SIKA S.M.A.R.T TRAINING

WALL COATING APPLICATOR TRAINING

MARCH 5-6, 2025

JACKSONVILLE, FLORIDA

BUILDING TRUST

OFFICE BUILDING SAFETY

- In case of emergency
- Fire alarm – stay put and wait for announcement
  - Where is our meeting spot for emergency's
- Inclement weather
- Medical emergency – dial the operator
- Room egress
- Use handrails when walking

Our first priority is to be safe at all times during our stay

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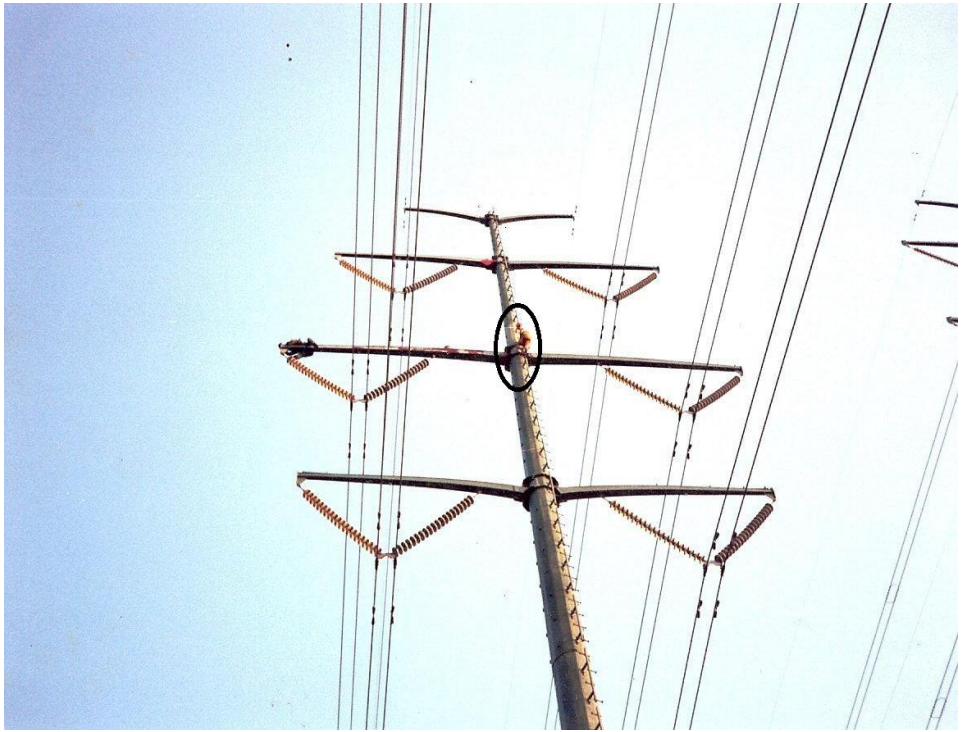
JOB SITE SAFETY



Our first priority is to be safe at all times during our stay

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CARDINAL RULES

- Respect others – mute your phone
- Start and end on time
- Everyone matters and will be heard
- No bad questions but keep it relevant
- Show honor and respect for Sheraton staff
- Smoking in designated areas only

ACCOUNTABILITY

- Program starts at 8:00 AM each day
- 14 professional development hours
- Certified trained applicator status

Attendance for entire program required for certificate

WELCOME TO JACKSONVILLE, FL

Patrick Jorski
Parking & Restoration Specialist – Dallas TX

Brittany Hill
Territory Sales Manager – Jacksonville, FL

James McKiney
Territory Sales Manager – Tampa, FL

Mark Aument
Senior Product Engineer – Shakopee MN

Dan Kime
Senior Product Engineer – Shakopee MN

Mathew Horning
Product Manager – Lyndhurst, NJ

Ryan Hall
Product Manager – Lyndhurst, NJ

SIKA SMART TRAINING

Wall Coating Applicator Training

Group Introduction

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INTRODUCTIONS

SIKA WALL COATING APPLICATOR TRAINING

Your name

Your company name

City you travelled from

10 Minute

Group Activity

The Assignment

1. As a table, make list of your wall coating challenges
2. Work as a team to choose **one** challenge
3. Nominate a spokesperson
4. Share your team's idea with the group
5. **Turn list of challenges in to your table captain (team name)**

1 Challenge

Group Activity

SIKA
ROLE OF WALL COATINGS

Jim McKiney

THE ROLE OF WALL COATINGS

INTRODUCTION

Wall coatings are a crucial component of the building envelope

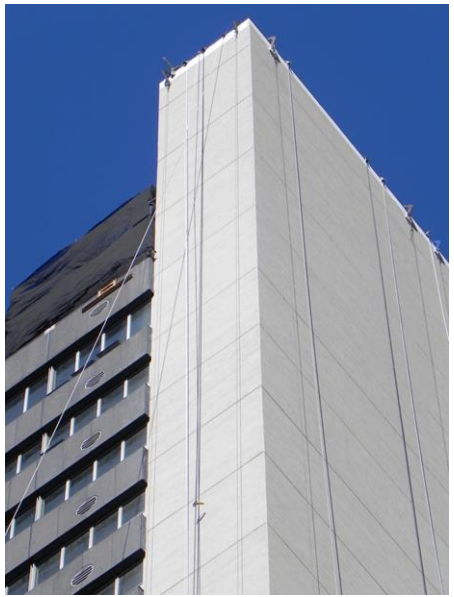
- **Structural components of building**
- **Building occupants**
- **Contents of the building**

- **Protect structural components**
- **Barrier to the elements**
- **Maintain aesthetics of buildings and structures**

THE ROLE OF WALL COATINGS

INTRODUCTION

People underestimate the importance of wall coatings



- Lack of understanding
- Incorrectly specified
- Inadequate training

A small error can make a big mess

THE ROLE OF WALL COATINGS

INTRODUCTION

Lack of understanding of how coatings work

- Changing coating technology
- Chemistry of adjacent materials
- More complex assemblies
- Aggressive construction schedules
- Turnover in workforce

INDUSTRY NEED

INTRODUCTION

Training is a critical element of being successful

- Changes in technology, regulation
- New techniques
- Rapidly changing workforce
- Training is often eliminated in challenging markets

IMPACT OF TRAINING

INTRODUCTION

Investing in training pays dividends

- Improve quality of installations
- Increase production rates
- Avoid costly mistakes
- Improve job satisfaction
- Enhance job site safety

3RD PARTY VALIDATION

SIKA WALL COATING APPLICATOR TRAINING

www.swrionline.org

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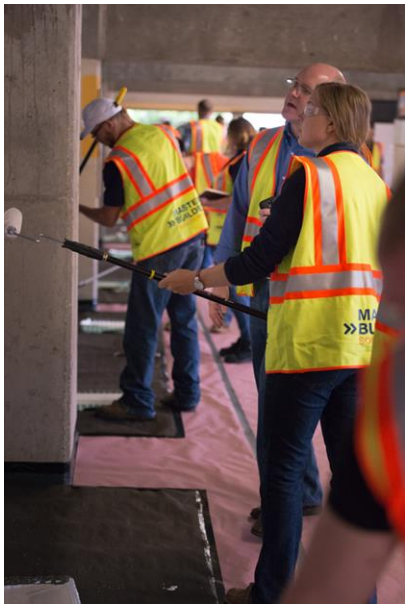
AGENDA

SIKA WALL COATING APPLICATOR TRAINING

Wall Coatings Topics

- Safety
- Surface preparation
- Building envelope topics
- Acrylic Coating Chemistry
- Material selection
- Installation techniques
- Spray techniques
- Troubleshooting
- Scenario planning
- Color



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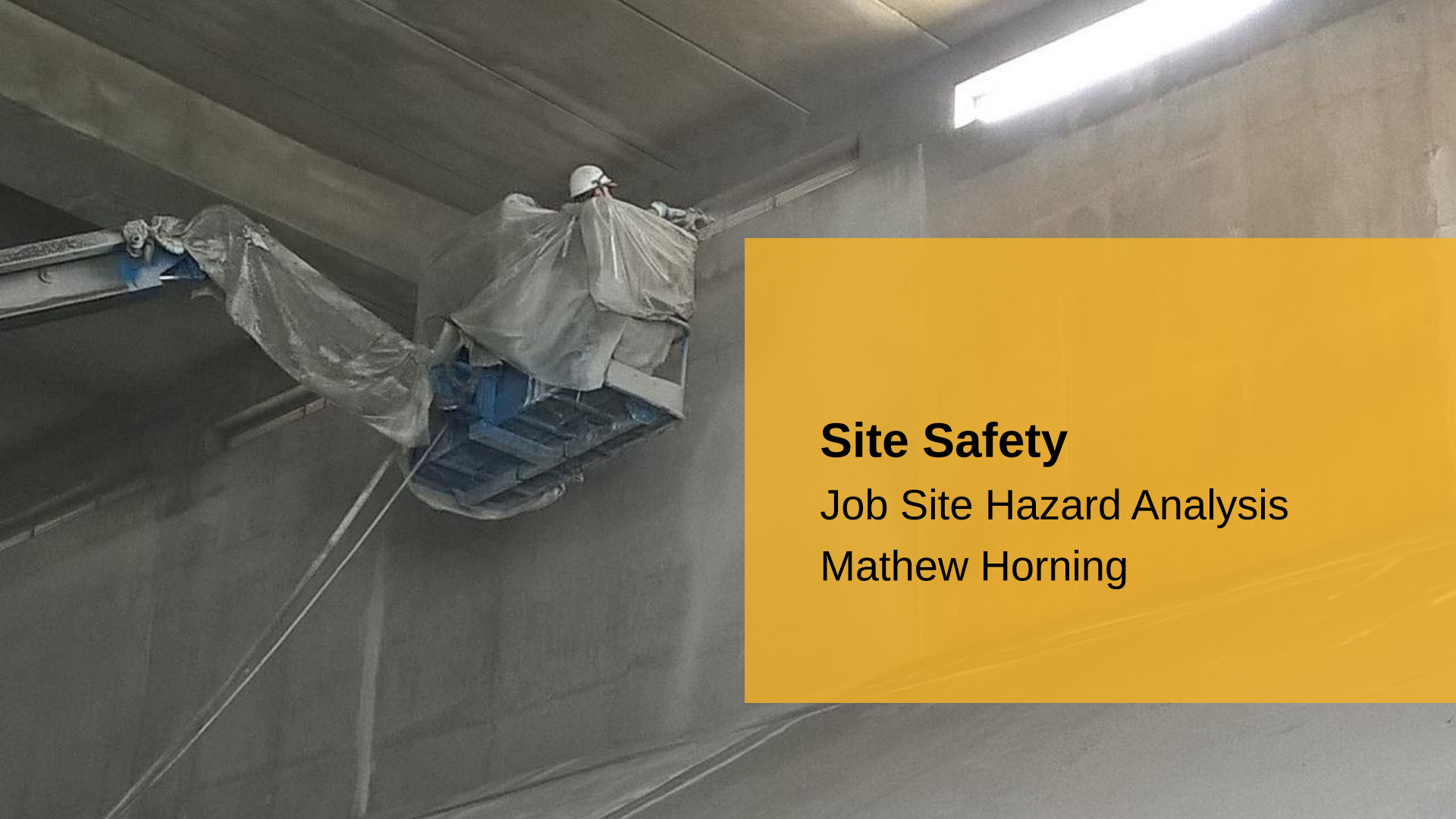

Site Safety

Job Site Hazard Analysis

Mathew Horning

JOB SITE HAZARD ANALYSIS

SITE SAFETY

What is a Hazard?

- A hazard is the potential for harm
- Associated with a condition or activity that, if left uncontrolled, can result in an injury or illness

What is a Job Hazard Analysis?

- Focusing on job tasks as a way to identify hazards before they occur
- Focuses on the relationship between the worker, the task, the tools, and the work environment
- After identifying the uncontrolled hazards, develop steps to eliminate or reduce them to an acceptable risk level

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JOB SITE HAZARD ANALYSIS

SITE SAFETY

Who is Involved?

- **Employers, foreman and supervisors, and employees** are encouraged to use the information to analyze their own jobs and recognize workplace hazards so they can report them

Why is it important?

- It helps to **prevent workplace injuries and illnesses** by looking at workplace operations, establishing proper job procedures, and ensuring that all employee are properly trained
- Reduces workers' compensation costs, increases worker productivity (valuable tool for training new employees in the steps required to perform their jobs safely)

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JOB SITE HAZARD ANALYSIS

SITE SAFETY

What jobs are appropriate for a Job Hazard Analysis?

- Jobs with the **highest injury** or **illness rates**
- Jobs with the potential to cause **severe or disabling injuries** or illness, even if there is no history of previous accidents
- Jobs in which **one simple human error** could lead to a severe accident or injury
- Jobs that are **new to an operation** or have **undergone changes** in processes and procedures
- Jobs complex enough to **require written instructions**

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JOB SITE HAZARD ANALYSIS

SITE SAFETY

Where to begin?

- Involve employees
- Review accident history (indicators: near miss, reoccurring injuries)
- Conduct preliminary job review (discussion/brainstorming with employees, take immediate action for IDLH)
- List, rank, and set priorities for hazardous jobs
- Outline the steps or tasks (watch an employee perform the job and list each step as the worker takes it – keep it simple/basic)

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JOB SITE HAZARD ANALYSIS

SITE SAFETY

How to identify workplace hazards?

- What can go wrong?
- What are the consequences?
- How could it arise?
- What are other contributing factors?
- How likely is it that the hazard will occur?

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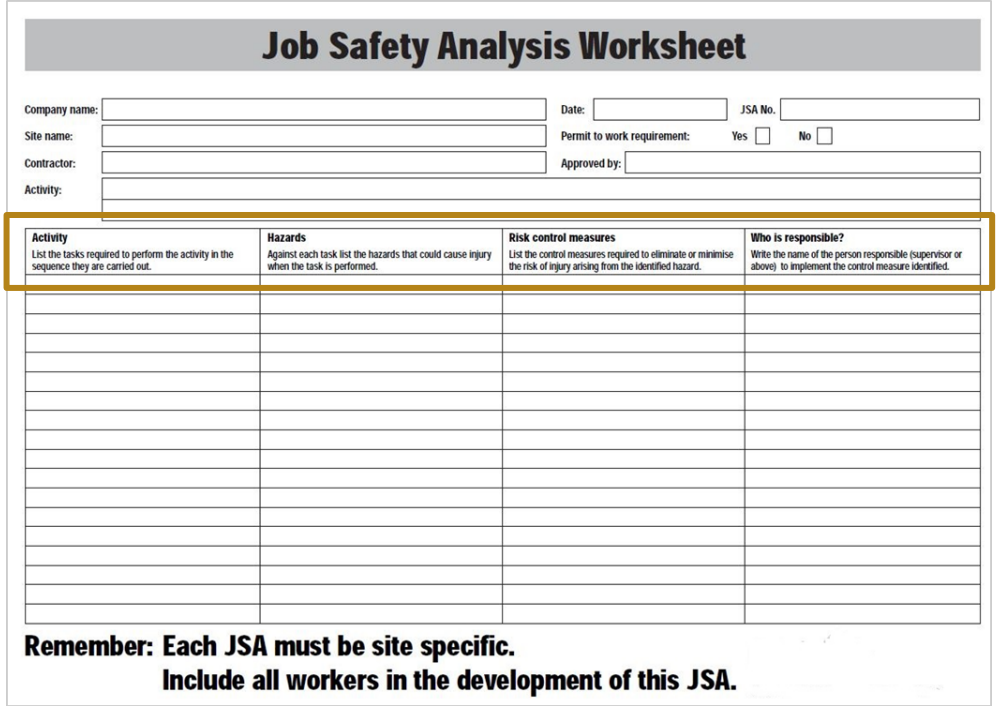
JOB SITE HAZARD ANALYSIS

SITE SAFETY



Job Safety Analysis Worksheet

Company name: | Date: | JSA No.

Site name: | Permit to work requirement: Yes ☐ No ☐

Contractor: | Approved by:

Activity:

Activity	Hazards	Risk control measures	Who is responsible?
List the tasks required to perform the activity in the sequence they are carried out.	Against each task list the hazards that could cause injury when the task is performed.	List the control measures required to eliminate or minimise the risk of injury arising from the identified hazard.	Write the name of the person responsible (supervisor or above) to implement the control measure identified.

Remember: Each JSA must be site specific.
Include all workers in the development of this JSA.

Variety of sources: Google, OSHA, SWR Institute

10 Minute - JSA

Group Activity

Patrick Jorski

Surface Preparation

Wall Coatings

Patrick Jorski

TOPICS

SURFACE PREPARATION

- Substrate
- Recoats
- Filling and Priming Products
- Mock Ups

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SURFACE PREPARATION METHODS

Substrate Preparation for Coatings

- Removal of Contaminants
- Porosity
- Provide a Degree of Profile
- Should have Texture similar to fine grit sandpaper

Objective:

A substrate which is **s**ound, **t**extured, **u**ncontaminated and **d**ry → **S.T.U.D.**

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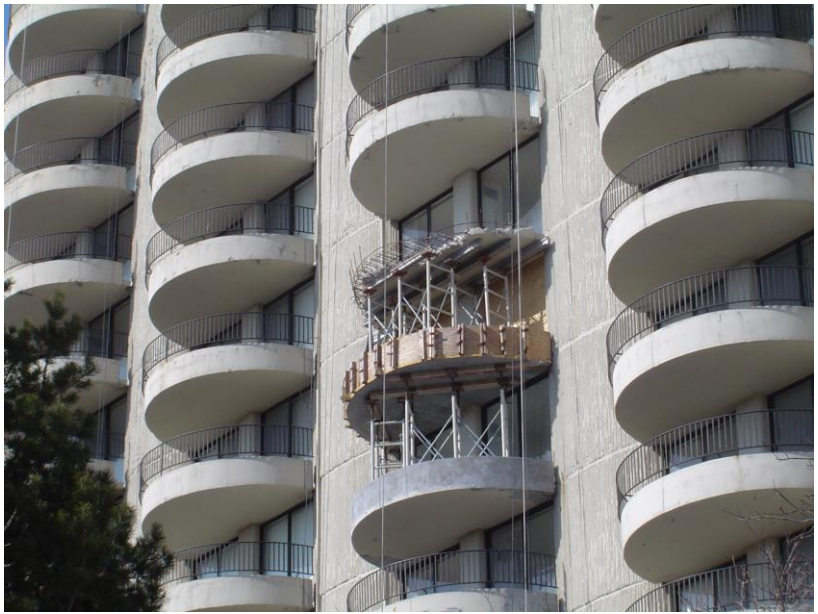
SOUND SUBSTRATE

SURFACE PREPARATION METHODS



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ROUGH (TEXTURED) SUBSTRATE

SURFACE PREPARATION METHODS

Surface Profile

- Industry standards are established to assist in ensuring proper bond
- Both SSPC and ICRI have established guidelines

Unprepared surface profile

Prepared surface profile

Prepared surface profile stretched flat to show comparative actual surface available for bonding

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CLEAN (UNCONTAMINATED) SUBSTRATE

SURFACE PREPARATION METHODS

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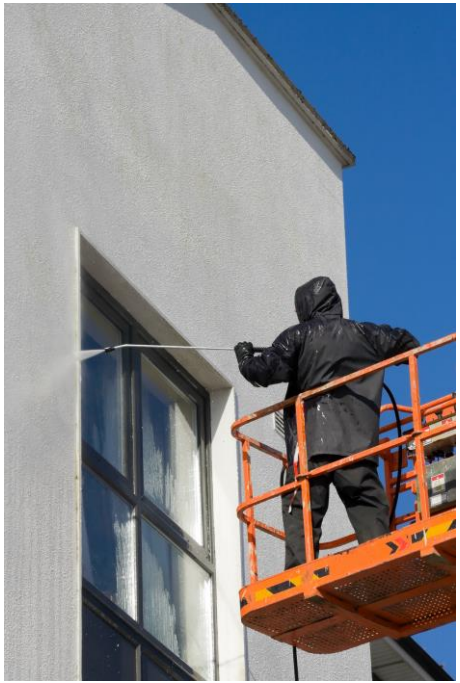
CLEAN (UNCONTAMINATED) SUBSTRATE

SURFACE PREPARATION METHODS

Power Washing Example

- Use a 15 degree tip
- Rotating tips can be used for more aggressive cleanings
- Tip should never be more than 14” away from the surface
- Pressure requirements, 300 to 600 psi for coatings – 1,500 to 3,500 for concrete substrate
- Power washing masonry will inject water in to substrate – ensure adequate dry time prior to coating



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DRY SUBSTRATE
SURFACE PREPARATION METHODS

Ensure surface is dry during cure

- If incompletely coalesced film is exposed to water it can blister
- Do not rely on the permeance of a coating to allow a wet substrate to dry out

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DRY SUBSTRATE

SURFACE PREPARATION METHODS

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

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RECOAT GUIDELINES

SURFACE PREPARATION METHODS

Evaluate existing coating

- Thickness of the coating
- Adhesion testing
- What is the existing coating?
- How old is it?
- Is there chalking?

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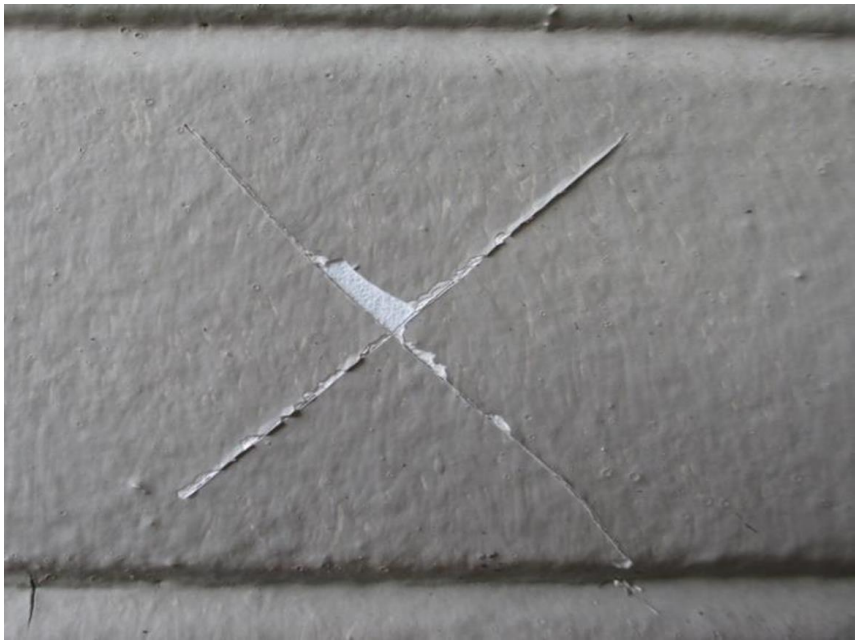
RECOAT GUIDELINES

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



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RECOAT GUIDELINES

SURFACE PREPARATION METHODS

ASTM D-3359 Measuring Adhesion by Tape, Method A

5A	No peeling or removal,
4A	Trace peeling or removal along incisions or at their intersection,
3A	Jagged removal along incisions up to 1.6 mm (1⁄16 in.) on either side,
2A	Jagged removal along most of incisions up to 3.2 mm (1⁄8 in.) on either side,
1A	Removal from most of the area of the X under the tape, and
0A	Removal beyond the area of the X.

4A

1A

Specifier will identify requirements based on findings during evaluation

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PREPARATION PRODUCTS

SURFACE PREPARATION METHODS

Preparation Products

- **Patching**
  - 

  - Sika Thorocoat 748
- **Fillers**
  - 

  - Sika Thorocoat 749
- **Primers**
  - 

  - Sika Thorocoat 100
  - 

  - Sika Thorocoat 150

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PRIMERS

SURFACE PREPARATION METHODS

Sika Thorocoat 100 (formerly Thoro Primer 1000)

- 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

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PRIMERS

SURFACE PREPARATION METHODS

Sika Thorocoat 100 (formerly Thoro Primer 1000)

Installation

- Brush or ½” nap roller
- Recoat in 2-4 hours (temperature dependent)
- 36% solids by volume
- 300 – 375 ft²/gal (dependent on porosity of substrate)
- Approximately 5-9 wet mils

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PRIMERS

SURFACE PREPARATION METHODS

Sika Thorocoat 150 (formerly CM Primer)

- 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
- Dries to recoat in 2 – 4 hours

BUILDING TRUST

PRIMERS

SURFACE PREPARATION METHODS

Sika Thorocoat 150 (formerly CM Primer)

Installation

- Brush or ½” nap roller
- Recoat in 2-4 hours (temperature dependent)
- 36% solids by Volume
- 175 – 275 ft²/gal. (dependent on porosity of substrate)
- Approximately 6-9 wet mils/2-3 dry mils

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PATCHING COMPOUNDS

SURFACE PREPARATION METHODS

Sika Thorocoat 748 (formerly Sonocoat Patching Compounds)

- A 100% acrylic crack bridging material that is compatible with all our high build coatings
- Fill voids in vertical substrates
- FL 746; Knife grade, textured
- FL 748: Knife grade smooth
- Available in 1 gallon and 5 gallon packaging

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PATCHING COMPOUNDS

SURFACE PREPARATION METHODS

Sika Thorocoat 748 (formerly Sonocoat Patching Compounds)

Installation

- **Cracks up to 1/16”**
- Apply with damp sponge to fill crack
- **Cracks between 1/16 and ¼”**
- Rout to ¼” x ¼”
- 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

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Sika Thorocoat 749/Block Filler (formerly Thoro Block Filler)

- 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

FILLER

SURFACE PREPARATION METHODS

Installation

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

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MOCK-UPS

SURFACE PREPARATION METHODS

General Practices

- Apply sample, per project requirements, at least one week prior to any pre-installation conference
- Mock-up size will be determined by project specification
- Mock-up area should be maintained throughout construction cycle

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MOCK-UPS

SURFACE PREPARATION METHODS

Surface Preparation

- Per project specification - excessive preparation methods that do not truly reflect what will be used over the entire site cannot be used for a site mock-up

Application

- Use only specified materials of the proper color
- Mix product to ensure color uniformity
- Apply complete system, per required mils

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TEST YOUR KNOWLEDGE

GROUP CHECK IN

SURFACE PREPARATION METHODS

BUILDING TRUST

GROUP CHECK IN

SURFACE PREPARATION METHODS

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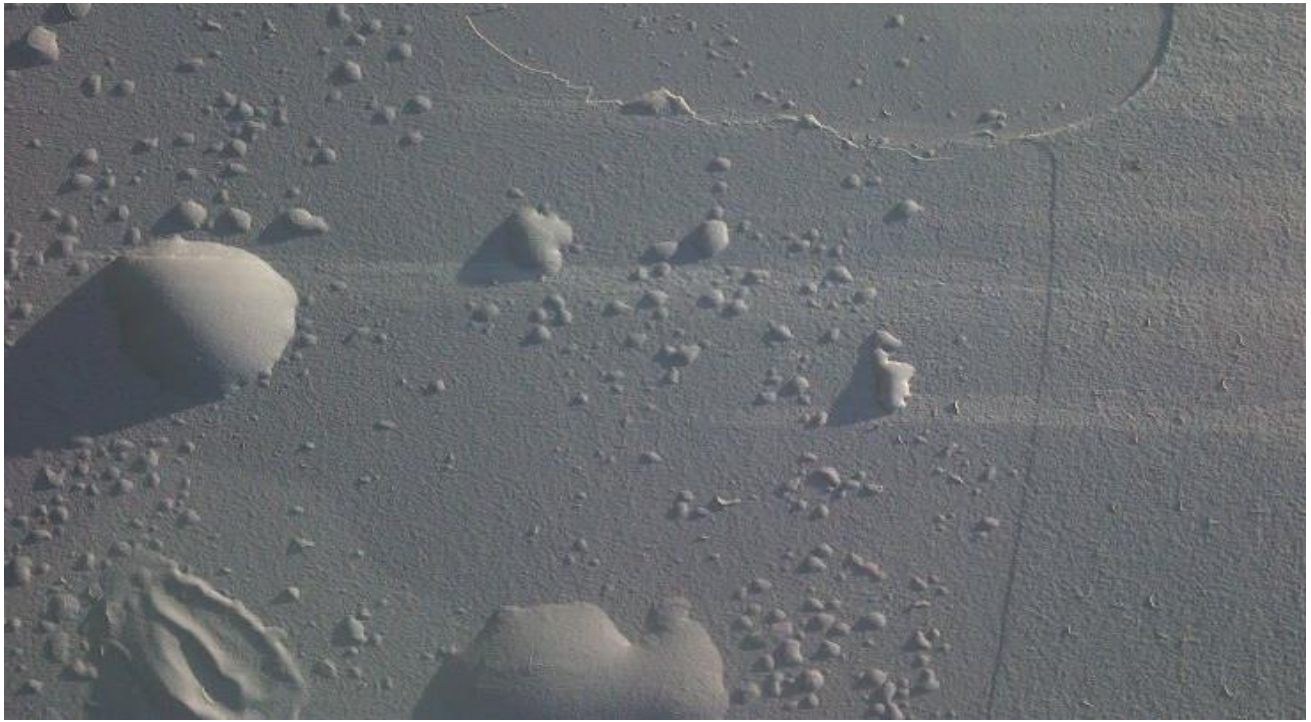
SURFACE PREPARATION METHODS



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Hands-on on the deck

Adhesion Tests, Primers & Patching Compounds

Coatings Chemistry

Dan Kime

Coating Chemistry Topics

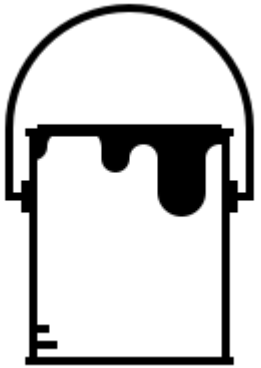
- Anatomy of a coating
- Science of coalescence
- FAQ
- Check-in

ANATOMY OF A COATING

COATING CHEMISTRY

- Binder
- Pigment
- Carrier
- Additives

Beer	Concrete	Bread	Lipstick
Barley	*Rocks*	*Flour*	*Wax*
Hops	*Sand*	*Yeast*	*Oil*
Yeast	*Cement*	*Salt*	*Alcohol*
Water	*Water*	*Water*	*Pigment*



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WHAT ARE POLYMERS?

BINDERS

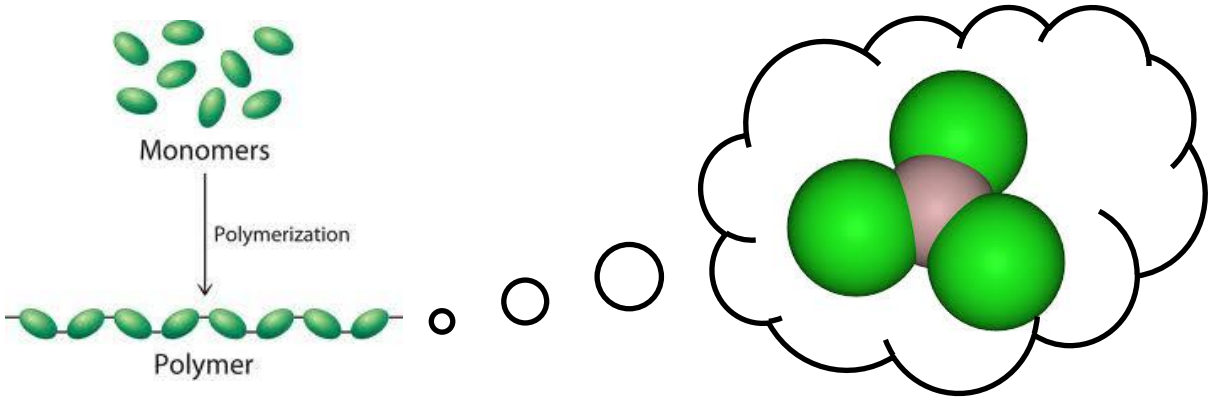
“poly+mer”

“many + identical combining units”

“mono + mer”

“one + identical combining unit”

- **Monomers** are combined to create **polymers**
- **Polymers** are the building blocks used to make coatings



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FUNCTIONS & ATTRIBUTES

BINDERS

Function of the binder

- Holds all the ingredients together
- Adhere ingredients to the surface
- Film forming portion of formula
- Approximately **5-35%** of the total volume

Performance of the binder

Physical attributes:

- Adhesion
- Film build
- Overall durability
- Hardness
- Flexibility
- Cleanability
- Color and gloss retention

Application attributes:

- Flow and leveling
- High wet film build

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COMMON TYPES

BINDERS

100% Acrylic

- Superior resistance to alkalis
- Retains adhesion in wet conditions
- Greater water resistance
- Retention of extensibility

Styrene-Butadiene Acrylic (SBA)

- Early oxidation
- Tendency to yellow
- Age hardening
- Prone to dirt pick-up

Polyvinyl Acetate (PVA)

- Sensitive to high alkalinity
- Lower perm ratings
- Prone to dirt pick-up

Silicone

- High extensibility
- Prone to dirt pick-up
- Limitations in recoating
- Poor color retention, limited pallet

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IMPACT OF BINDER ON PERFORMANCE

BINDER

Binder quality has a significant impact on performance

Polyvinyl Acetate

- High pH substrate
- Improper coalescence
- Film hardening, loss of adhesion
- Accelerated color fading

Styrene-Butadiene

- Early oxidation of coating
- Excessive fading
- Chalking run off on to windows and awning

Silicone

- Consistent dirt pick-up
- Increased cleaning costs
- Adjacent to building coated with MP EL 850 with no dirt pick-up

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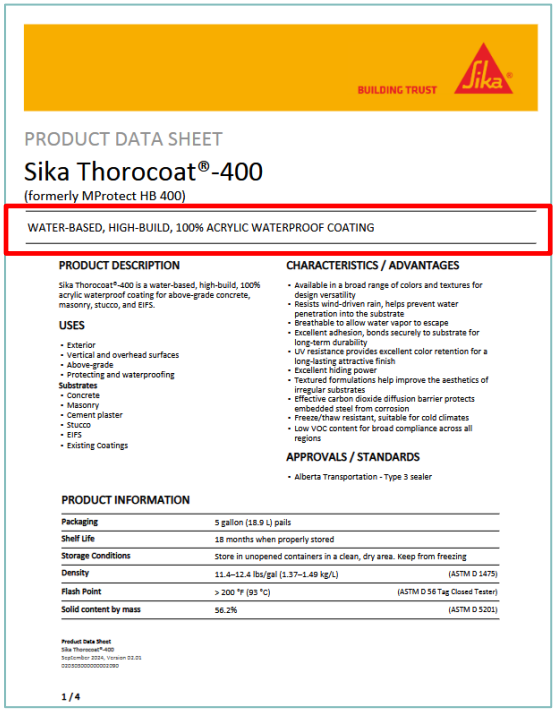
WHAT YOU NEED TO KNOW

BINDERS



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PRODUCT DATA SHEET

Sika Thorocoat®-400

(formerly MProtect HB 400)

WATER-BASED, HIGH-BUILD, 100% ACRYLIC WATERPROOF COATING

PRODUCT DESCRIPTION

Sika Thorocoat®-400 is a water-based, high-build, 100% acrylic waterproof coating for above-grade concrete, masonry, stucco, and EIFS.

USES

- Exterior
- Vertical and overhead surfaces
- Above-grade
- Protecting and waterproofing

Substrates

- Concrete
- Masonry
- Cement plaster
- Stucco
- EIFS
- Existing Coatings

CHARACTERISTICS / ADVANTAGES

- Available in a broad range of colors and textures for design versatility
- Resists wind-driven rain, helps prevent water penetration into the substrate
- Breathable to allow water vapor to escape
- Excellent adhesion, bonds securely to substrate for long-term durability
- UV resistance provides excellent color retention for a long-lasting attractive finish
- Excellent hiding power
- Textured formulations help improve the aesthetics of irregular substrates
- Effective carbon dioxide diffusion barrier protects embedded steel from corrosion
- Freeze/thaw resistant, suitable for cold climates
- Low VOC content for broad compliance across all regions

APPROVALS / STANDARDS

- Alberta Transportation - Type 3 sealer

PRODUCT INFORMATION

Packaging	5 gallon (18.9 L) pails	
Shelf Life	18 months when properly stored	
Storage Conditions	Store in unopened containers in a clean, dry area. Keep from freezing	
Density	11.4–12.4 lbs/gal (1.37–1.49 kg/L)	(ASTM D 1475)
Flash Point	> 200 °F (93 °C)	(ASTM D 56 Tag Closed Tester)
Solid content by mass	56.2%	(ASTM D 5201)

Product Data Sheet
Sika Thorocoat®-400
September 2024, Version 02.01

1 / 4

- Substrate
  - What is the nature of the substrate being coated?
- Application Condition
  - Will atmospheric conditions impact the coating installation?
- Material Composition
  - What type of binder is used in the coating?
  - Styrene-Butadiene yellows in UV
  - Some binders are intended for interior use only and absorb water when used on exteriors

WHAT ARE PIGMENTS?

PIGMENTS

Pigments are finely ground particles which are which are dispersed in paint and coatings to produce color and provide additional physical properties

Prime pigments

- Provide whiteness and color ($Ti0_2$)
- Provide hiding power
- Can be organic or inorganic
- Relatively expensive

Pigment extenders

- Provide bulk at relatively low cost
- May detract from performance
- Can be reactive with dilute carbon dioxide resulting in carbonate

Examples of prime pigments

- Titanium dioxide - white
- Inorganic – earthy colors, more UV resistant
- Organic – brighter colors, not as robust to UV light

Examples of pigment extenders

- Clay – kaolin and china clay
- Silica – abrasion resistance
- Calcium carbonate – chalk
- Talc – relatively soft

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FUNCTIONS AND ATTRIBUTES

PIGMENTS

Function of pigments

- Primary function is to provide color to the surface
- Hide existing surface
- Contribute to UV resistance

Performance of the pigment

Physical attributes:

- Hiding power
- Resistance to fading
- Increased hardness of film
- Abrasion resistance
- Cleanability
- Color and gloss retention

Application attributes:

- Increased body
- Sag resistance

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IMPACT OF PIGMENT ON PERFORMANCE

PIGMENTS

Organic pigment

- Poor pigment combination for exterior application
- Early fading
- Chalking surface

Surfactant staining

- Water soluble ingredients in paint leach to surface
- More common in dark colors
- Can produce a tobacco colored stain
- Often dissipates with washing or rain

Calcium sulfate

- Reaction of dilute sulfur dioxide with calcium carbonate
- Common in lower quality coatings with extenders
- Forms an insoluble stain

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WHAT YOU NEED TO KNOW

PIGMENTS

Organic vs. Inorganic

- Some colors with **organic pigments** are not intended for exterior use. Be wary of colors with large amounts of organic pigment.

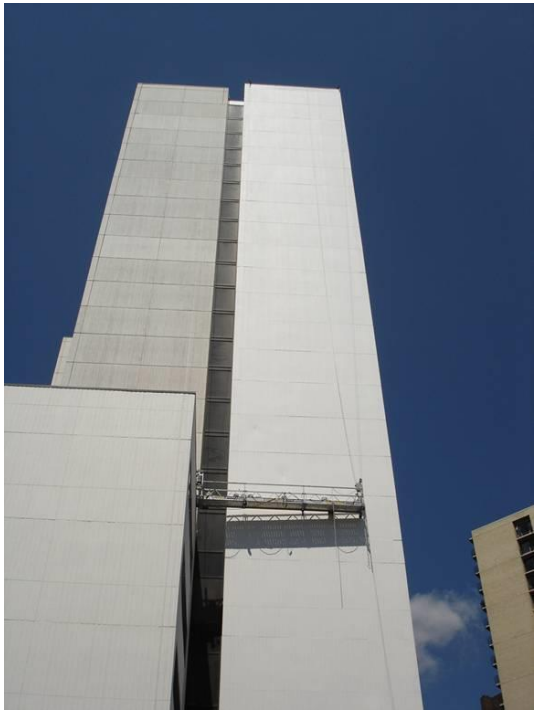
Exposure

- Southern exposures will show fade much sooner than other exposures.

Environmental conditions

- UV and moisture exposure can accelerate fading of coatings.

Range of pigment quality



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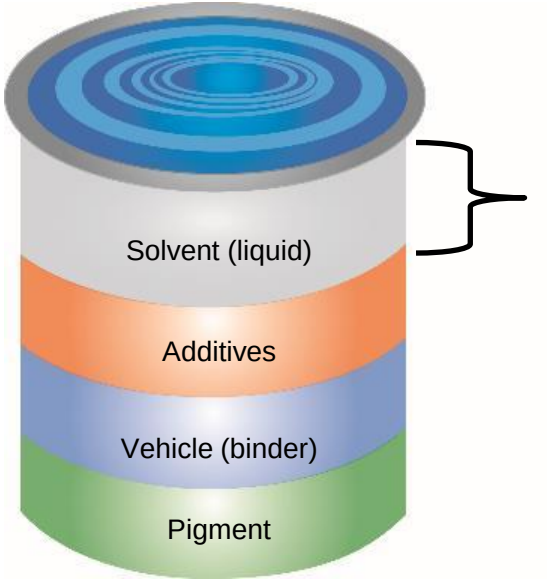
WHAT IS A CARRIER?

CARRIERS

Carrier is a liquid used to dissolve paint solids, providing a way to get the pigment and binder from the container onto the surface being coated



Types of carriers

- ***Water***
  - Typical in wall coatings
- ***Mineral spirits***
  - Used in alkyd coatings
- ***Denatured alcohol***
  - Common for shellac
- ***Co-solvents***
  - Used with acrylic binders

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FUNCTIONS AND ATTRIBUTES

CARRIERS

Function of carrier

- Primary function is to provide a way to get the coating ingredients onto the surface

Performance of the carrier

Physical attributes:

- Wetting of surface contributing to adhesion of the coating
- Carrier is undesirable after application and must evaporate from the film

Application attributes:

- Surface wetting
- Easy of application
- Flow and leveling

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TYPES OF CARRIERS USED IN EXTERIOR WALL COATINGS

CARRIERS

- Majority of Sika wall coatings products use a water carrier in combination with co-solvents

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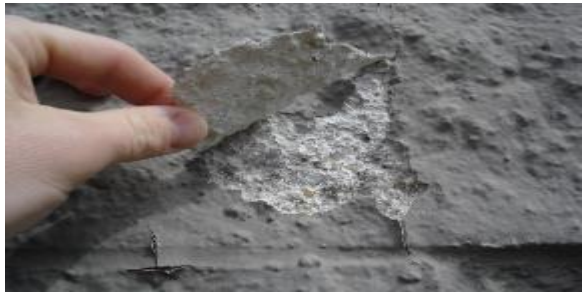
IMPACT OF CARRIER ON PERFORMANCE

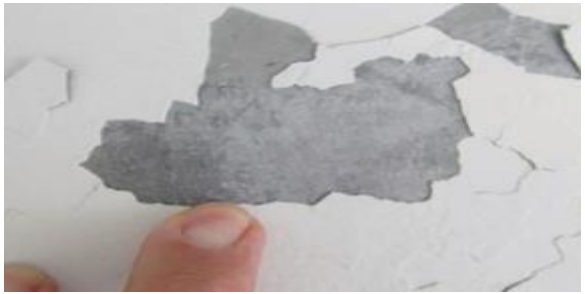
CARRIERS

Carrier impact performance of coatings



Improper film formation

- Water based coating used in cold temperature
- Incomplete coalescence
- Result: widespread delamination



Loss of adhesion

- Solvent coating used over alkaline substrate
- Reaction between oils in coating and salts in concrete
- Soapy layer forms between substrate and coating

Improper film formation

- Solvent based coating used in hot weather
- Excessive solvent flash
- Chalking and color variation

BUILDING TRUST

WHAT YOU NEED TO KNOW

CARRIERS

Water

- Water carriers are more sensitive to temperature extremes
- Low temperature application can result in improper coalescence

Solvent

- Solvent based carriers require ventilation and air movement
- Can experience rapid drying do to solvent flash point in hot weather
- Will increase VOC content of coating

BUILDING TRUST

FUNCTIONS AND ATTRIBUTES

ADDITIVES

Additives are additional ingredients that effect and enhance many paint and coating properties

Thickeners/rheology modifiers

- Provide adequate viscosity
- Control sag, wet film thickness
- Resist spatter when rolled
- Level and flow, reduce pinholes

Preservatives

- Two types used in latex paints
- In can, wet state preservatives keep bacteria from growing, consuming cellulose based thickeners
- Dry film preservative discourages mildew from growing on paint surface

Surfactants

- Specialized soaps
- Keep pigments dispersed
- Help with surface “wetting”
- Provide compatibility with colorants

Defoamers

Break bubbles as they are formed when:

- The paint is mixed in the factory
- It is shaken or stirred
- It is applied to the surface

BUILDING TRUST

FUNCTIONS AND ATTRIBUTES

ADDITIVES

Additives are additional ingredients that effect and enhance many paint and coating properties

Co-solvents

- Additional liquids other than water
- Aid in film formation, control evaporation
- Help resist damage from freezing
- Contribute to flow and open time

BUILDING TRUST

IMPACT OF ADDITIVES ON PERFORMANCE

ADDITIVES

Additive's impact performance of coatings

No in-can preservative

- Coating without or improper dosing for formula
- Air leakage starts biological growth
- Organisms consume water carrier, leaving solids behind

No dry film preservative

- Coating without or improper dosing for formula
- Excessive growth in high moisture area
- Staining of coating

No Defoamers

- Coating without enough Defoamers
- Excessive air entrapment
- Pinholes and bubbles in film

BUILDING TRUST

WHAT YOU NEED TO KNOW

ADDITIVES

Preservatives

- Some environments require the use of coatings containing various preservatives
- No guarantee of success: coatings with algaecides can see algae/fungi growth

Surfactants

- Staining can appear on all colors
- More common in darker colors and colors utilizing a high liquid pigment load
- Usually a brown stain resembling chewing tobacco
- Almost always corrects itself with time

BUILDING TRUST

SCIENCE OF COALESCENCE

COATINGS CHEMISTRY

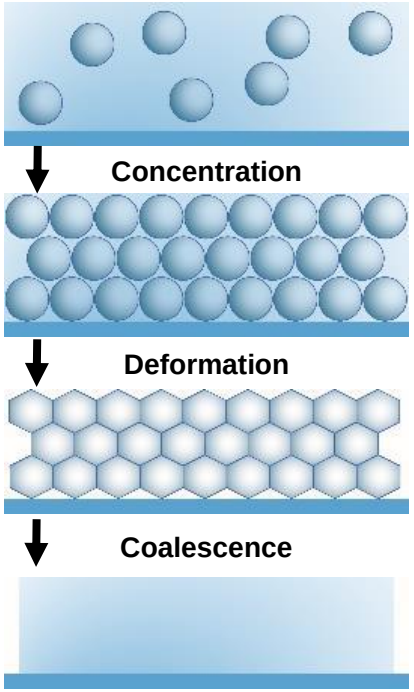
- Mechanics of coalescence
- Conditions that impact coalescence
- Coalescence and performance
- Indications of improper coalescence

BUILDING TRUST

HOW IT WORKS

SCIENCE OF COALESCENCE

- **Coalescence** is the process where individual particles in an emulsion completely join together to form a continuous film
- **Coalescing agents** are included in the coating formulation to soften or “solvate” the acrylic resin particles
- Common latent solvents or **cosolvents** are butyl cellosolve and butyl carbitol



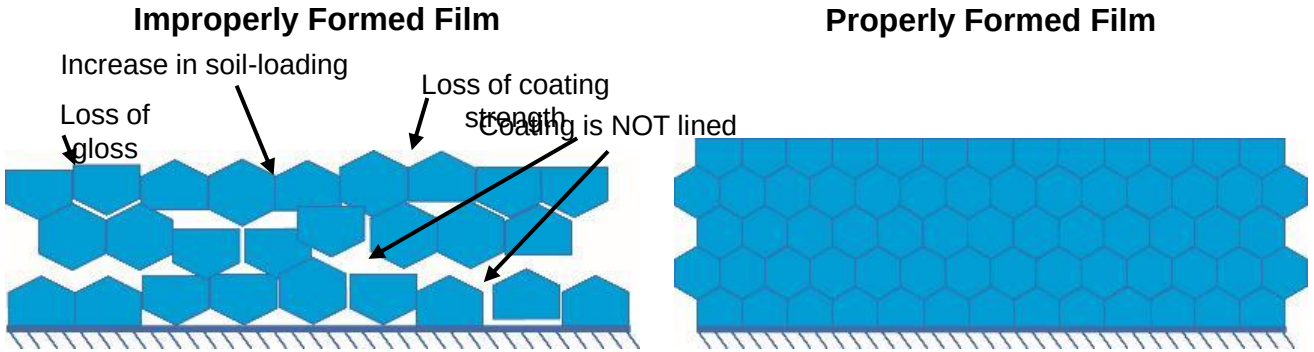
Acrylic wall coating cure through the process of coalescence

BUILDING TRUST

CONDITIONS THAT IMPACT COALESCENCE

SCIENCE OF COALESCENCE

- Effectiveness of **cosolvents** diminishes at low temperatures
- Not potent enough at low temperatures to soften acrylic particles
- **Cosolvents** continue to evaporate at cooler temperatures
- Excessive humidity can also inhibit the performance of **cosolvents**
- Ideal ambient conditions for curing lie between 50-80°F (10-27°C)

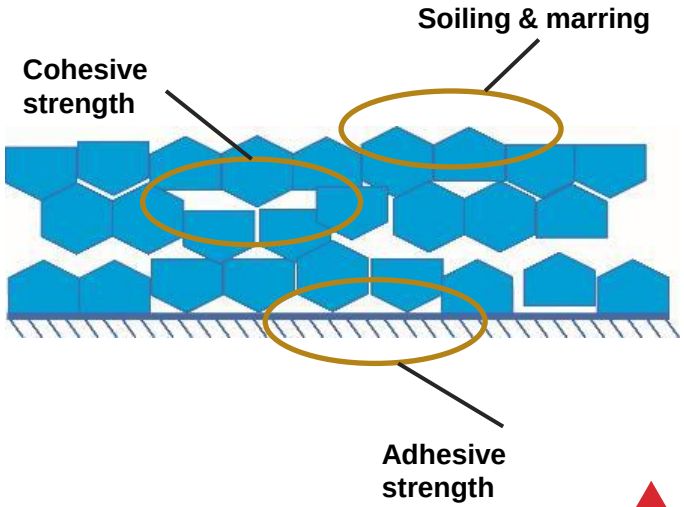


BUILDING TRUST

COALESCENCE AND PERFORMANCE

SCIENCE OF COALESCENCE

- Achieving proper film coalescence is a basic requirement to a coatings performance and service life
- Properties impacted:
  - Cohesive strength
  - Marring and scuff resistance
  - Loss of sheen
  - Increased dirt pick up
  - Water **permeance**



BUILDING TRUST

IMPROPER COALESCENCE

SCIENCE OF COALESCENCE

BUILDING TRUST

INDICATIONS OF IMPROPER COALESCENCE

SCIENCE OF COALESCENCE

- Improper coalescence can lead to diminished physical properties
- Visual indicators that a coating has cured improperly:
  - Chalking or dusting
  - Loss of sheen
  - Poor adhesion
  - Higher permeance

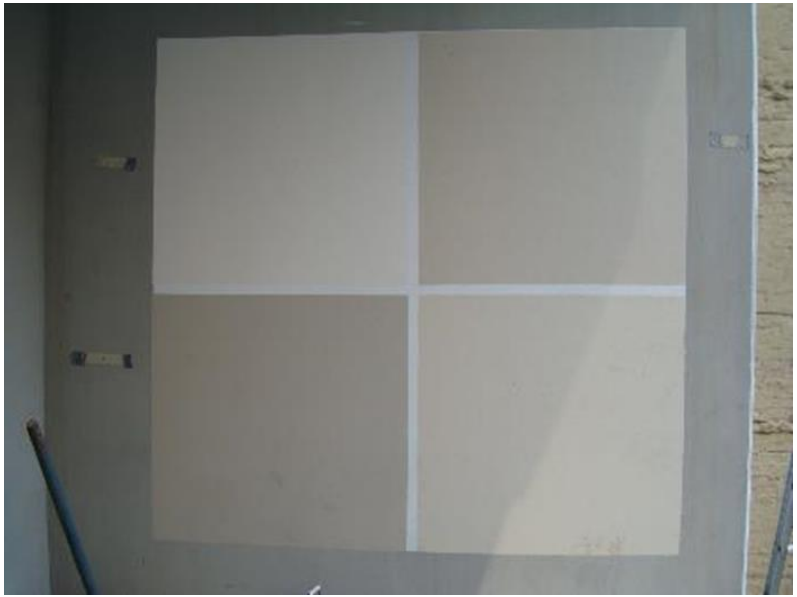
BUILDING TRUST

SECTION REVIEW

Sika Thorocoat Wall Coatings – Material Selection

TOPICS

MATERIAL SELECTION



- Anatomy of a coating
- Types of exterior coatings
- Key Properties
- Selection criteria

WHY NOT PAINT???????

HIGH PERFORMANCE COATINGS FOR PROTECTION AND PERFORMANCE

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	NR

Coatings

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

Paints

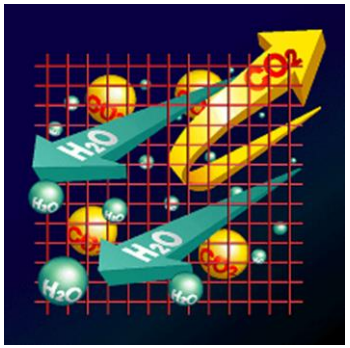
- Primary function is aesthetic
- Interior and exterior, multi-surface use
- Often formulated with resin blends
- Generally thinner film build materials

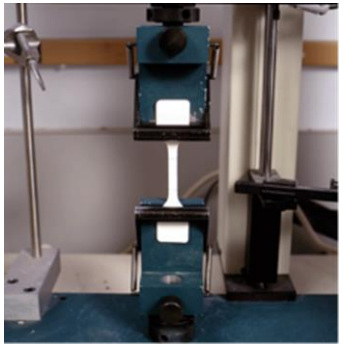
*Some high performance coatings are formulated for thin mil applications

BUILDING TRUST

PAINT VS. COATINGS

- WATERPROOF
- FLEXIBLE/ ELASTOMERIC
- ANTI- CARBONATION- COVER
- COLOR/ TEXTURE
- PERMEABILITY
- UV RESISTANCE
- DIRT PICK UP/ RESISTANCE
- LIGHT REFLECTANCE





Paint only gives you color – Coatings give you Performance with Aesthetics

PROJECT BEAUTIFICATION + PERFORMANCE

SELECTION CRITERIA

MATERIAL SELECTION

Application

- Rheology
- Film build
- Flow and leveling
- Hiding power
- Application temp. range
- Recoat time

Durability

- Adhesion
- Permeability
- Elongation and recovery
- Carbon dioxide diffusion
- Water repellency
- Crack bridging
- Flexibility
- UV Resistance

Aesthetics + Maintenance

- Color selection
- Color retention
- Texture
- Sheen
- Soiling resistance, cleanability
- Abrasion resistance
- Touch up + recoat

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

HB Flexible

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

HB Elastomeric

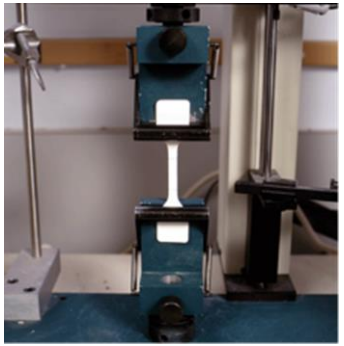
- Primary function: waterproofing
- Film build: 12-20 DFT
- Commonly called “elastomeric”
- Primary use: waterproofing
- Limitations: adhesion, dirt pu

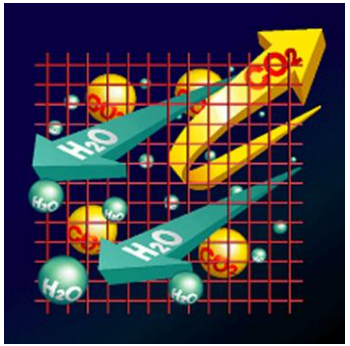
*Some thin mil materials can have advanced physical properties

KEY PERFORMANCE PROPERTIES

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

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
Aspergillus oryzae, 7 days	No growth	(Fed. Std. 141, Method 6152
Aspergillus niger, 21 days	No growth	and 6271.1)
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

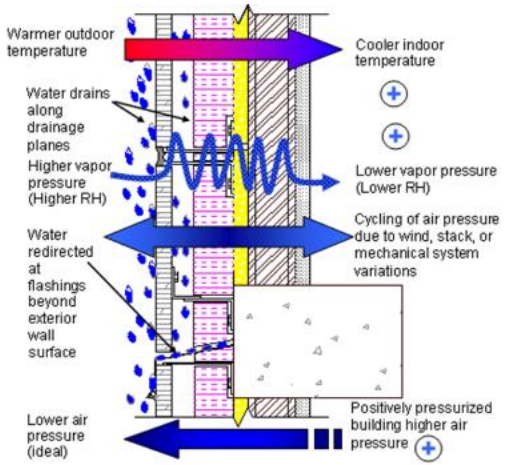
PERMEABILITY

KEY PERFORMANCE PROPERTIES

Importance: Passage/ migration of water vapor

Key concepts

- Water vapor:
  - Air contains moisture that can condense on cool surfaces within wall assembly
- In a nutshell:
  - Vapor is H2O in gaseous state
  - Moisture moves from warm to cold
  - High concentration to low concentration
  - Differential pressure drives flow



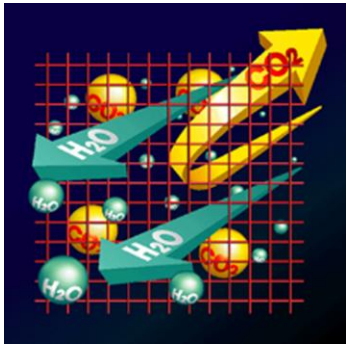
Summer Condition

>10 PERMS = "~~Breathable~~ Vapor Permeable Coating"

BUILDING TRUST

ANTI-CARBONATION

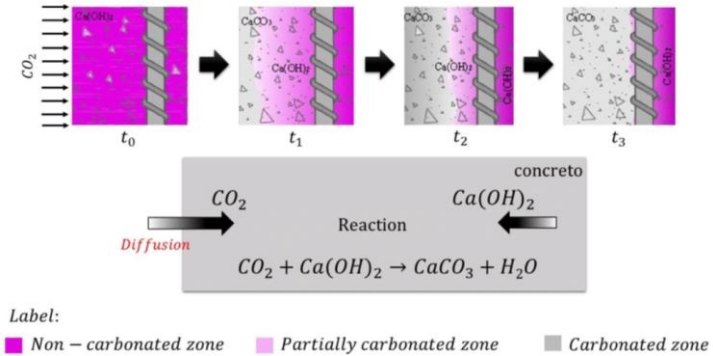
KEY PERFORMANCE PROPERTIES



Key concepts

- Carbonation of concrete (corrosion):
  - Reaction between acidic gasses in atmosphere and the products of cement hydration in concrete

- Contributing factors:
  - High levels of CO_2
  - Moisture
  - Presence of calcium hydroxide



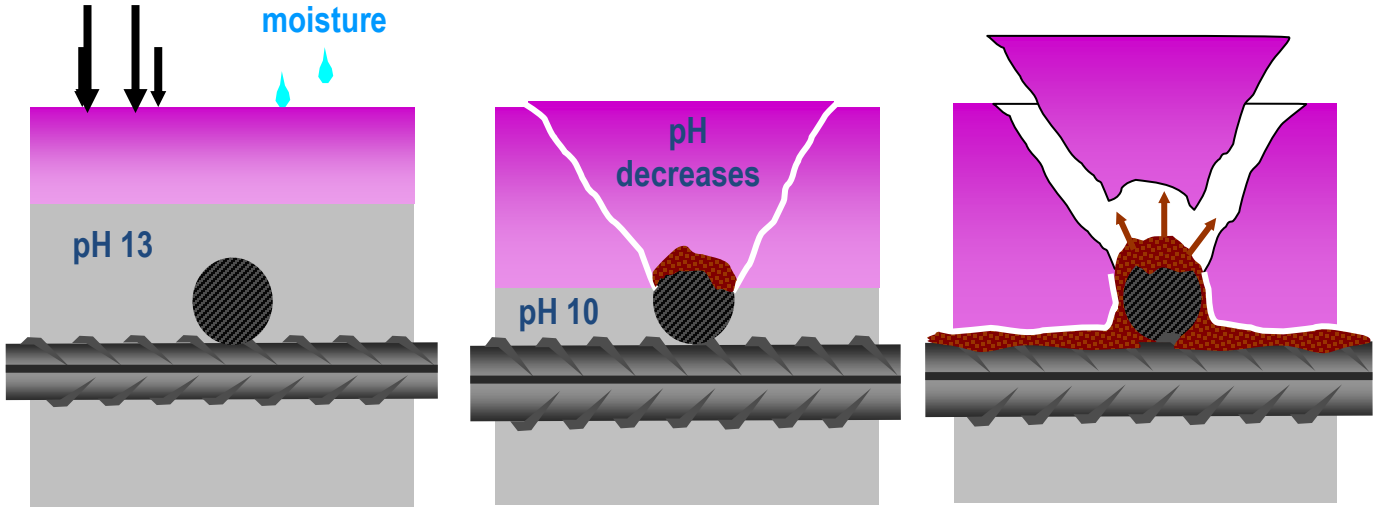
Diffusion of dilute carbon dioxide in concrete

ANTI-CARBONATION

KEY PERFORMANCE PROPERTIES

How carbonation happens

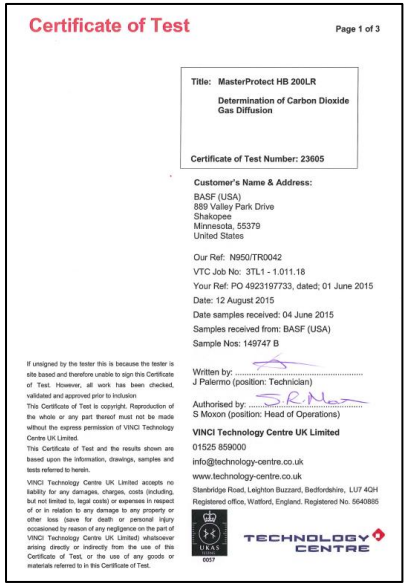
Atmospheric Carbon dioxide



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 - 1.011.18

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

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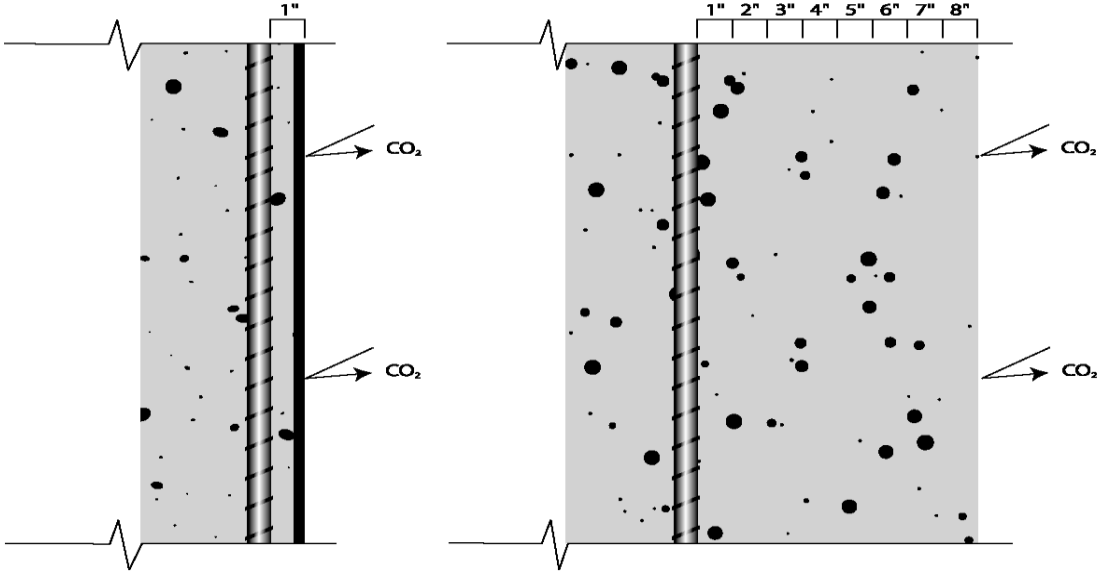


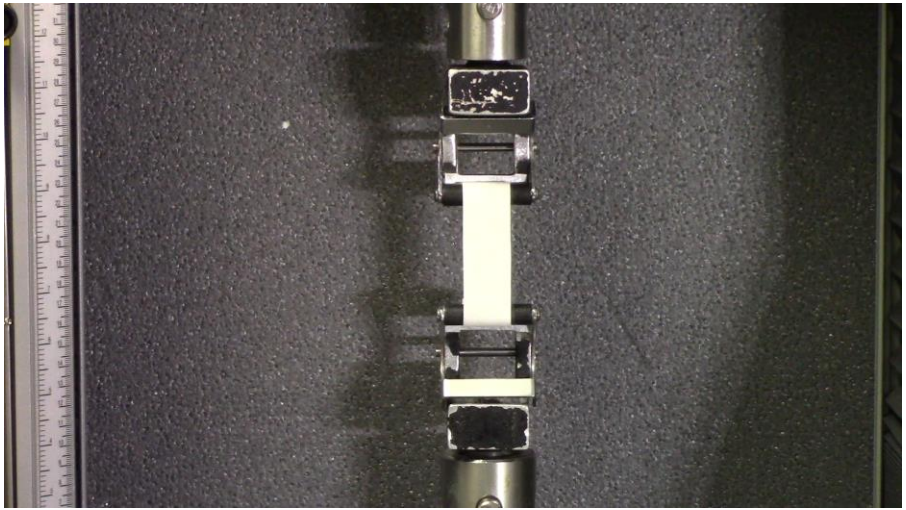
Equivalent thickness of concrete Sc= 8"

Concrete with inadequate cover can be protected with coatings

FLEXIBILITY VS. ELONGATION

KEY PERFORMANCE PROPERTIES

Importance: Accommodate thermal movement within substrate



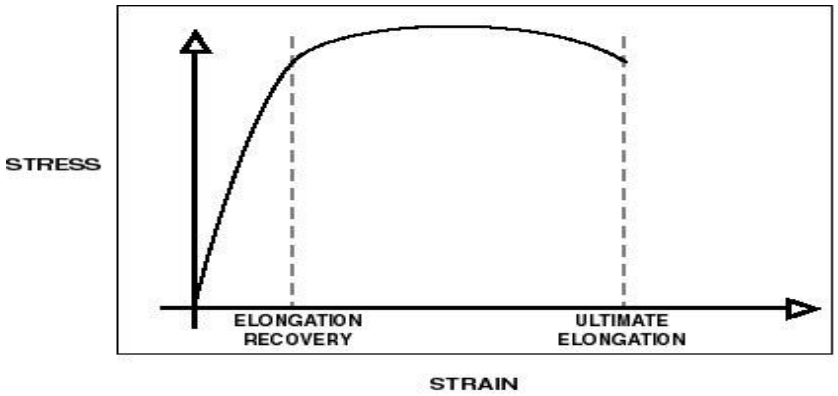
BEWARE of coatings that report elongation without recovery %

Key concepts

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

ELONGATION RECOVERY

- 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.
- Ability to stretch and recover= long term performance.



BUILDING TRUST

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.

BUILDING TRUST

WHAT KIND OF CRACK IS IT???

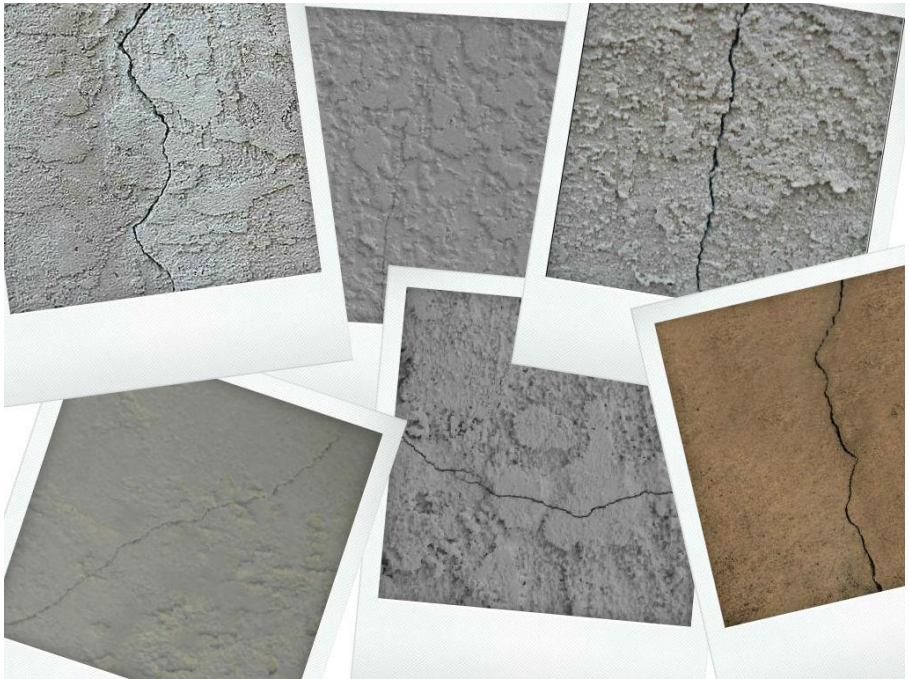
Open cracks on a precast panels

Surface cracks on a precast panel

Hairline cracks on a stucco wall

DYNAMIC VS. STRUCTURAL MOVEMENT

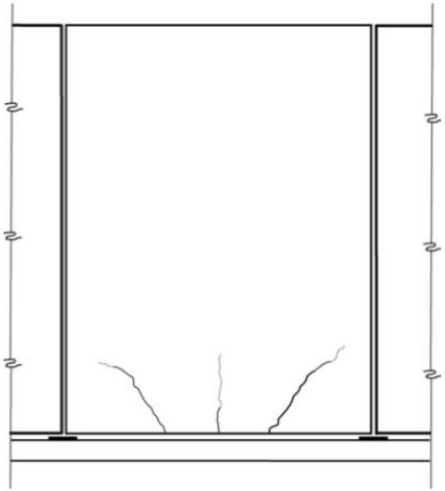
IS THE MOVEMENT THERMALLY DYNAMIC ???

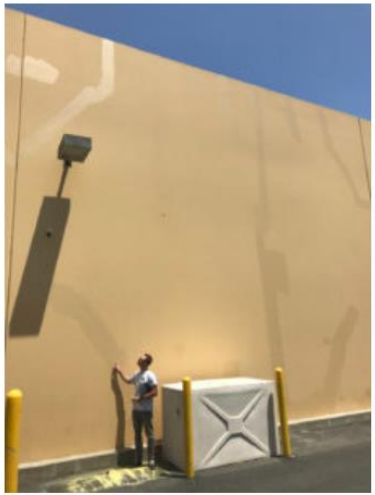


Structural

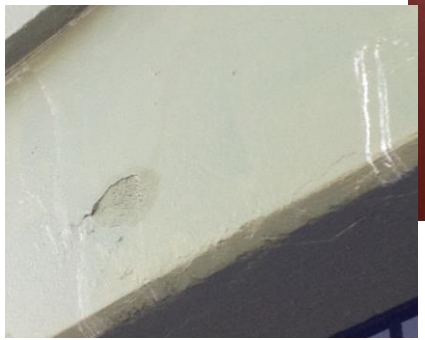
Settlement

Shrinkage





WHY NO ELASTOMERICS ON SOFFITS/ UNDERSIDE????



BUILDING TRUST

WHAT ARE THE COATING OPTIONS?

- HB Elastomeric Coatings
  - **Best for substrates that may crack (thermally dynamic) Elongation + Recovery**
- HB Flexible Coatings
- **Best adhesion to substrate, highest carbonation protection- monolithic walls**

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

WALL COATING PORTFOLIO

SIKA CONSTRUCTION SYSTEMS

Thin Mil Coatings

- Sika Thorocoat 250
- Sika Thorocoat 350

High Build Coatings

- Sika Thorocoat 200
- Sika Thorocoat 200 LR
- Sika Thorocoat 300 SB
- Sika Thorocoat 400
- Sika Thorocoat 400 DOT

Elastomeric Coatings

- Sika Thorocoat 750
- Sika Thorocoat 850

BUILDING TRUST

THIN MIL COATINGS

SIKA WALL COATING PORTFOLIO

Sika Thorocoat 250

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

Sika Thorocoat 350 Aquasol

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

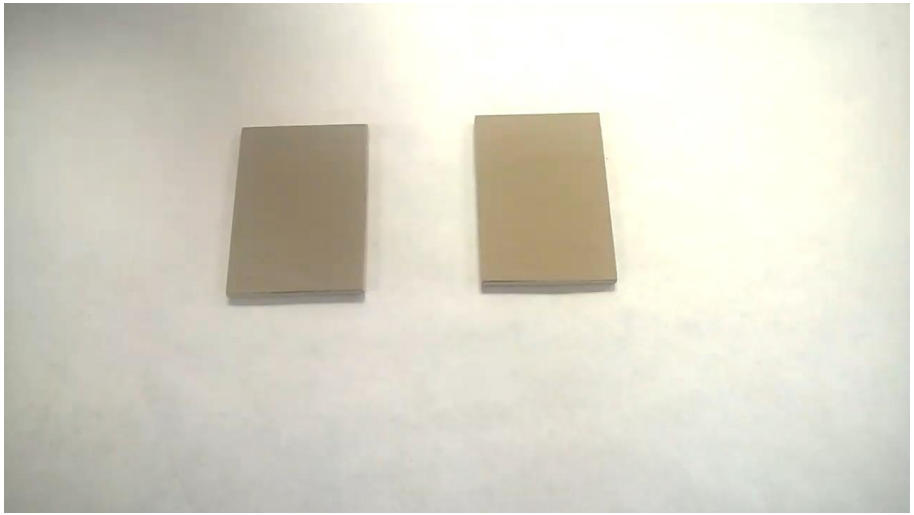
Common uses + benefits

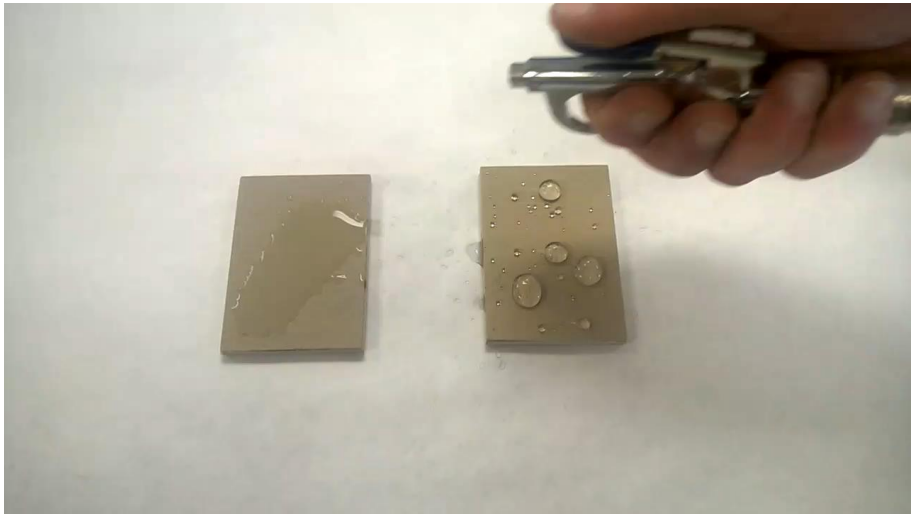
- Substrates
  - Concrete
  - Masonry
  - Stucco
  - Existing coatings
- Application method
  - Brush
  - Roll
  - Spray
- Broad color range, available in 4 tint bases

BUILDING TRUST

SIKA THOROCOAT 350 AQUASOL

SIKA WALL COATINGS PORTFOLIO

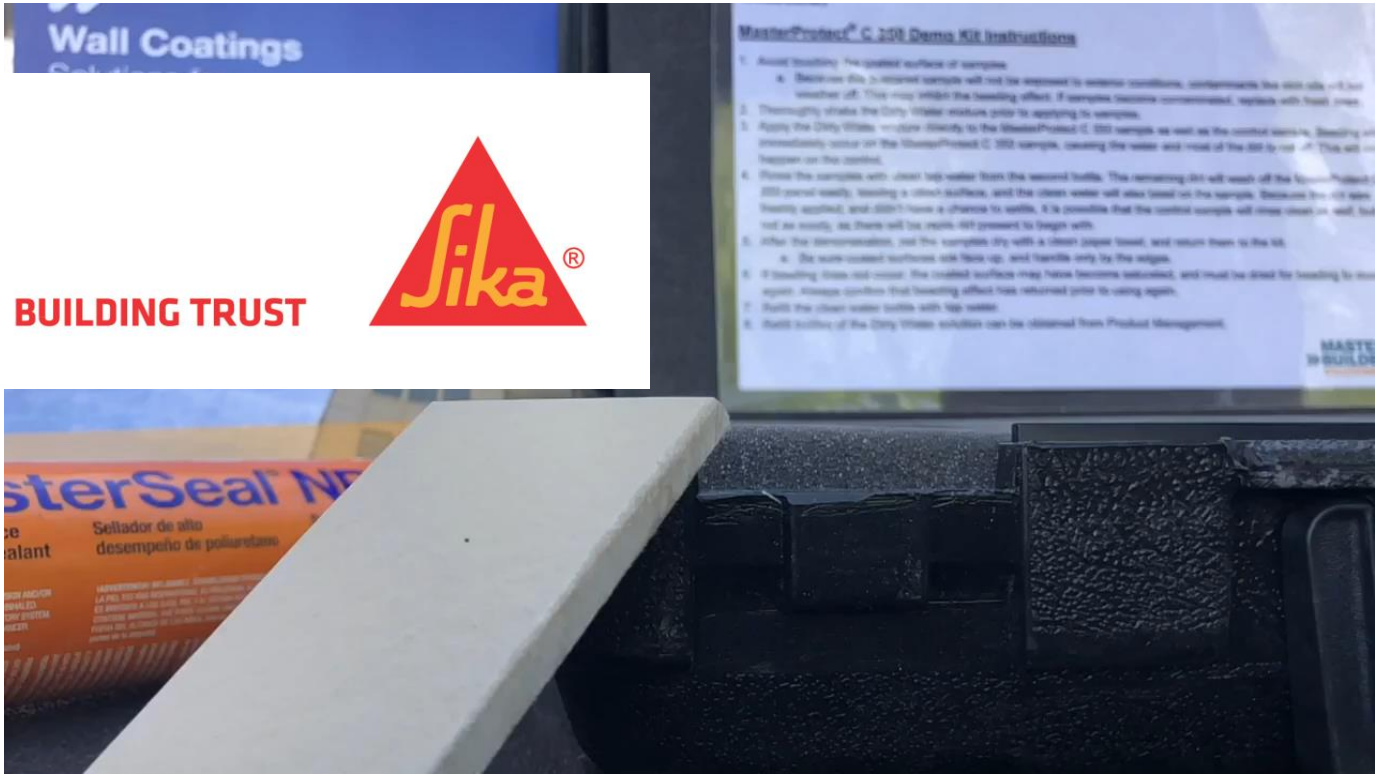




BUILDING TRUST

THIN MIL COATINGS

SIKA WALL COATING PORTFOLIO



HIGH BUILD COATINGS

SIKA WALL COATING PORTFOLIO

Sika Thorocoat 200

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

Common uses + benefits

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

BUILDING TRUST

HIGH BUILD COATINGS

SIKA WALL COATING PORTFOLIO

Sika Thorocoat 200 LR

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

Sika Thorocoat 300 SB

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

Common uses + benefits

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

BUILDING TRUST

HIGH BUILD COATINGS

SIKA WALL COATING PORTFOLIO

Sika Thorocoat 400

- Water-based, 100% acrylic
- Smooth and textures
- Broad range of colors
- Waterproofing protection

Sika Thorocoat 400 DOT

- Water-based, 100% acrylic
- Fine texture
- Salt spray resistance

Common uses + benefits

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

BUILDING TRUST

ELASTOMERIC COATINGS

SIKA WALL COATING PORTFOLIO

Sika Thorocoat 750

- Water-based, 100% acrylic
- Smooth and textures
- Broad range of colors
- Waterproofing protection
- Resistance to algae growth

Common uses + benefits

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

BUILDING TRUST

ELASTOMERIC COATINGS

SIKA WALL COATING PORTFOLIO

Sika Thorocoat 850

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

Common uses + benefits

- Substrates
  - Concrete
  - Masonry
  - Stucco
- Application method
  - Brush
  - Roll
  - Spray
- Anti-carbonation
- Permeable
- Resistance to wind driven

BUILDING TRUST

HANDS-ON APPLICATION

SIKA WALL COATING PORTFOLIO

Application and Coverage Rates

Sika Thorocoat 350

- 180-280 ft²/gal*
- 5-8 wet mils per coat
- 2-3 dry mils per coat
- 41% volume solids

Sika Thorocoat 200

- 75-125 ft²/gal*
- 13-22 wet mils per coat
- 5-8 dry mils per coat
- 39% volume solids

Sika Thorocoat 750

- 180-280 ft²/gal*
- 16-20 wet mils per coat
- 8-10 dry mils per coat
- 50% volume solids

*Estimated coverage rate on a smooth surface

BUILDING TRUST

MATERIAL INSTALLATION-KNOW YOUR RECOAT TIMES:

- **Primers:** Sika Thorocoat 100 Primer; Sika Thorocoat 150 Primer
  - 2-4 hours cure before coating
- **Patching compounds and block fillers:** Sika Thorocoat 748; Sika Thorocoat 749
  - 12 hours cure before coating
- **Thin Mil Coatings:** Sika Thorocoat 250; Sika Thorocoat C 350 Aquasol
  - 2-4 hours cure before coating
- **High Build Coatings:** Sika Thorocoat 100 TW; Sika Thorocoat 200; Sika Thorocoat 300 SB Artic; Sika Thorocoat 400
  - 6 hours cure before coating
- **Elastomerics:** Sika Thorolastic 750; Sika Thorolastic 850
  - 12 hours cure before coating

BUILDING TRUST

OBJECTIVES

TROUBLESHOOTING WALL COATING APPLICATIONS

- Brief overview of proper installation practices
- Discuss common issues that cause call backs for Acrylic Wall Coatings
- Present possible causes and repairs to these issues
- Utilize Wall Coating Troubleshooting Guide resource to find repairs and solutions

APPLICATION TECHNIQUES/COMMON ISSUES

TROUBLESHOOTING WALL COATINGS

Installation Technique Issues

- Texture
- Zebra Stripes
- Lap Marks

Surface Preparation

- Peeling
- Pinholes
- Blistering & Delamination

Other Issues

- Efflorescence
- Surfactant Leaching
- Building Envelope
- Mock Ups

APPLICATION TECHNIQUES

TROUBLESHOOTING WALL COATINGS

Texture

- Can alter appearance of color
- Can be altered by a number of variables
  - Nap length
  - Application method
  - Texture of coating

APPLICATION TECHNIQUES

TROUBLESHOOTING WALL COATINGS

Solutions to Application Issues

- Avoid using inappropriate nap length
- Pre-dampen and shake out roller covers
- Avoid paint build up on roller ends
- Use quality equipment
- Back roll in one direction
- Keep a wet edge and pick natural stopping points

EXISTING COATING OVER 40-50 MILS

EFFLORESCENCE

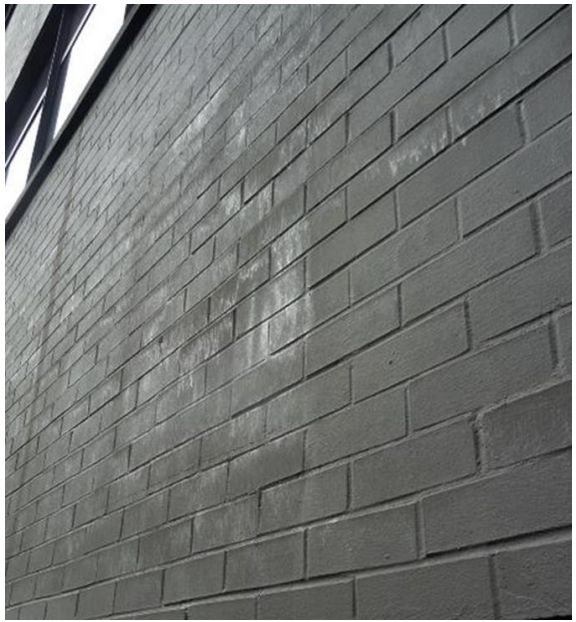
TROUBLESHOOTING COATINGS

Efflorescence

- Appearance of white residue from within substrate
- Water dissolved soluble salts, move to surface through temperature changes
- Moisture evaporates once reaching the surface leaving salt deposit
- It can take months for new buildings to dry out
- Coatings shouldn’t be applied over efflorescence
- Never use high pressure washing to remove salts, use least aggressive means possible

SURFACTANT LEACHING

TROUBLESHOOTING WALL COATINGS



Surfactant Leaching

- Glycols or soaps that leach onto the surface of water based coatings
- Surfactants evaporate slower and in cooler temperatures and damp conditions can be left behind
- Rain will typically wash away surfactants that remain behind
- Not detrimental to coating performance, purely aesthetic
- May only be visible from one angle


Sterling
24-HOUR
VIDEO
SURVEILLANCE
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BUILDING ENCLOSURE TROUBLESHOOTING WALL COATINGS

Building Envelope

- Poor building envelope can reveal issues with application, but should be treated separately
- Any point of access for water, salt, contaminants, is a point of weakness to the building envelope
- In any call back look for patterns to reveal possible building envelope issues

BUILDING ENCLOSURE

TROUBLESHOOTING WALL COATINGS

Coatings alone cannot protect a building

> **Inspect** and assure that all possible points of entry are sealed tight **before** starting a coatings application

JOINT SEALANT TECHNOLOGIES AND PROPERTIES

JIM MCKINEY

BUILDING TRUST

SEALANT FUNDAMENTALS

LEARNING OBJECTIVES

Todays discussion will revolve around the following:

- The key functions and properties of Joint Sealants
- The role of bond breaking materials
- Importance of sealant dimension

CHOOSING THE RIGHT SEALANT

1. We need it to stick
2. We need it to move
3. We need it to last

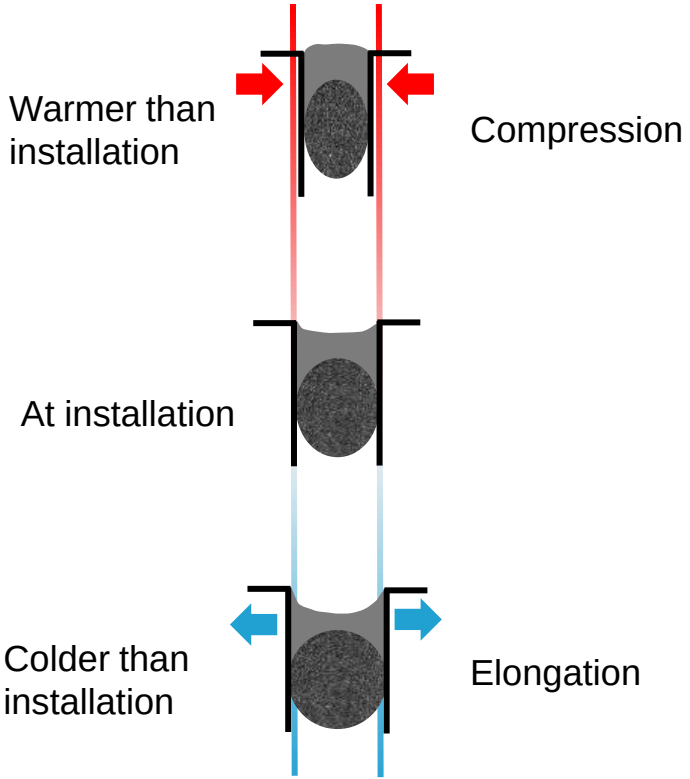
SIMPLICITY SPEED IMPACT

SEALANT FUNDAMENTALS
KEY PROPERTIES

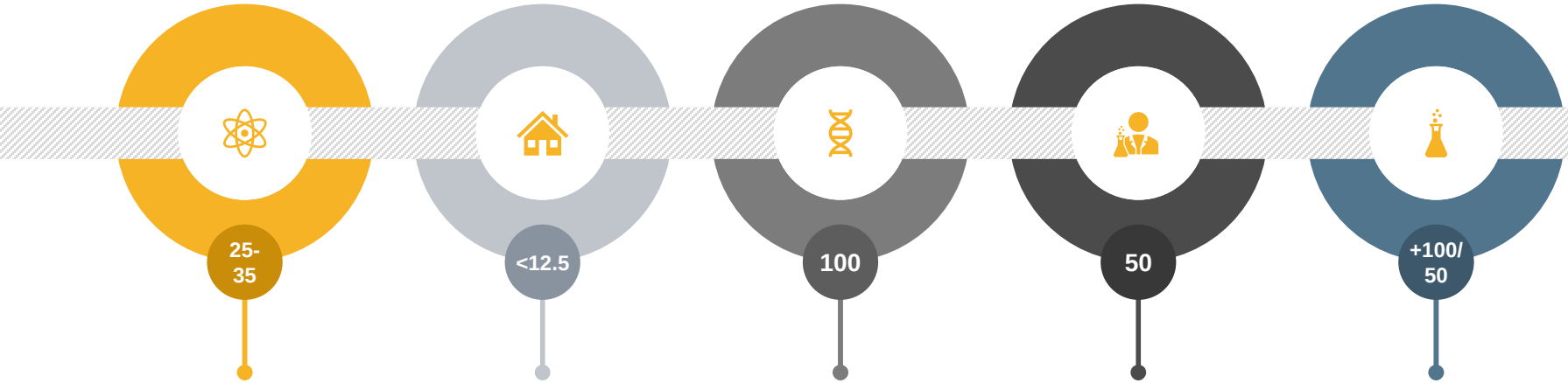
Movement Capability

- Ability to handle repeated cycles of elongation and compression
  - Most often caused by temperature changes

- ASTM C 719



SEALANT CHEMISTRY



Class 25-35
Adhere to many substrates
Color options
UV Stable
Good movement
Paintable
Economical

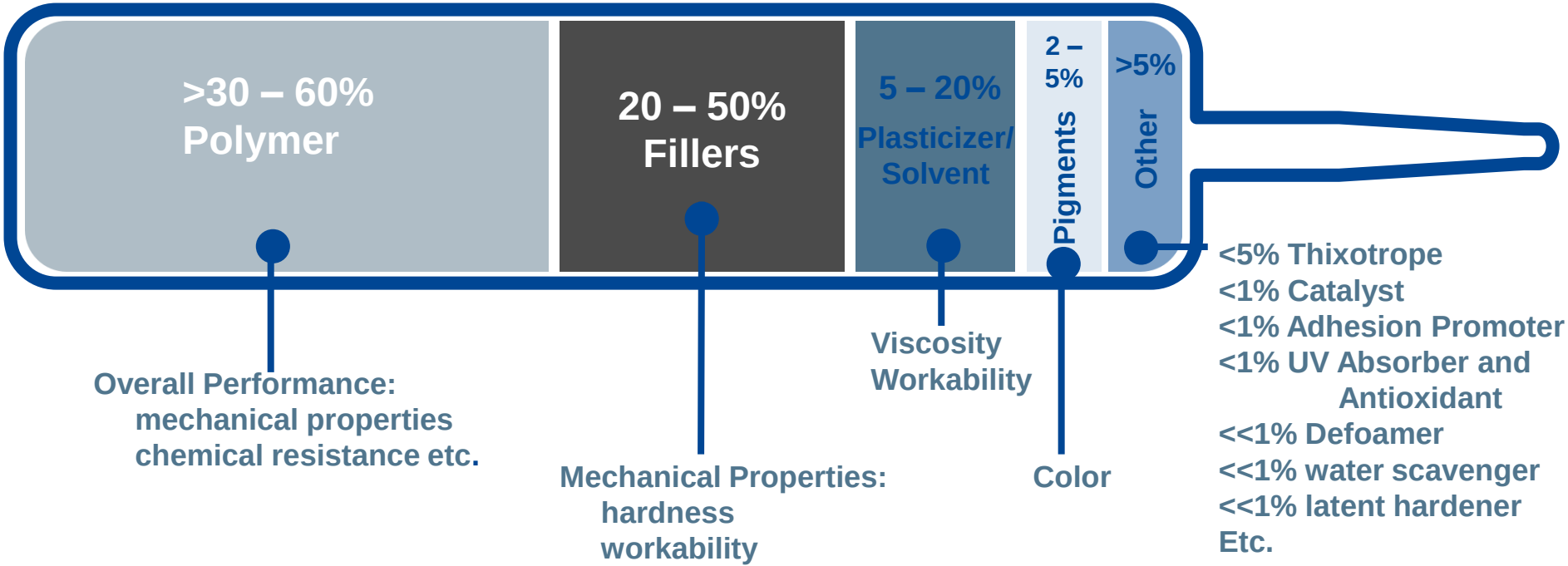
<Class 12.5
Typically interior
Low moving class
Endless color options
Economical

Class 100
Organic chemistry
UV stable
Very low modulus
Low color solutions
Compatible with silicone

Class 50
Polymer modified
Color options
UV stable
Will adhere to silicone res.
Paintable
High movement

Class +100/50
Polymer modified
UV stable
Very low modulus
Paintable
Will adhere to silicone res.

SEALANT CHEMISTRY
SEALANT FORMULA BASICS



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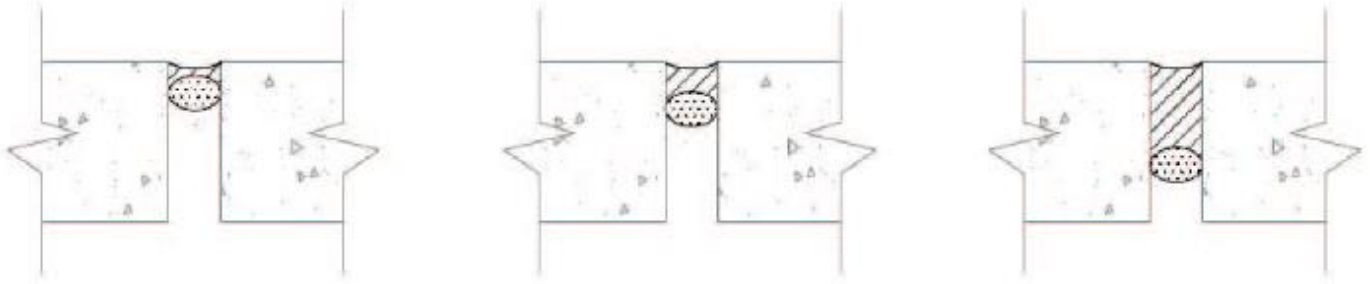
SEALANT SINGLE COMPONENT – MULTI-COMPONENT

JOINT DEPTH AND SIZE

- Joint Depth
  - Max Joint Depth = ½”
  - Min Joint Depth = ¼”
- Min/Max Width
  - Min Joint Width = ¼”
  - Max Joint Width = 3”



Too Thin/Not Enough | Normal: 1/4”-1/2” | Too Thick/Too Deep

The depth of the joint should always be half the width with out exceeding the minimum ¼” or maximum ½”. The depth is always measured at the center of the joint or the top of the backer rod.

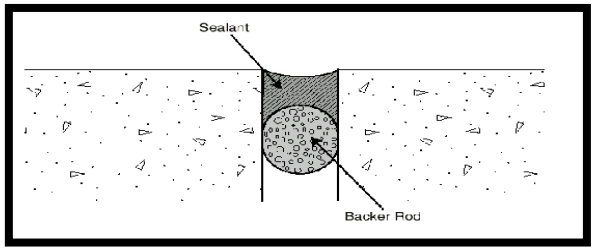
BUILDING TRUST

Sealant Fundamentals

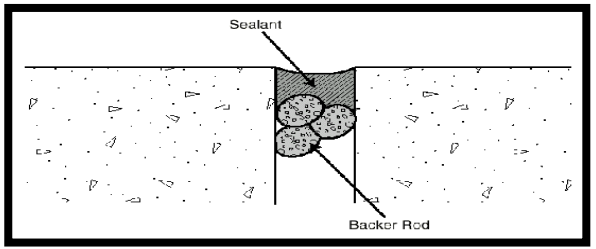
Inserting Backer rod

Joint Backing

- **Controls Sealant Depth**
- **Prevents 3-Sided Adhesion**
- **Provides a Base for Tooling**



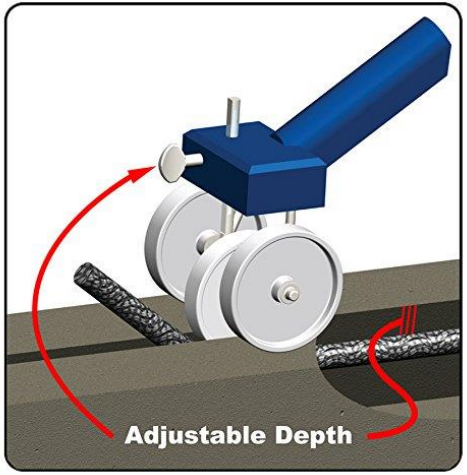
Correct use of backer-rod in joint



Incorrect use of backer-rod in joint

BUILDING TRUST

INSERTING BACKER ROD



BUILDING TRUST

Sealant Installation

Sealant Installation

Installation/Tooling

- Joint is first filled with sealant
- Then sealant is tooled to concave appearance
- This maximizes adhesion and creates proper ”hourglass” shape

PROPER TOOLING

SIMPLICITY BASED IMPACT

PROPER TOOLING

SIMPLICITY BASED IMPACT

TROUBLESHOOTING ADHESIVE FAILURE

- Improper Backing
  - Incorrect type or size of backing material
  - Does not provide adequate bond breaker
  - Diminishes “hourglass” shape

TROUBLESHOOTING REVIEW QUESTION

- What is a plausible explanation for this type of adhesive failure?

TROUBLESHOOTING ADHESIVE FAILURE

- Reasons for Adhesive Failure
  - Improper Surface Preparation
  - Improper Thickness
  - Improper Backing
  - Bond Surface Area
  - Substrate Movement
  - Incompatible Materials
  - Improper Mixing/Cure Failure
  - Incorrect Sealant Selection

Sealant pull test demonstration

ASTM C 1521

5 Minute

- Non-Destructive DOWEL Test

Sealant Installation
Adhesion Testing

Non-Destructive Field Adhesion Test

TOPICS

MATERIAL INSTALLATION

- Safety
- Equipment
- Installation Methods

BUILDING TRUST

SAFETY

MATERIAL INSTALLATION

- Use proper PPE: safety glasses, respirator, gloves, hard hat etc.
- Secure buckets
- Secure equipment
- Check equipment: ladders, scaffold, aerial work platform
- Have proper safety harness and lanyard
- Safety is a team effort

Everyone is Responsible for Safety

BUILDING TRUST

SAFETY CONSIDERATIONS

WALL COATING APPLICATIONS

Typical Exposures

- Ladders
- Aerial Work Platforms (AWP)
- Scaffolding
- Swing stage
- Unprotected sides, wall openings, floor openings

BUILDING TRUST

SAFETY CONSIDERATIONS

WALL COATING APPLICATIONS

General Best Practices

- Wear a harness
- Always stay connected
- Make sure your harness fits
- Use guard rails or lifelines
- Inspect FPE before using
- Be aware of holes and openings

“Know when to say no”

BUILDING TRUST

SAFETY CONSIDERATIONS

WALL COATING APPLICATIONS

Additional Resources

SWRI website

- OSHA Alliance
- Fall Hazard Awareness Course
- Toolbox Talks
- Safety & Health Field Manual
- Safety Video Library

www.swrionline.org

BUILDING TRUST

EQUIPMENT REVIEW

- **Ph Pencil**
- Ribbon Style mixing paddles
- Heavy duty slow speed drill
- Heavy duty roller frames
- Covers and brushes – different sizes
- Extension poles
- Different types of tapes
- Safety glasses – different shades
- Bucket grids and trays
- Camera/phone
- Binoculars
- Temp gun
- Extra buckets/touch up buckets
- Sharpie

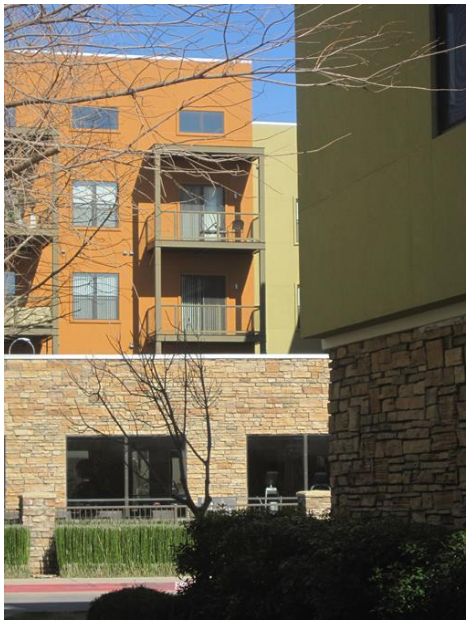
SIMPLICITY SPEED IMPACT

PREPARATION

MATERIAL INSTALLATION

Prepare coating before application:

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



BUILDING TRUST

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.**

SIMPLICITY SPEED IMPACT

IMPACT ON AESTHETIC

MATERIAL INSTALLATION

- There is a proper way to installing a coating
- Impacts **Function** and **Aesthetics**
- Art and Science

Roller Lap Marks

Roller direction marks

BUILDING TRUST

EQUIPMENT

MATERIAL INSTALLATION

Rollers

- Cover types/Composition
- Specialized Rollers

Brushes

- Types Composition
- Use

BUILDING TRUST

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" very rough

SIMPLIFIED IMPACT

BUILDING TRUST

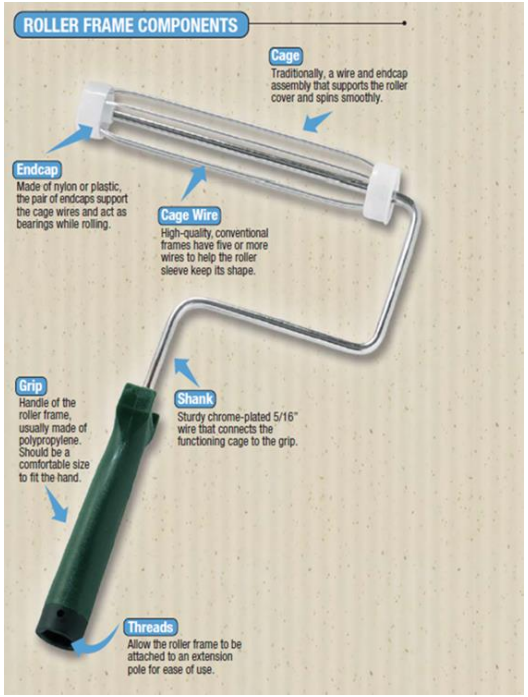
EQUIPMENT REVIEW

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

SIMPLICITY SPEED IMPACT

EQUIPMENT

MATERIAL INSTALLATION



Roller Quality

- Strong frame Shank decreases roller marks
- Strong Cage Wires that won't collapse
- Need to freely spin for proper back-rolling

BUILDING TRUST

EQUIPMENT

MATERIAL INSTALLATION

Brushes

- Available in natural and synthetic fibers
- Synthetic best for Acrylics
- Water slowly degrades natural fibers

Courtesy of Wooster Brush Company www.wooster.com

BUILDING TRUST

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.**

CUT IN AND STIPPLE WITH A BRUSH

APPLICATION METHODS

METHODS

MATERIAL INSTALLATION

Rolling

- “Priming” roller with water
- Do not starve the roller by painting out too much area
  - Compresses fibers
  - More difficult to reload
- Back Roll in one direction

BUILDING TRUST

METHODS

MATERIAL INSTALLATION

Lap Marks

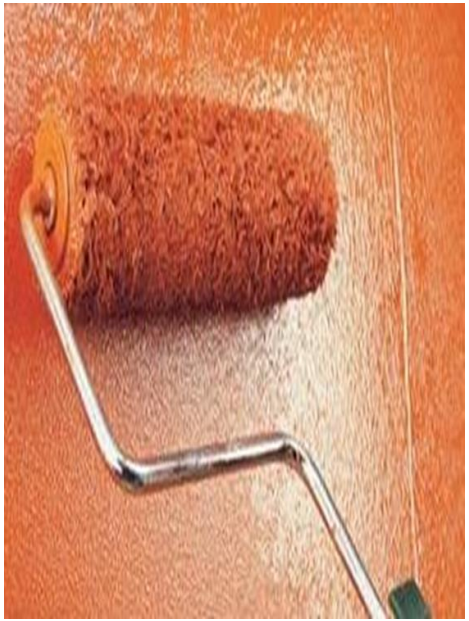
- Appearance of a denser color or higher gloss where wet and dry layers overlap during installation

Cause

- Failure to maintain a “wet edge” when applying paint

Solution

- Use the “brushing from wet to dry” technique: Apply paint toward the unpainted area and then back into the just painted area. Work in small areas and stop painting only when the area is finished, such as at corners or doors.

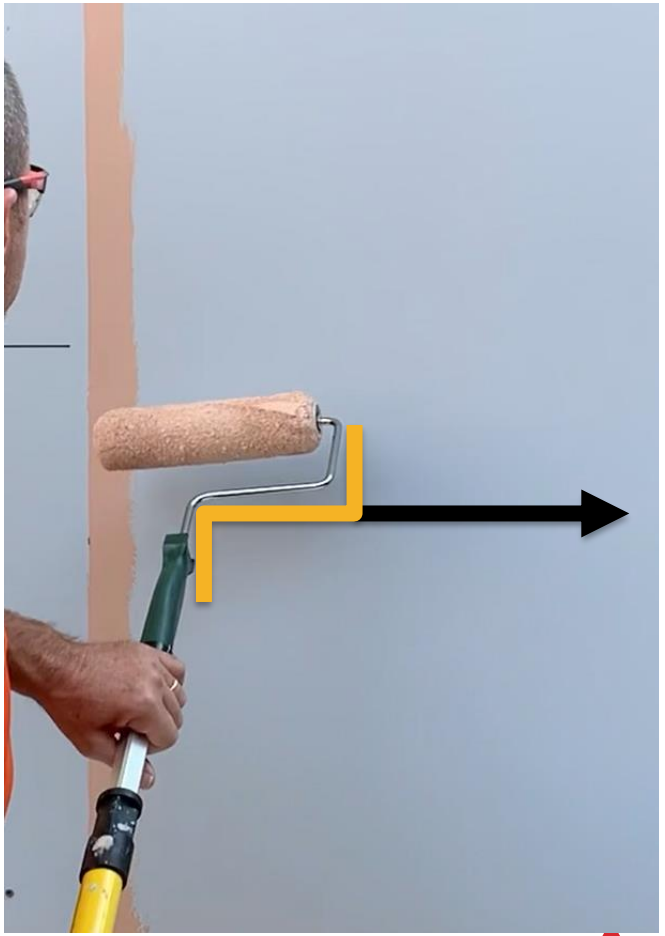


BUILDING TRUST

ROLLER APPLICATION

KEY PERFORMANCE PROPERTIES

- Keep and maintain a wet edge
- Point the frame in the direction you are rolling
- Proper cut ins will provide better color uniformity on the wall
- Texture and angular sheen is color, finishing is key to maintaining flat even looks on vertical walls



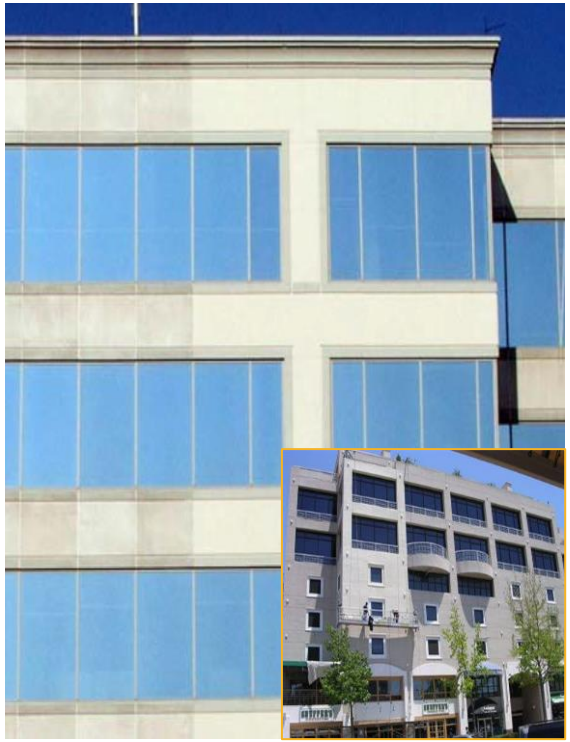
ROLLER APPLICATION

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

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

BUILDING TRUST

METHODS

MATERIAL INSTALLATION

Roller Stipple

- Textured pattern left in the paint by the roller

Cause

- Use of incorrect nap or low quality roller cover
- Use of lower grades of paint
- Use of incorrect rolling technique

Solution

- Avoid too long a nap for the paint and substrate
- Pre-dampen roller covers, shake out excess water
- Don’t allow paint to build up at roller ends

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