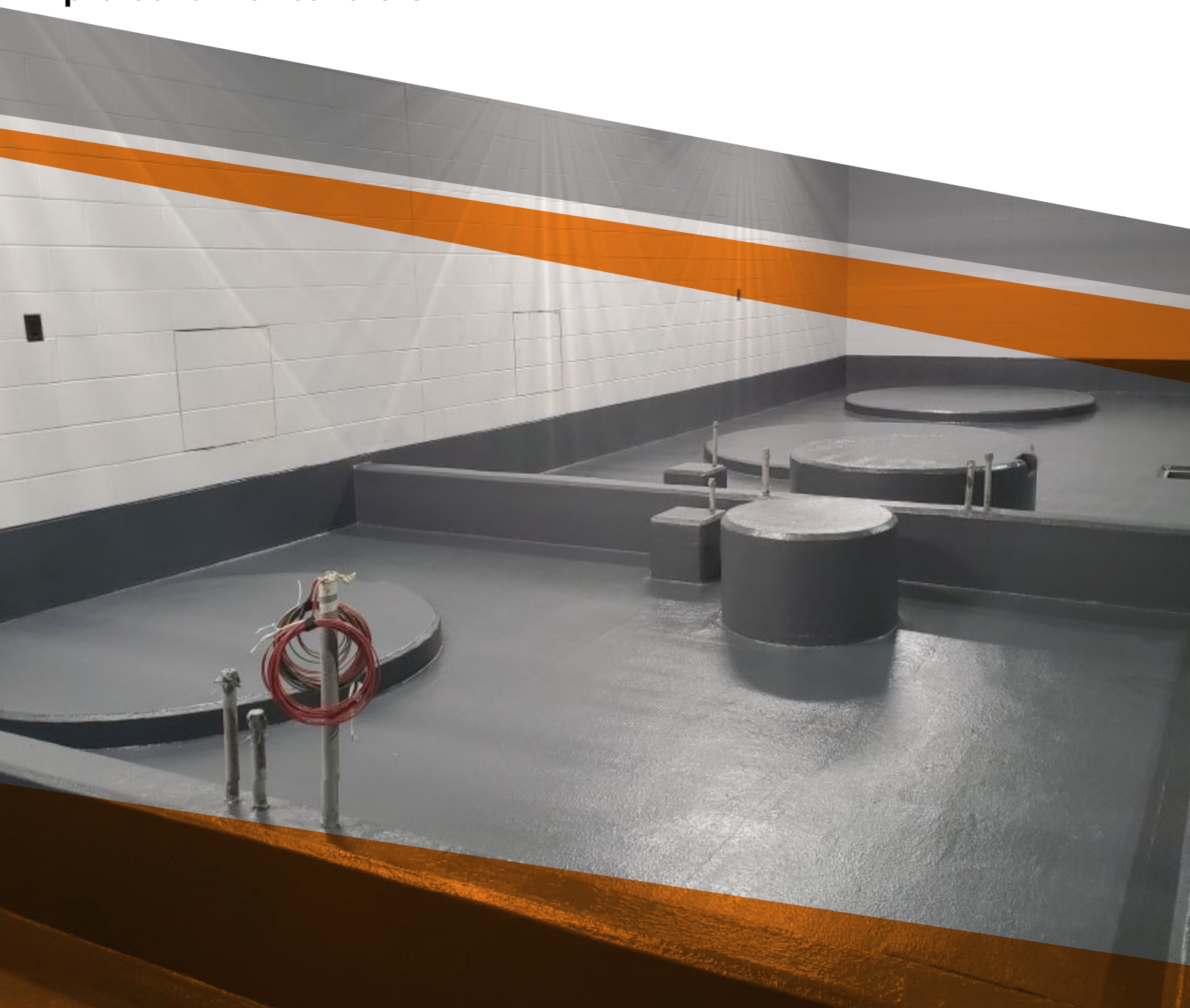
Dudick
A Division of Carboline

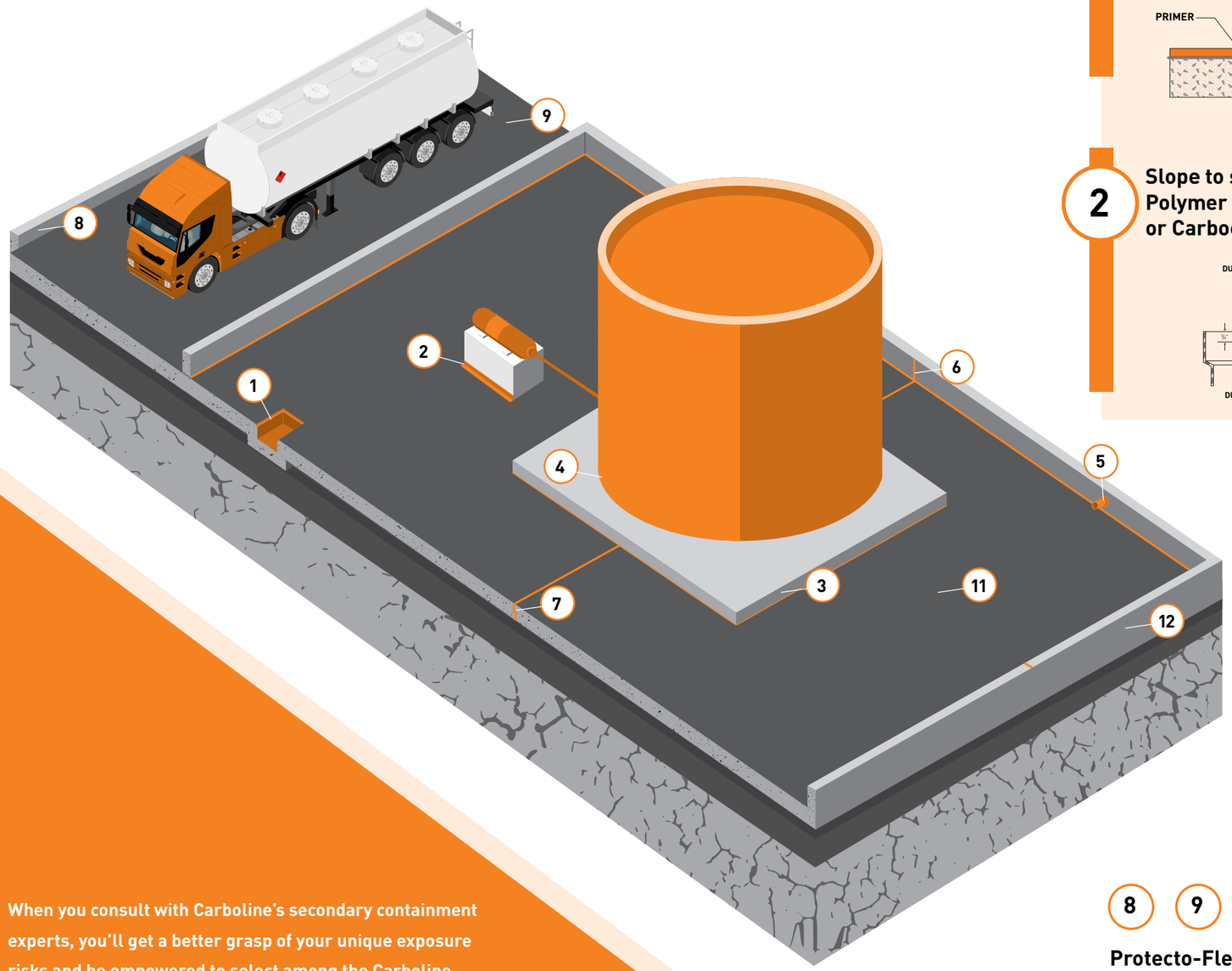
Secondary containment

Comprehensive chemical- and impact-resistant protection for concrete



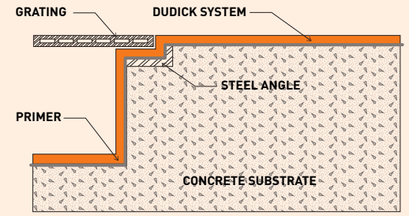
Right-fit secondary containment

Too often, the wrong protection is installed over concrete secondary containment—whether it's a low-cost catch-all that catches very little, or the "safe" overkill option that costs a fortune you didn't need to spend.

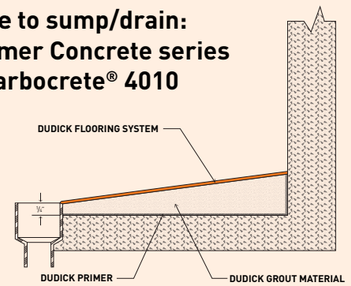


When you consult with Carboline's secondary containment experts, you'll get a better grasp of your unique exposure risks and be empowered to select among the Carboline, Dudick, or Prime Resins concrete protection technologies best suited to mitigate them.

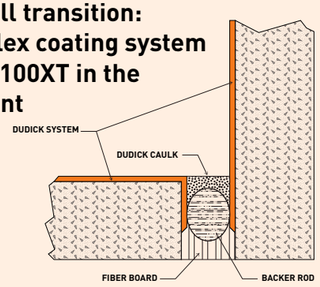
1 Sump and trench detail: Protecto-Glass system



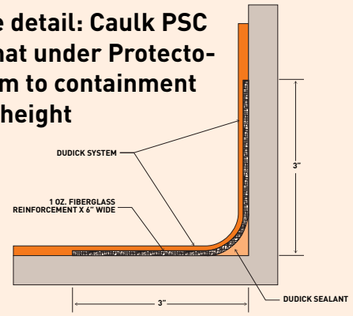
2 Slope to sump/drain: Polymer Concrete series or Carbocrete® 4010



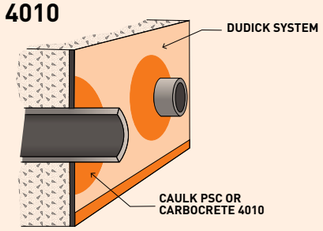
3 Floor to wall transition: Protecto-Flex coating system with Caulk 100XT in the honored joint



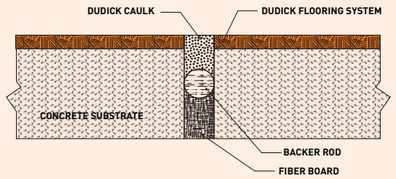
4 Tank chine detail: Caulk PSC with 1oz mat under Protecto-Flex system to containment wall/curb height



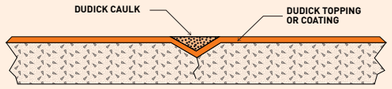
5 Penetration: Caulk PSC or Carbocrete 4010



6 Expansion joint: Caulk PSC or Caulk 100XT with backer rod and no topcoat



7 Crack repair: Caulk PSC or Scratch Coat series



8 9 10 11 12

Protecto-Flex systems are ideal for horizontal and vertical concrete surface protection.

EPOXY SELECTION	DESCRIPTION
Protecto-Flex BC	Epoxy binder using G-1 filler to create a flexibilized base coat and laminating resin for fiberglass mat in secondary containment systems
Semstone® 805	Rubber-like flexible novolac epoxy for secondary containment
Semstone 806	Rubber-like bisphenol-A epoxy for waterproofing and sound/vibration dampening
Semstone 140 CT/145 CT	Moderate/excellent chemical resistance with good general chemical resistance with a six-hour recoat window
Protecto-Coat 100XT	Broad-spectrum novolac topcoat for secondary containment and tank lining
Protecto-Coat PS	Flexible, spray-applied polysulfide coating for secondary containment
Protecto-Coat 800	Vinyl ester containment coating for aggressive acid exposure
Protecto-Coat 900	Vinyl ester novolac containment coating for the harshest chemical exposure

DYNAMIC FILLING[1,2]	DESCRIPTION
Semstone 6325	Economical two-component, self-leveling polyurethane sealant for high flexibility, with limited chemical resistance
Caulk PSC	Two-component, high-build polysulfide formula optimized for workability, with moderate chemical resistance
Caulk 149	Two-component polysulfide formula designed for extreme flexibility, with moderate chemical resistance
Caulk 100XT	Two-component fluoroelastomer developed for honored joints and cracks under the harshest chemical exposure

[1] Dynamic filling refers to moving joints

[2] Products in this table are designed to be left bare and not coated over

STATIC FILLING[1,2]	DESCRIPTION
Scratch Coat 300	Two-component, general-purpose rigid epoxy filler for joints and cracks
Scratch Coat 800	Two-component, chemical-resistant rigid vinyl ester filler for joints and cracks
Carboseal Flex Joint	Two-component, semi-rigid, self-leveling polyurea filler for joints
Floor Fix	Two-component, low-viscosity patch for spalled and spider-cracked concrete

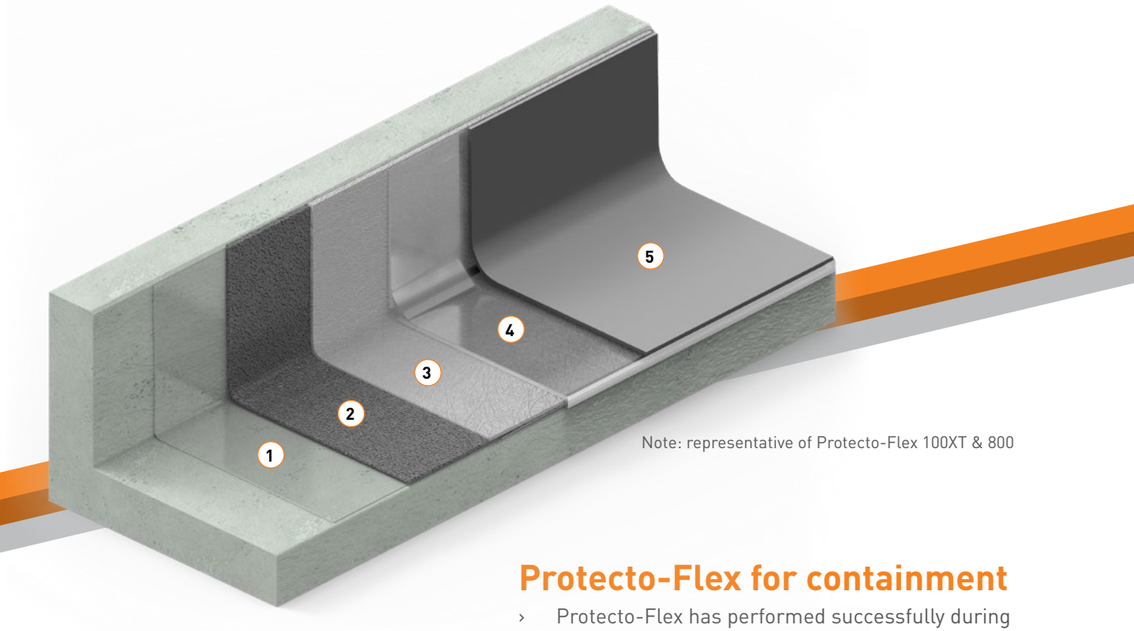
[1] Static filling refers to joints that do not move

[2] Products in this table are compatible with topcoats

Protecto-Glass vs. Protecto-Flex

Resin technology influences the degree of protection a coating provides to concrete. Where conventional epoxy resins provide sufficient baseline protection in many circumstances, a novolac epoxy or vinyl ester resin is more protective. This is because they crosslink more tightly when they cure. Tighter crosslinking results in less permeable barrier properties.

	IMMERSION SYSTEMS		SECONDARY CONTAINMENT SYSTEMS	
	Protecto-Glass 160XT	**Protecto-Glass 860**	**Protecto-Flex 100XT**	**Protecto-Flex 800**
1 Primer	Primer 67/67C	Primer 27/27C	Primer 67/67C	
2 Troweled Mortar	Protecto-Glass 160XT w/ G-1 Filler	Protecto-Glass 860 w/ G-1 Filler	Protecto-Flex BC w/ G-1 Filler	
3 Reinforcement	1oz Chop Strand Mat		1oz Chop Strand Mat	
4 Saturant Resin	Protecto-Glass 160XT w/ G-1 Filler	Protecto-Glass 860 w/ G-1 Filler	Protecto-Flex BC	
5 Topcoat	Protecto-Coat 100XT	Protecto-Coat 800	Protecto-Coat 100XT	Protecto-Coat 800



Note: representative of Protecto-Flex 100XT & 800

Protecto-Glass for linings

- Protecto-Glass is ideally suited for concrete that will see immersion service. This is commonly specified for trenches, sump pits, and or in concrete tanks.
- Utilizing the same application process for linings with chemical-resistant, flexibilized resin options for build coats, the risk of permeation or damage from moderate wear is eliminated.
- Protecto-Glass linings contain close to ⅛ inch (3.2 mm) of glass mat reinforcement to prevent leaks or substrate deterioration.

Protecto-Flex for containment

- Protecto-Flex has performed successfully during rigorous lab testing and 20 years of field installations.
- Whether the concrete is cracked or will crack in the future, the unique physical properties of the Protecto-Flex system provide excellent flexibility for long-term protection.
- Utilizing more economical epoxy resins for the flexibilized build coats even when topcoating with vinyl ester allows for faster and easier application without sacrificing protection.
- Wet-on-wet application of the primer, basecoat, glass mat, and saturant allow this five- or six-step system to be installed in as little as two days.

Resin selection

There are enough different resin technologies behind protective coatings that arriving at a simple understanding of which will best suit your site and circumstances can be daunting.

Use the tables below to help you prepare for a consultation with a concrete secondary containment expert.

WET TEMPERATURE RESISTANCE[1]	
Resin type	**Max service temperature, °F (°C)**
Bisphenol-A epoxy	160°F (71°C)
Novolac bisphenol-A epoxy	180-190°F (82-88°C)
Vinyl ester	250°F (121°C)
Bisphenol-A polyester	265°F (129°C)
Novolac vinyl ester	300°F (149°C)
High-temp novolac vinyl ester	360°F (182°C)

[1] General immersion resistance in water up to the stated temperatures. For comparison purposes only.

COMPARATIVE CHEMICAL RESISTANCE OF GENERIC RESIN TECHNOLOGIES					
	Mineral/inorganic acids	**Organic acids**	**Alkaline**	**Organics**	**Solvents**
Epoxy	✗	✗	✓	✗	✗
Novolac epoxy	✓	✗	✓	✗	✓
Vinyl ester	✓	✓	✓	✓	✓
Novolac vinyl ester	✓	✓	✗	✓	✓

Resurfacing and restoration product guide

Sometimes coating a concrete surface is not enough. Aggressive chemical exposures can erode concrete, and where this erosion is severe, it may be best to repair the underlying substrate.

Carboline and Dudick support a broad range of concrete repair/restoration products developed to withstand the harshest chemical attacks for both vertical and horizontal secondary containment surfaces.

Product	Horizontal – ⅛" to ½" (3 to 13mm) build	Horizontal – ½ to 4" (13 to 102mm) build	Vertical – ⅛" to 2" (3 to 50mm) build	Formable/castable ½"- 4" (13 to 102mm) build
Carbocrete 4000	✓	✓		
Carbocrete 4010	✓	✓	✓	✓
Carboguard® 510 SG	✓		✓	
Polymer Concrete 100	✓	✓		
Polymer Concrete 100XT	✓	✓		✓
Polymer Concrete 800	✓	✓		✓
Polymer Concrete 900	✓	✓		✓

Easy versatility: Carbocrete 4010

Versatile Carbocrete 4010 exhibits excellent bond and compressive strength, plus better chemical resistance than existing concrete and other masonry surfaces. It's even suitable as a sloping material for floor-wall transitions.

Consult with a Carboline technical service representative to learn which rebuild product is the right fit for your secondary containment assets.

High performance seamless wall and floor systems

DUDICK + CARBOLINE

Since 1970, Dudick, Inc. has manufactured industry-leading high-performance coatings, tank linings, and floor protection systems for a wide range of industrial and commercial facilities.

Dudick became a division of Carboline in 2021. Founded in 1947, Carboline is a renowned provider of high-performance coatings, linings, and fireproofing products. Now as a Carboline division, Dudick's unique asset protection solutions are more widely available and backed by a stronger manufacturing, distribution, and field technical service footprint. Additionally, the partnership rounds out Carboline's product portfolio, providing a more comprehensive source of asset protection solutions for customers.

THE DUDICK DIFFERENCE

It's more than just developing great products. It's more than just retaining a seasoned technical staff. And it's more than just taking a genuine interest in solving unique, complex problems for customers. The Dudick Difference is spending over 50 years obsessing over all three. That means our customers get the best instead of just the best available.

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