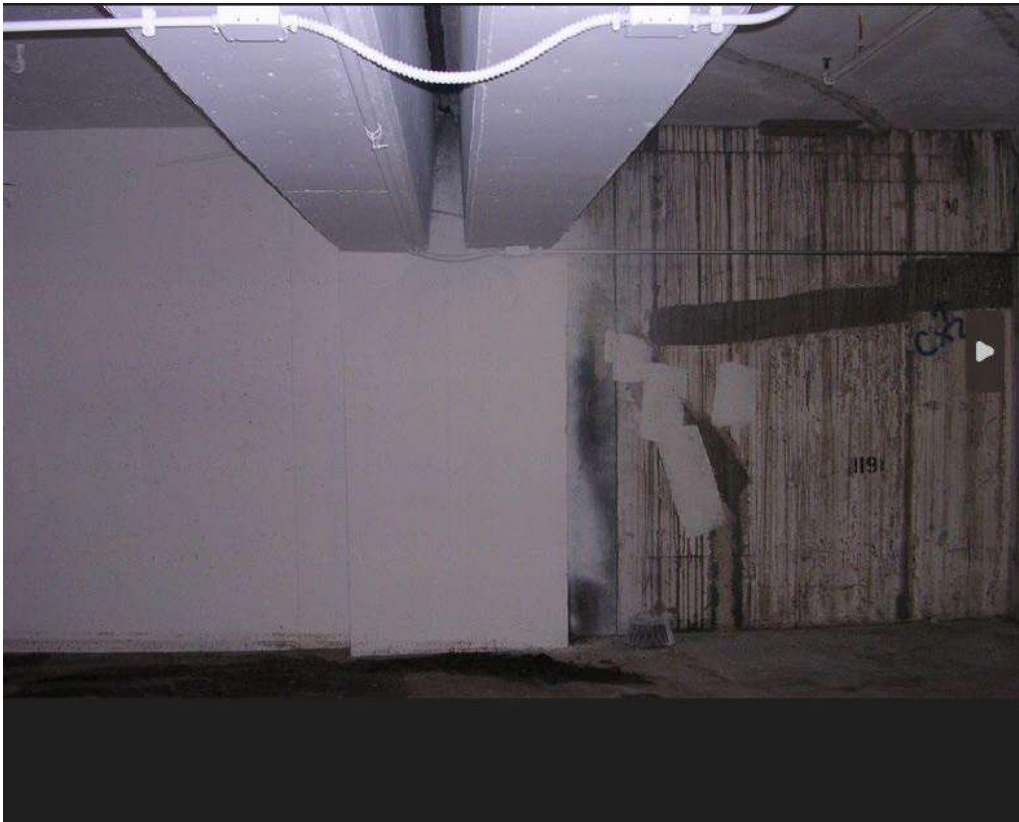
SikaThorocoat300 Artic (MasterProtect HB 300 SB)

- f* Smooth, water-based, SBA
- f* Cool weather applications
- f* Green concrete
- f* Highly permeable (28 perms)

Commonuses + benefits

- f* Substrates
 - f* Concrete
 - f* Masonry
 - f* Stucco
- f* Application method
 - f* Brush
 - f* Roll
 - f* Spray
- f* Primerless application
- f* Anti-carbonation protection (18 in.)
- f* Resistance to wind driven rain

DALLAS GALLERIA PARKING GARAGES-SIKA THOROCCOAT 200 LR-40,000 GALLONS-COATED 16 YEARS AGO.



HIGH BUILD COATINGS

WALL COATING PORTFOLIO

SikaThorocoat400 (MasterProtect HB 400)

- f* Water-based, 100% acrylic
- f* Smooth, fine and course texture
- f* Broad range of colors
- f* Waterproofing protection
- f* Salt spray resistance



Commonuses + benefits

- f* Substrates
 - f* Concrete
 - f* Masonry
 - f* Stucco
- f* Application method
 - f* Brush
 - f* Roll
 - f* Spray
- f* Resistance to wind driven rain
- f* Anti-carbonation protection
- f* Excellent adhesion and durability

SIKA THOROCCOAT 400-ANTI-CARBONATION PROTECTIVE, HIGH-BUILD WATERPROOFING COATING:



ELASTOMERIC COATINGS

WALL COATING PORTFOLIO

SikaThorolastic750 (MasterProtect EL 750)

- f* Water-based, 100% acrylic
- f* Smooth, fine and course texture
- f* Broad range of colors
- f* Waterproofing protection
- f* Resistance to algae growth



Commonuses + benefits

- f* Substrates
 - f* Concrete
 - f* Masonry
 - f* Stucco
- f* Application method
 - f* Brush
 - f* Roll
 - f* Spray
- f* High elongation 344%, 98% recovery
- f* Permeable
- f* Resistance to wind driven

SIKA THOROLASTIC 750 ELASTOMERIC COATING-EFFIS PROJECT:



ELASTOMERIC COATINGS

WALL COATING PORTFOLIO

SikaThorolastic850 (MasterProtect EL 850)

- f* Smooth, silicone modified acrylic
- f* Broad range of colors
- f* Waterproofing protection
- f* Superior crack bridging
- f* Recoatable



Commonuses + benefits

- f* Substrates
 - f* Concrete
 - f* Masonry
 - f* Stucco
- f* Application method
 - f* Brush
 - f* Roll
 - f* Spray
- f* Anti-carbonation
- f* High elongation 784%
- f* Permeable
- f* Resistance to wind driven

ELASTOMERIC COATINGS

WALL COATING PORTFOLIO

Sikagard570

- f* Water-based, 100% acrylic
- f* Smooth, silk finish
- f* Broad range of colors
- f* Waterproofing protection
- f* Extremely resistant to dirt pick up and mildew
- f* Harder surface film than bulk of coating beneath
- f* Fully reinforceable with Sika Flexitape

Commonuses + benefits

- f* Substrates
 - f* Concrete
 - f* Masonry
 - f* Stucco
- f* Application method
 - f* Brush
 - f* Roll
 - f* Spray
- f* High elongation 675% at 73 F, 275% at 0 F
- f* Permeable
- f* Resistance to wind driven

MATERIAL INSTALLATION NOW YOUR RECOAT TIMES:

f **Primers:** Sika Thorocoat 100 Primer; Sika Thorocoat 150 Primer

f 2-4 hours cure before coating

f **Patching compounds and block fillers:** Sika Thorocoat FL 748; Sika Thorocoat FL 749

f 12 hours cure before coating

f **Thin Mil Coatings:** Sika Thorocoat C 250; Sika Thorocoat C 350 Aquasol

f 2-4 hours cure before coating

f **High Build Coatings:** Sika Thorocoat 100 TW; Sika Thorocoat 200; Sika Thorocoat 300SB Artic; Sika Thorocoat 400

f 6 hours cure before coating

f **Elastomerics:** Sika Thorolastic 750; Sika Thorolastic 850; Sikagard 570

f 12 hours cure before coating

ICRI CRB- SEPT/OCT 2023



There Is No Panacea When It Comes to Wall Coatings

by Keith C. Howard

Elastomeric coatings sound like the solution for all situations because there is a perception that they are the only waterproof option for above grade concrete and masonry applications. Elastomerics have become prevalent in many specifications, but do we understand what an elastomeric wall coating is, what it's supposed to do, and when we should use them? Wall coatings vary greatly in their ingredients, chemistry, and performance. Understanding when an elastomeric coating is appropriate for a specific project is key to the successful performance and protection of the wall section.

An elastomeric coating is a high-build coating that is manufactured with special resins that can stretch (elongate). The function of elastomeric coatings is to bridge small hairline cracks in substrates that are subject to thermally dynamic movement or have existing cracks.

Thermal dynamic cracks are common in stucco on wood, metal framing, or Exterior Insulation Finish Systems (EIFS). These substrates are not monolithic and act as a "shell" installed over a wall's framing or structural elements. The hairline cracks experienced by these substrates are typically 1/16" or less and will vary with ambient temperature. As the outside temperature falls, the cracks in the stucco will widen; as the outside temperature rises, these same cracks will narrow or even close. (Fig. 1)



Fig. 1. Crack in exterior stucco

Quite often, the word elastomeric is used as a generic term. Two key physical properties should be reported to evaluate actual elastomeric coatings: elongation and recovery. Elongation of 300% is considered the minimum for good performance. Regarding recovery, many products do not even list their recovery value on the data sheet. A tested recovery value (%) is essential for long-term performance. Without it, your coating is like a rubber band that stretches and stays stretched out.

It is also important to understand how much movement (crack bridging) can be expected out of a typical elastomeric coating system. A typical two-coat elastomeric coat-

ing with 300% elongation applied at a 16-mil total dry film thickness (DFT) is going to be able to move about 1/32". At 600% elongation, the movement allowance would be approximately 1/16". All existing cracks should be treated/detailed according to the manufacturer's recommendations before the application of any coating. When evaluating crack bridging properties, don't forget the other essential physical property of recovery percent. Elongation is useless without recovery (ASTM D412, D2370) (Fig. 2).



Fig. 2. Elongation testing

What if elongation is not necessary? What coating type is best for monolithic substrates like concrete and masonry? Drying shrinkage, settlement, mortar, or structural cracks often found in single wythe CMU, poured-in-place concrete, tilt-up concrete, or precast concrete walls (Fig. 3) are typically not thermally dynamic cracks and should be treated differently than stucco/EIFS cracks.



Fig. 3. Typical cracks in concrete

The cracks found on these monolithic substrates are typically far less frequent and may not change much with temperature when compared to stucco on framing. Cracks in concrete walls could be indicative of larger structural issues or lack of proper expansion joints and should be properly repaired or filled with a paintable sealant before the coating application.

Recommending elastomeric coatings on these types of substrates is not the best recommendation for either the owner or the structure. The selection of the coating based on the substrate type and wall construction is critical to long-term performance.

One of the primary functions of high-performance exterior wall coatings is to protect the structure from the damaging effects of water or moisture ingress.

WWW.ICRI.ORG

Coatings play a crucial role in safeguarding reinforced concrete structures from carbonation. By forming a protective barrier against carbon dioxide, limiting moisture ingress, and providing corrosion inhibition, coatings help maintain the alkalinity and durability of concrete. These protective measures significantly extend the service life of reinforced concrete structures, ensuring their structural integrity and minimizing the need for costly repairs or replacements. To provide a protective barrier, the wall coating needs to be applied as a continuous pinhole free membrane. Making sure the contractor understands the proper application is critical to extending the life of the building.

Application techniques for any high build wall coating are different than typical paint applications. Pay close attention to the manufacturer's recommendations, and when in doubt, contact the manufacturer's local representative!

When applying one of these coatings, it is best to have the frame bend facing the correct direction. If you are applying from North to South, you need to have the bend of the frame facing towards the South because this is where the pressure is applied on the roller cover to make sure you get proper application consistency.

For proper roller application, the coating should be applied in an M or W pattern, doubling back to fill in the pattern. The roller application should be overlapped by two or three inches (Fig. 6). The finish stroke should be in a downward application starting at one end of the wall following all the way down the wall to a natural stopping point.



Fig. 6. Coating application with proper overlap

When cutting in a high build coating with a brush, it is best to go back and lightly stipple with the brush to add texture (Fig. 7); this will help blend in the roller stipple.



Fig. 7. Match stipple texture at brush-applied cut-ins

Before applying a high build wall coating, it is best to mix the material in the bucket and then box mix the pails together to achieve proper color consistency. Boxing is done by pouring half of the mixed material into an empty pail and then pour half the bucket of the next pail into the half pail and repeating as you apply the material. (Fig. 8)



Fig. 8. Box mixing demonstration to achieve color consistency

Mock-ups should always be conducted to check for adhesion and aesthetics, especially in recoat applications. The standard adhesion test is ASTM D3359, *Adhesion by Tape Test* (Fig. 9). This testing may help determine if a primer is needed or if a special surface preparation is required. Full surface preparation and a sealant joint should be included in the mock-up.



Fig. 9. Performing tape adhesion test

When selecting a wall coating, there are several questions that should be considered. Is the substrate bare concrete/masonry or is there an existing coating? What is the wall assembly; is it monolithic? What is the level of exposure to UV, thermal cycles, and other environmental conditions? How will the contractor access the building and how will that affect application technique? The bottom line: Every building is different, so one wall coating type will not be suitable for every application (Fig. 10).



Fig. 10. Properly coated concrete parking structure

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Thank You! Questions?

WE
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EQUIPMENT

SPRAY EQUIPMENT



f Sika Thorocoat 400 Smooth

f WFT 16 – 22 at a coverage rate of 75 - 100 ft² /gal

f DFT 6 – 8

f Typical Application: Airless Spray Equipment

f Pump Pressure: 2000 psi

f Tip size: .027” - .039”

f GPM: 2

f Equipment Example: Titan PowrTwin 6900Plus, 8900Plus & 12000Plus

f **Note** – Fibers in Sika Thorocoat 400 Smooth may make it difficult to spray and may require a larger tip size or use of texture equipment

SPRAY TIPS

SPRAY EQUIPMENT

Spray Tips 417, 515, 655, etc.

f Various tips for various applications

f General Painting

f High Pressure Painting

f Low Pressure Painting

f Line Striping

1st number x2 determines the spray fan width

f 517 = 5 x 2 = 10" fan pattern

2nd two numbers determines the flow of the coating (orifice size)

f 517 = .17" orifice results in .3 gpm flow rate



WORN TIPS

TROUBLESHOOTING SPRAY EQUIPMENT

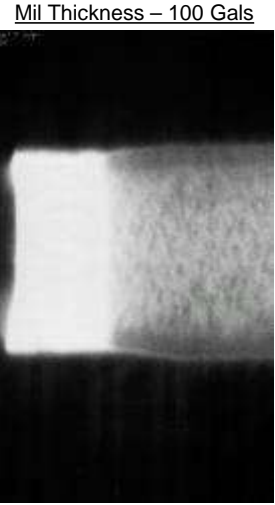
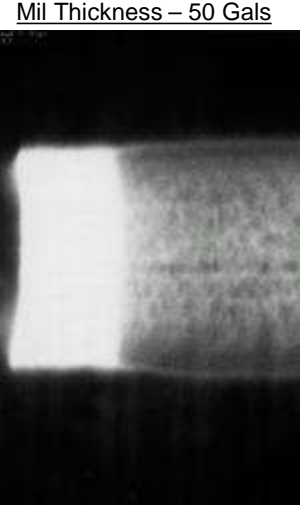
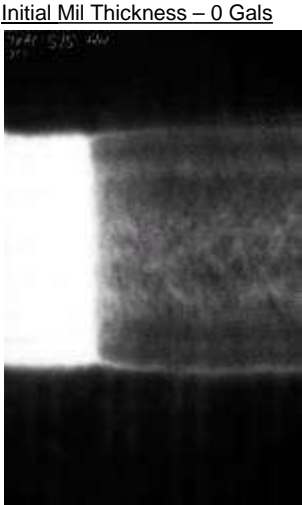
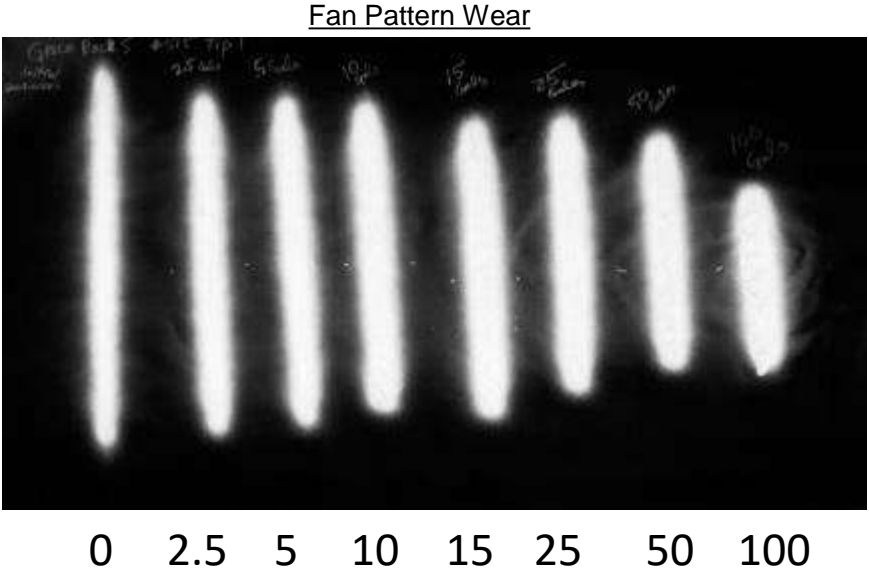
Wastes coating and labor

f Example: 12" fan worn to 9"

f Same labor at reduced production rate.

Use lowest pressure that produces a good spray pattern

All coatings are abrasive in nature



SPRAYING APPLICATION

CROSS HATCH

**JORSKI tip –
Make sure to
spray touch up
material into a
pail because
the coating will
sheer when
passing
through the
airless sprayer.**

EQUIPMENT

SIKA THOROCCOAT 200-POWER ROLLER APPLICATIONS SQ.FT/MIN



SPRAY EQUIPMENT

Standard Spray Equipment- minimum 1-1.25 GPM (Gallon per minute)

- f* Sika Thorocoat 100 Primer
- f* Sika Thorocoat 150 Primer
- f* Sika Thorocoat 250
- f* Sika Thorocost 350 Aquasol

Heavy Duty Spray equipment- minimum 1.25-3 GPM

- f* Sika Thorolastic 750 Smooth
- f* Sika Thorolastic 850
- f* Sika Thorocoat 200 & 200 LR
- f* Sika Thorocoat 749 Block Filler
- f* Sika Thorocoat 400 Smooth
- f* Sikagard 570
- f* Sika Thorocoat 300 Artic

Texture Spray Equipment-minimum 2-3 GPM, air-assist equipment

- f* Sika Thorocoat 400 Fine & Coarse Texture
- f* Sika Thorocoat 100 TW
- f* Sika Thorolastic 750 Fine & Coarse Texture

f Research conducted by the Painting and Decorating Contractors of America (PDCA), indicates that airless spraying can save installers between **50% and 75%** of their coating time.



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