Specification Guidelines for CSI MasterFormat Section 09 67 23

Resinous Flooring in Commercial & Industrial Construction.

System Architecture

100% Solids Double Sand Broadcast Epoxy Systems (20–35 mils DFT).

Regional Engineering

Contextualized for the specific climate and industrial sectors of Upstate SC (Greenville, Spartanburg, Anderson).

QUALITY ASSURANCE & PROJECT PREREQUISITES

EXPERIENCE MANDATE

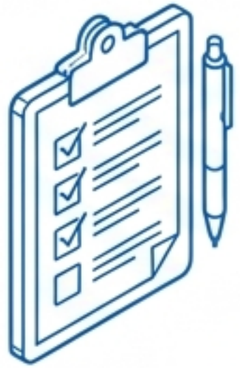
Minimum 3 years documented experience installing similar industrial-grade epoxy floor coatings. Must designate a single, on-site project foreman.

CREDENTIALING

Active manufacturer QCA (Qualified Contractor/Applicator) status is strictly required to obtain a long-term jobsite specific warranty.

SINGLE-SOURCE COMPATIBILITY

100% of materials (primer, binder, aggregate, topcoat) must be manufactured and provided by a single source to ensure chemical bonding compatibility.



PRE-APPLICATION PROTOCOL

Mandatory on-site review of interfacing trades, surface prep, environmental controls, and slab conditions prior to installation.

SUBSTRATE TESTING & CONCRETE PREREQUISITES

Cure & Strength

28-Day Cure / 2,500 PSI

Moisture - Calcium Chloride

ASTM F1869 limit < 5 lbs / 1,000 sq ft

Moisture - Relative Humidity

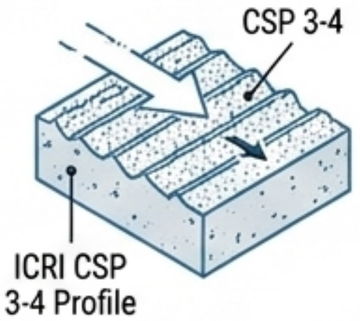
ASTM F2170 limit < 75% RH

INTERVENTION MANDATE

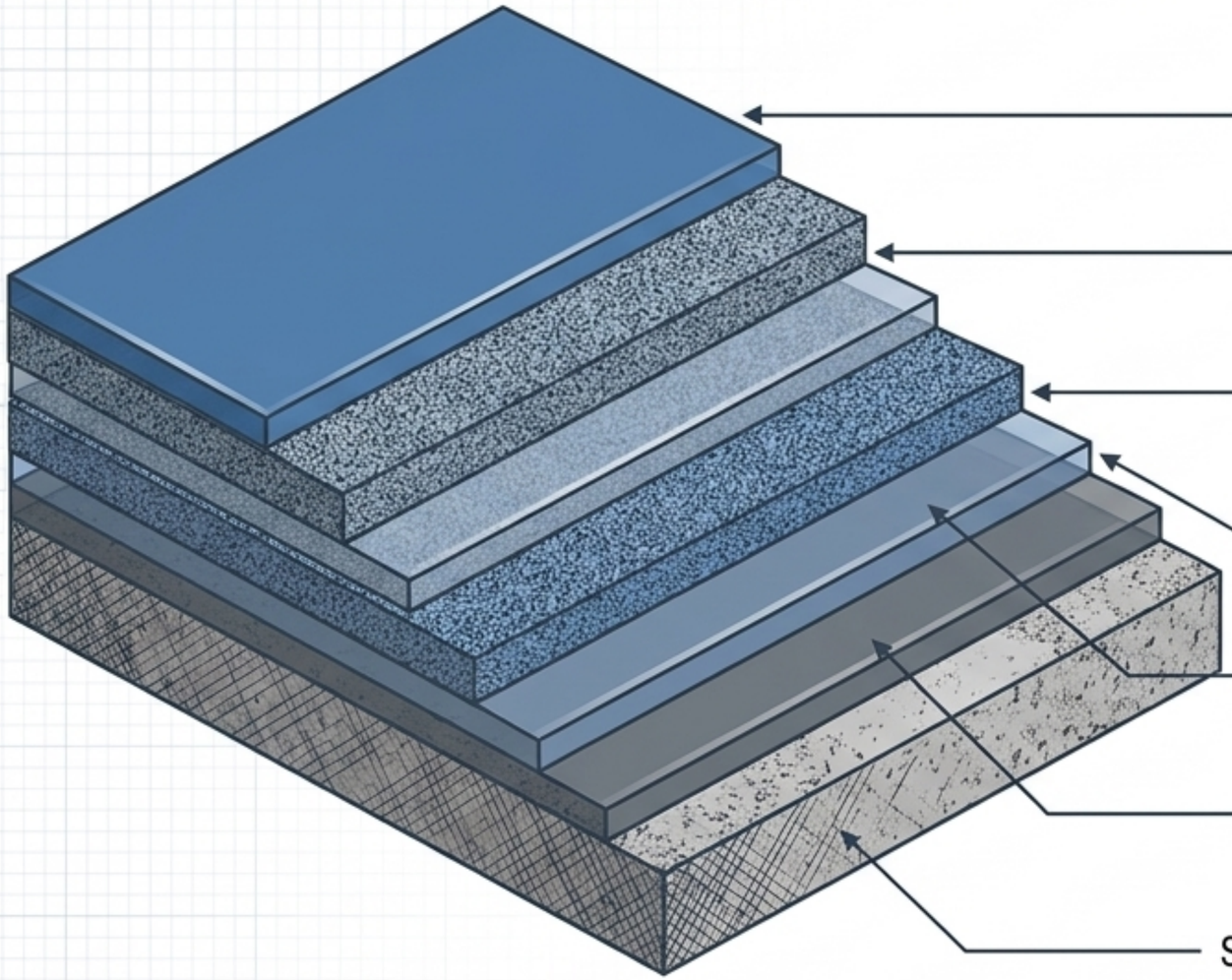
If either moisture limit (ASTM F1869 or ASTM F2170) is exceeded, specification of an EC-15 Moisture Vapor Barrier is strictly mandated to prevent osmotic blistering.

SURFACE PREPARATION

Mechanical abrasion or shot-blasting required to achieve ICRI CSP 3-4. (Note: Acid etching is insufficient for industrial adhesion).



System Architecture (Dubro Double Broadcast)



Total system yields a **20–35 mils Dry Film Thickness (DFT)** designed for **heavy-duty industrial impact.**

Advanced Topcoat Selection Matrix

Topcoat Specification	Chemistry Base	Key Superpower	Ideal Application
EC-34	Pigmented Epoxy	Standard Industrial Wear	Base specification for general commercial use.
EC-50	Novolac Epoxy	Extreme Heat & Chemical Resilience	Continuous chemical exposure or high-temperature washdowns.
EC-101 / EC-102	Polyaspartic (100% Solids)	UV Stability & Rapid Cure	Areas prone to hot-tire staining or where rapid return-to-service is critical.
SC-65 Series	Water-Based Polyurethane	Low Odor & Mar Resistance	Odor-sensitive environments requiring gloss, semi-gloss, or flat finishes.
EC-95	Solvent-Based Polyurethane	Chemical/UV Resistance	Exterior-facing bays or high-UV exposure zones.

Industrial Chemical Resistance Guide

- Long Term (LT)
- 72-Hour (72)
- Splash & Spill (SS)

Acids	
Hydrochloric Acid (10%)	LT
Sulfuric Acid (50%)	72
Acetic Acid (10%)	SS

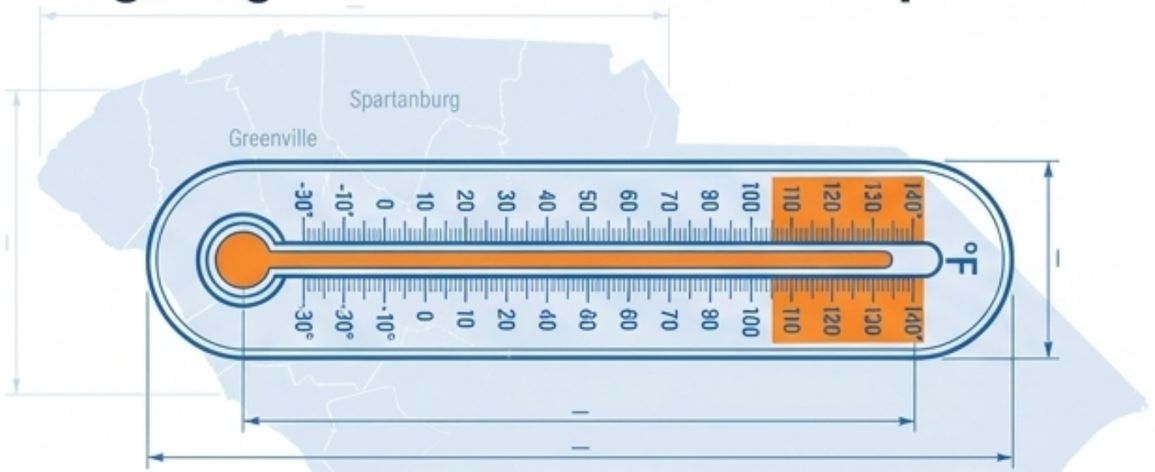
Solvents & Fuels	
Gasoline/Jet Fuel	72
Acetone (100%)	SS

Alkalis & Salts	
Sodium Hydroxide (50%)	LT
Calcium Chloride	LT

Rule of Thumb: For any facility requiring continuous (Long Term) exposure to harsh solvents or concentrated acids (e.g., 98% Sulfuric), the specification must be upgraded to the EC-50 Novolac topcoat.

Context: Specifying for the Upstate SC Environment

Mitigating Extreme Pavement Temperatures



SC summer temperatures accelerate moisture vapor transmission. Traditional epoxies take 12-18 hours to cure, trapping outgassing vapor as bubbles.

Specifying Polyurea/Polyaspartic topcoats (like CycloSpartic/EC-101) provides a flexible, rapid-cure solution that prevents delamination during extreme heat waves.

Tailored for Upstate Industries

Spartanburg: Forklift-rated, hot-tire resistant specs for automotive manufacturing and Tier-1 supplier facilities.

Anderson: OSHA-compliant, anti-slip heavy-duty coatings for textiles and distribution warehouses.

Greenville: High-gloss, UV-stable decorative flake and metallic systems for commercial retail and corporate showrooms.