



Sikalastic 720 One Shot Arctic Technology: *A Cold Weather Traffic Coating Solution*

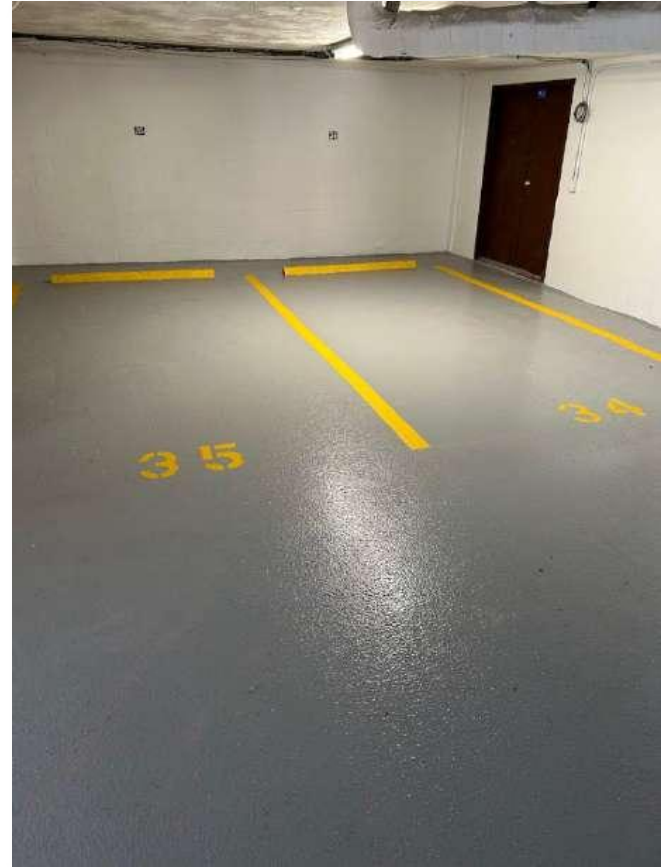
PRESENTED BY:
RYAN HALL
PRODUCT ENGINEER

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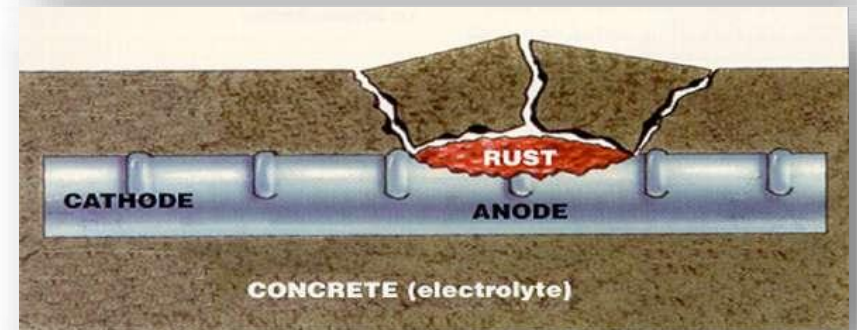
ONE SHOT TECHNOLOGY: AGENDA

- 1 THE NEED FOR TRAFFIC COATINGS
- 2 SUBSTRATE PREPARATION OVERVIEW
- 3 STANDARD TRAFFIC SYSTEMS
- 4 THE ONE SHOT CONCEPT
- 5 ONE SHOT ARCTIC INNOVATION
- 6 SIKALASTIC 705 ARCTIC PRIMER
- 7 SIKALASTIC 720 ONE SHOT ARCTIC



WHY TRAFFIC MEMBRANES?

- Protect the structure....
- From what:
 - Moisture
 - Temperature cycles (freeze/thaw)
 - Contaminants
- Prevent concrete/structural deterioration!



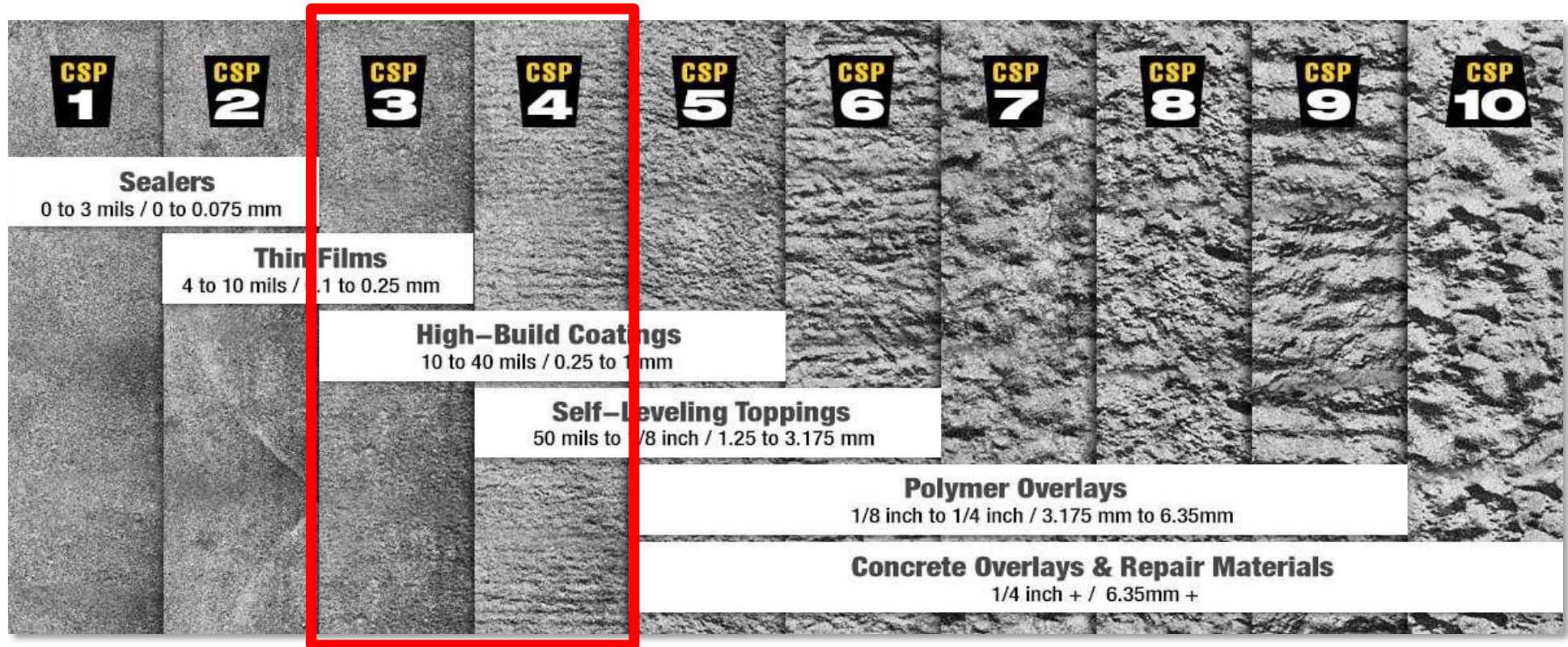
TRAFFIC COATINGS: SURFACE PREPARATION

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INTERNATIONAL CONCRETE REPAIR INSTITUTE (ICRI)

Recommended preparation for each material



COMPARISON OF PREPARATION METHODS FOR FLOORING



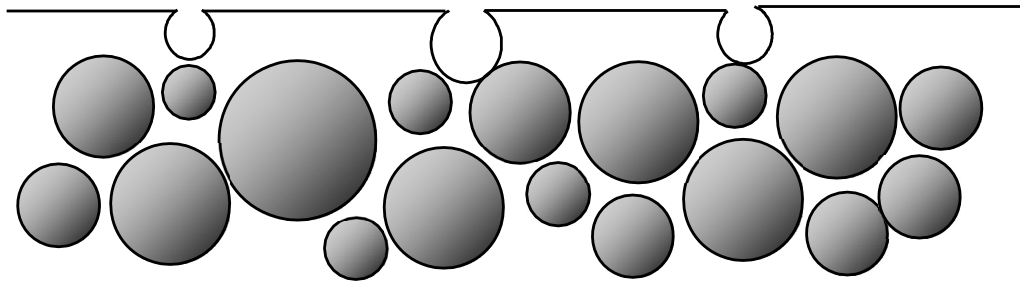
After bush hammering



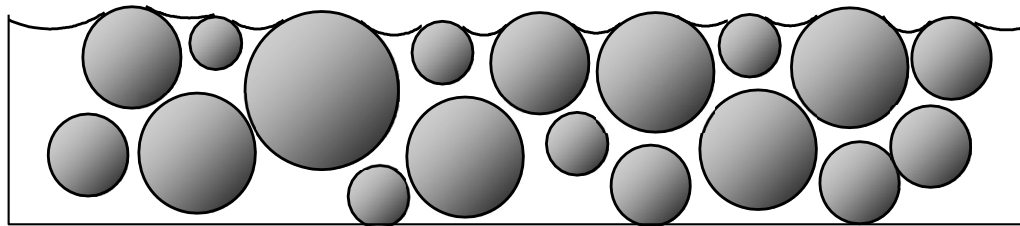
After shot/sand
blasting

THE REASON FOR SURFACE PREPARATION

SUBSTRATE BEFORE PREPARATION



SUBSTRATE AFTER PREPARATION



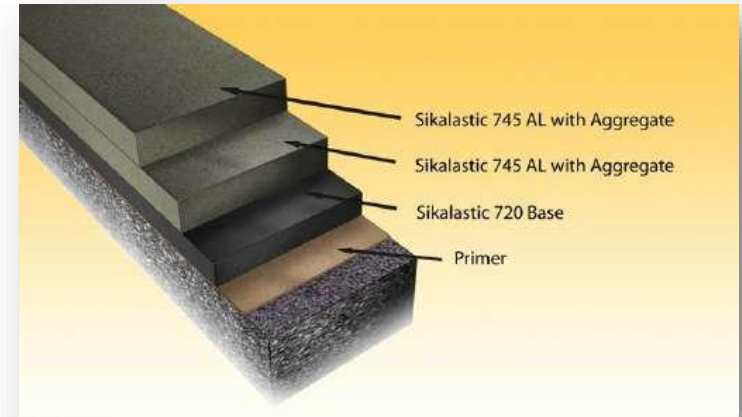
TRAFFIC COATINGS: STANDARD SYSTEMS

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THE STANDARD TRAFFIC COATING SYSTEM

- A typical multi-step system is comprised of:
 - BASE COAT
 - TOPCOAT 1 (wear coat)
 - AGGREGATE BROADCAST
 - TOPCOAT 2
 - AGGREGATE BROADCAST



STANDARD TRAFFIC COATINGS: THE BASE COAT

- Primary waterproofing layer
- Uninterrupted monolithic layer
- Flexible and crack bridging membrane



STANDARD TRAFFIC COATINGS: THE TOP COAT

- The base coat must be protected.
- Topcoat creates a layer that protects the base coat.
- A main element of the topcoat is to prevent the base coat (the waterproofing layer) from being compromised.

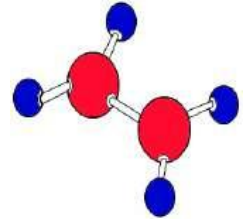


STANDARD TRAFFIC COATINGS: ADDING SLIP RESISTANCE

- Without texture the system would be too slippery, so texture had to be added to the topcoat.
- Broadcasting silica sand into the topcoat created a textured surface for slip resistance.



TEXTURED TOPCOATS – STATE OF THE ART



- Integral Proprietary Texture (non-silica)
 - ✓ Better abrasion resistance
 - ✓ Better aggregate retention
 - ✓ More durable



THE ONE SHOT CONCEPT: INNOVATION

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THE SIKALASTIC ONE SHOT CONCEPT

A **One** Coat Traffic System

MONOLITHIC
WATERPROOFING LAYER



FLEXIBLE
FOR CRACK-BRIDGING



HIGH DURABILITY
FOR WEAR RESISTANCE



WORK SMARTER NOT HARDER!

THE SCIENCE BEHIND SIKALASTIC ONE SHOT

The Sikalastic One Shot systems were achieved by building on **innovation** in two areas:

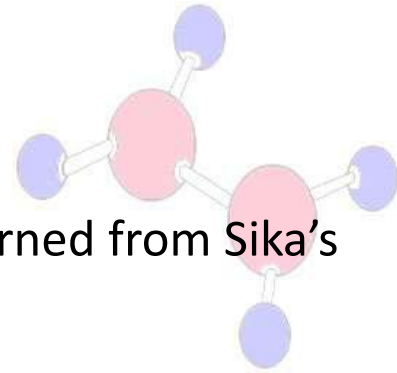
- **Integral aggregate innovation**
- **Polymer innovation**



INTEGRAL AGGREGATE INNOVATION



- Based on the lessons learned from Sika's Textured TopCoats
- Aggregate that forms a **chemical bond** with Resin.
- The **chemical bond** helps support the aggregate resistance to kick out.
- The **chemical bond** helps support the aggregate as the membrane is flexing with cracks.



SIKA'S POLYMER INNOVATION

- Polyurethane resin that is
 - ✓ flexible enough to bridge cracks.
 - ✓ hard enough and durable enough to handle traffic
- Allows the Sikalastic One Shot approach to go **against** the traditional theory that there has to be a separate flexible base coat and separate wear resistant topcoats.



SIKA'S POLYMER INNOVATION

- The next challenge?
 - A One Shot resin that can be mixed and applied down to 15°F
- Polyurethanes can cure down to low temperatures but mixing and handling becomes difficult
- A new resin innovation for One Shot requires a new primer that can also be mixed and applied down to 15°F



THE SIKALASTIC ONE SHOT ARCTIC PRODUCTS

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SIKALASTIC ONE SHOT ARCTIC PRODUCTS

SIKALASTIC-720 ONE SHOT ARCTIC

A two-component, elastomeric polyurethane based waterproofing coating intended for vehicular traffic.

- Mix and apply down to 15°F
- Single Coat One Shot system

Pedestrian version coming 2026!



Sikalastic One Shot Arctic Innovation

SIKALASTIC-705 ARCTIC PRIMER

A two-component, polyurethane based primer for concrete

- Mix and apply down to 15°F



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SIKALASTIC 720 ONE SHOT ARCTIC: OVERVIEW

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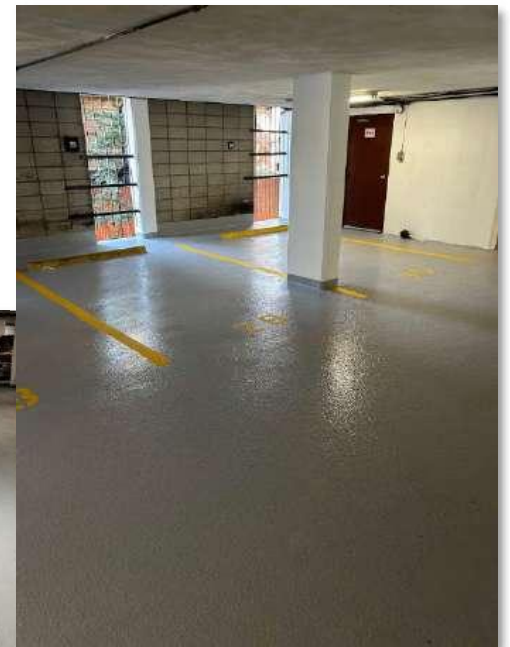
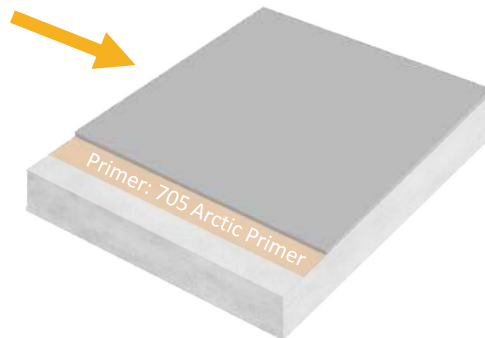
SIKALASTIC 720 ONE SHOT ARCTIC

Sikalastic®-720 One Shot Arctic is a two-component, aliphatic, elastomeric polyurethane waterproofing traffic coating intended for vehicular and heavy vehicular traffic.

Features

- ✓ Single coat system of 45 mils
- ✓ One thickness for drive lanes and parking stalls
- ✓ No need to condition material prior
- ✓ Mix and apply down to 15°F
- ✓ Open to vehicular traffic in just 36 hours!

45 mils of membrane and wear layer
– ALL IN ONE!



ONE SHOT ARCTIC: MIXING AT LOW TEMPS



Sikalastic 705 Arctic Primer



Sikalastic 720 One Shot Arctic

ONE SHOT ARCTIC: APPLICATION

☐ Date: February 2024

☐ Temperature: 27 °F



ONE SHOT ARCTIC: COMPLETED APPLICATION



Sikalastic 705 Arctic Primer



Sikalastic 720 One Shot Arctic

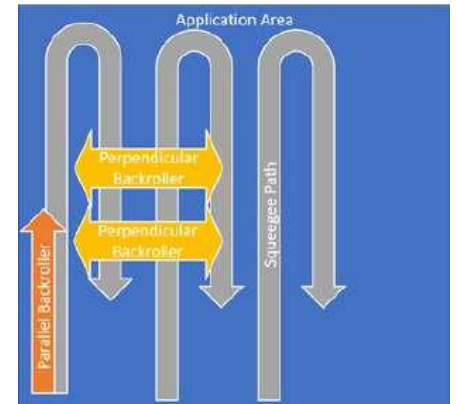
SIKALASTIC 720 ONE SHOT ARCTIC: KEY APPLICATION TIPS

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SIKALASTIC 720 ARCTIC ONE SHOT: KEY TIPS

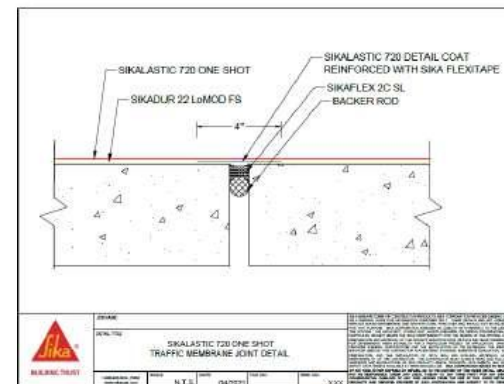
- Have a clear plan! Know who is squeegeeing, backrolling, mixing, & pouring out the material before starting.
- “Keep the train moving!”



SIKALASTIC 720 ONE SHOT ARCTIC: DETAILING



- Coat upturns, verticals and edge detail work prior to initiating the larger horizontal portions of the project
- Sikalastic 720 One Shot Arctic, mixed without aggregate can be used as a basecoat for details
 - It is critical **NOT** to work from the pail – either pour off into smaller pails or pour material along the base of any vertical



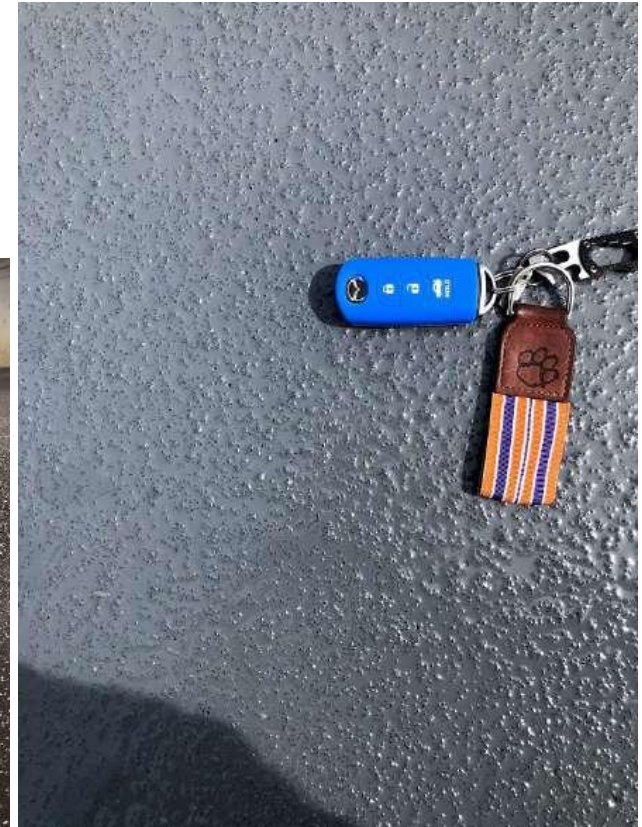
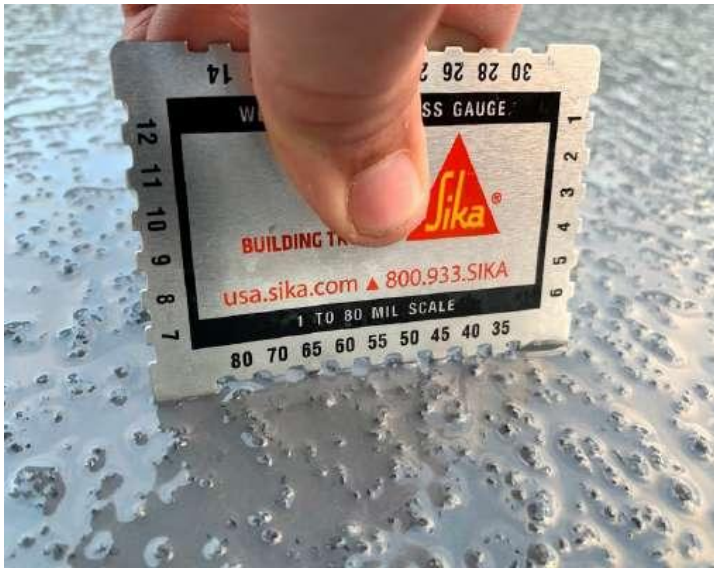
SIKALASTIC 720 ONE SHOT ARCTIC: KEY TIPS

- Know you have the right squeegee! We recommend the Seymour Midwest SpeedSqueegee® HD, 30" - 3/8" W x 1/4" D (30-45 mil), Black Neoprene



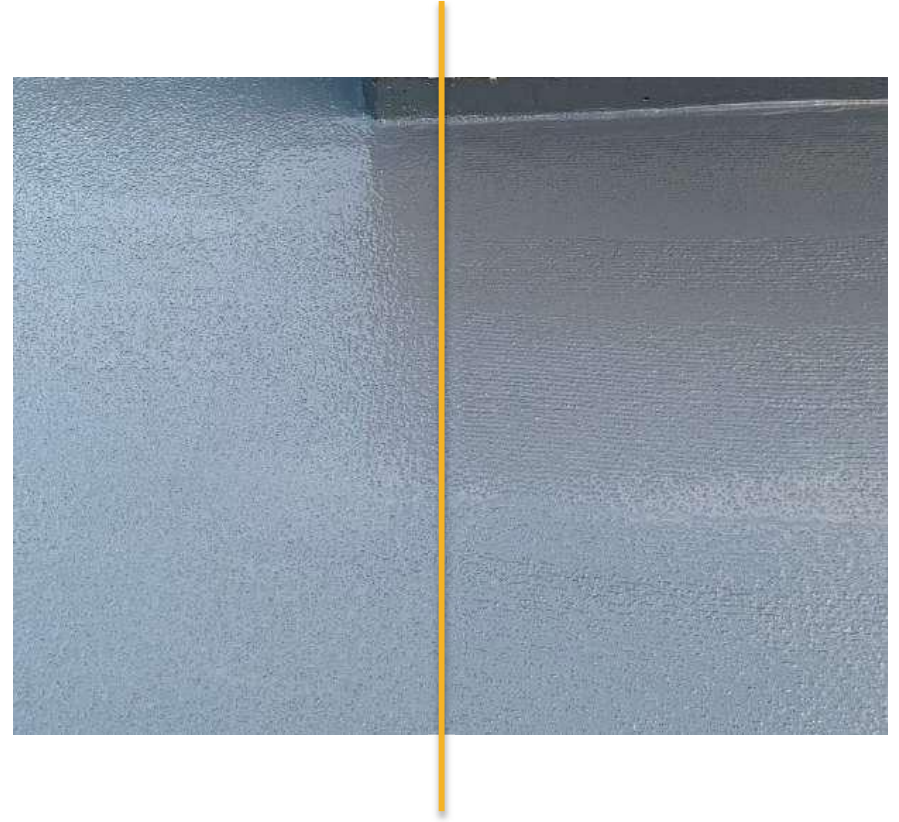
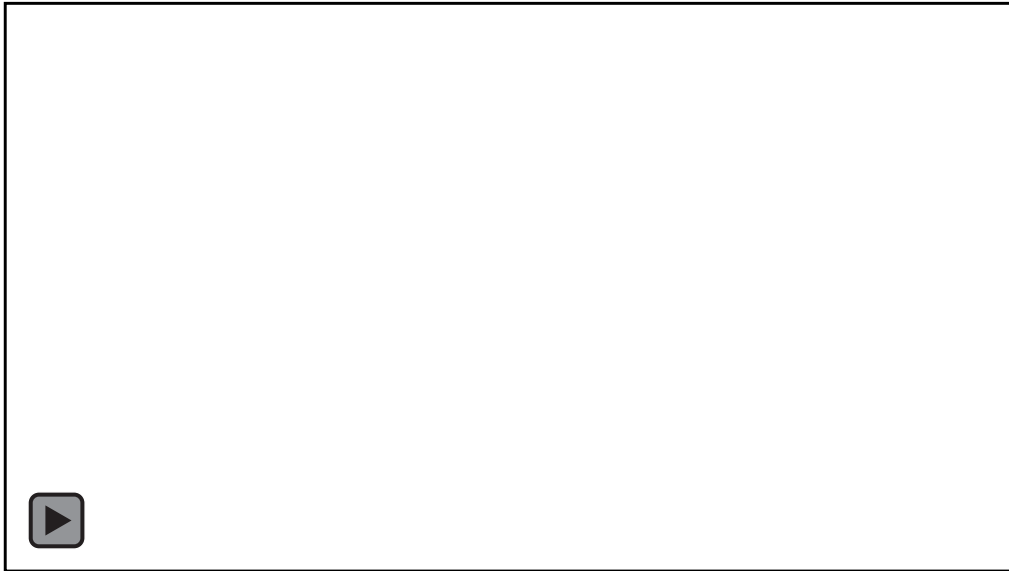
SIKALASTIC 720 ONE SHOT ARCTIC: KEY TIPS

- Check your thickness! A good indicator of proper thickness is seeing the aggregate after backrolling



SIKALASTIC 720 ONE SHOT ARCTIC: KEY TIPS

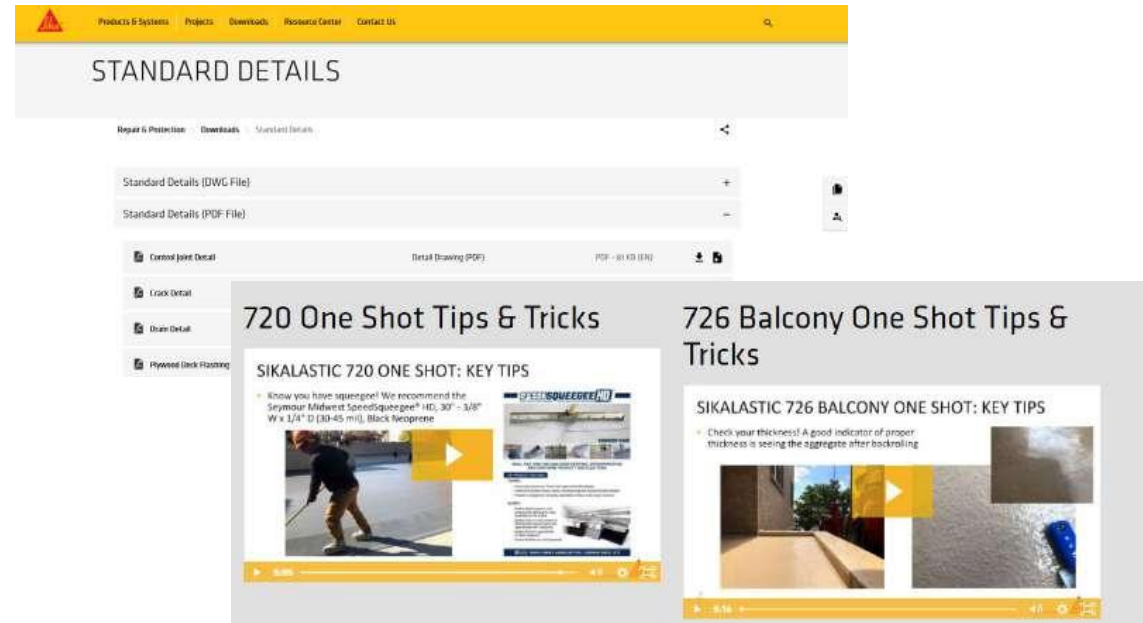
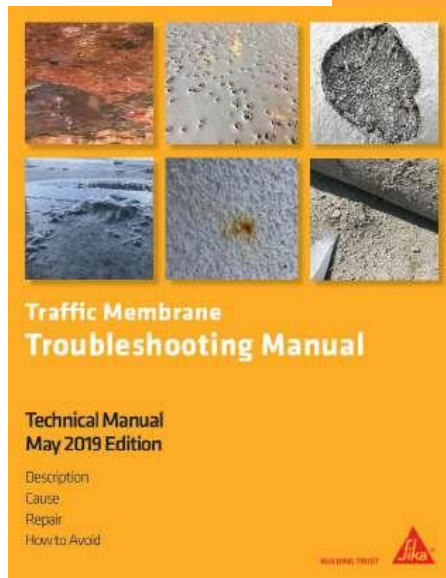
- Be systematic with your backrolling. Squeegee marks after application are areas missed when backrolling!



ONE SHOT INNOVATION: KEY BENEFITS



ADDITIONAL RESOURCES



Sika Technical Services

Phone: 1-800-933-7452 ext. 5



THANK YOU FOR YOUR ATTENTION!

“THERE’S A WAY TO DO IT BETTER – FIND IT.” – THOMAS A. EDISON

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