

HIGH-BUILD PIGMENTED EPOXY FLOOR COATING FOR LIGHT AND MODERATE DUTY COMMERCIAL AND INDUSTRIAL USE

DESCRIPTION

SHIELD 50, IS A 100% SOLIDS, NON-SHRINK, 2 COMPONENT, STRAW OR PIGMENTED EPOXY FLOOR COATING.

WHERE TO USE

ON DRY CONCRETE SURFACES AS A PIGMENTED BASE COAT AND TOP COAT FOR FOOT & VEHICULAR PNEUMATIC TIRE TRAFFIC. ALSO USED AS A BINDER COAT FOR QUARTZ FLOOR SYSTEMS.

- FOOD PROCESSING
- PHARMACEUTICAL PLANTS
- ACID STAIN TOP COAT

ADVANTAGES

- GOOD WORKING TIME
- NEARLY NO ODOR
- NO VOC'S – 100% SOLIDS
- 100% CROSS-LINKING
- NON-SHRINK COATING
- FAST CURE RATE
- CURES DOWN TO 50°F (10°C)
- EXCELLENT STRENGTH PROPERTIES
- HIGH COMPRESSIVE STRENGTH
- EXCELLENT IMPACT RESISTANT
- DOT NON-CORROSIVE
- EASY TO PLACE
- USED AS NEAT COATING OR TEXTURED POLYMER OVERLAY

TYPICAL NEAT COVERAGE

BASE COAT: 8-10 MILS (160-200 FT² / GAL.)

TOP COAT: 10 MILS (160 FT² / GAL.)

TYPICAL DATA FOR SHIELD 50

(MATERIAL AND CURING CONDITIONS AT 73°F UNLESS NOTED, 50% R.H.)

COLOR:	10 STANDARD COLORS	VISCOSITY:	500-750 cps.
POTLIFE:	25 - 35 MINUTES	CONSISTENCY:	NEARLY SELF-LEVELING
TACK-FREE TIME			
SUBSTRATE TEMPERATURE	50°F *	73°F	90°F
	10 - 12 HRS.	6 - 8 HRS.	5 - 7 HRS.

TENSILE PROPERTIES (ASTM D 638) 7 DAYS

TENSILE STRENGTH	8,800 PSI
ELONGATION AT BREAK	5 %

FLEXURAL PROPERTIES (ASTM D 790) 7 DAYS

FLEXURAL STRENGTH	16,000 PSI
TANGENT MODULUS OF ELASTICITY	5.1 X 10 ⁵

SLANT SHEAR STRENGTH (ASTM C 882) 7 DAYS

TEST TEMPERATURE	VALUE	MODE OF FAILURE
90°F	4,000 PSI	100% CONCRETE FAILURE
50°F *	4,200 PSI	100% CONCRETE FAILURE

COMPRESSIVE STRENGTH (ASTM D 695)

	50°F *	73°F	90°F
8 HOUR	3,700 PSI	6,300 PSI	10,300 PSI
1 DAY	10,100 PSI	10,200 PSI	10,300 PSI
7 DAYS	14,100 PSI	14,200 PSI	14,200 PSI

COEFFICIENT OF THERMAL EXPANSION (ASTM D 696)

TEMPERATURE RANGE -30°C (-22°F) / 30°C (86°F)
 7 DAYS 18.0 X 10⁻⁶ IN / IN./°F

HARDNESS, SHORE D (ASTM D 2240)

7 DAYS 80

WATER ABSORPTION (D 570)

7 DAYS 0.21%

SHELF LIFE 1.5 YEARS IN ORIGINAL UNOPENED CONTAINERS

PACKAGING 4-1 GAL./CS.; 5 & 15 GAL./UNITS

* PRE-CONDITIONED EPOXY TO 90°F BEFORE MIXING.

Mixing And Application Instructions

SURFACE PREPARATION

ALL SUBSTRATE SURFACES MUST HAVE ALL LOOSE AND DETERIORATION REMOVED TO A SOUND SURFACE. CONCRETE AND OTHER SUBSTRATES MUST BE CLEAN, SOUND, AND FREE OF DUST, GREASE, WAXES, COATINGS, CURING COMPOUNDS AND ALL CONTAMINANTS. TYPICAL REMOVAL METHODS INCLUDE DUST-FREE ABRASIVE BLASTING. CLEAN THE SUBSTRATE TO THE DESIRED SURFACE PROFILE FOR THE OVERLAY SYSTEM SELECTED. FOLLOW THE CCI SURFACE PREPARATION GUIDE FOR BEST RESULTS.

TEST SUBSTRATE FOR CLEANNES AND ADHESION

BEFORE PLACEMENT OF THE POLYMER OVERLAY TEST THE CLEANED CONCRETE SUBSTRATE FOR SOUNDNESS AND CLEANLINESS WITH A TENSILE PULL TEST ACI 503 R (MIN.200 PSI) OR CONCRETE COATINGS INC. SURFACE SHEAR TEST. 100% CONCRETE MUST FAIL TO PASS EITHER TEST WITHOUT BOND LINE FAILURE.

PRECONDITIONING POLYMER

WHEN TEMPERATURES DROP POLYMERS TYPICALLY THICKEN AND IT BECOMES HARDER TO FLOW OR TO SPREAD THE PRODUCT. WHEN THE TEMPERATURES ARE WARMER THEY TYPICALLY BECOME THINNER. TO IMPROVE THE FLOW-ABILITY MAINTAIN PRODUCT TEMPERATURE BEFORE MIXING AT ABOUT 20C (73F). WHEN THE SUBSTRATE TEMPERATURE IS 15C (60F) OR LOWER PREHEAT EACH EPOXY COMPONENT TO 90F BEFORE MIXING. CAUTION THE POTLIFE WILL BE REDUCED BY ABOUT 50%.

CUSTOMER SATISFACTION

APPLY A TEST AREA TO ENSURE THAT THE APPLICATION MEETS THE CUSTOMER'S EXPECTATIONS.

MIXING

PRE-MIX COMPONENT "A", (WHEN PIGMENTED) THEN POUR COMPONENT "B" INTO "A" AND MIX FOR 90 SECONDS (UNTIL ONE EVEN COLORS DEVELOPS) WITH A LOW SPEED PADDLE ATTACHED TO A DRILL (400-600RPM). 5-10% XYLENE MAY BE ADDED TO THE COMPLETED MIX. IN SOME CASES THIS HELPS TO MINIMIZE BUBBLING CAUSED FROM WARMER CONDITIONS OR ACCELERATED CURE. MIX SLOWLY AND THOROUGHLY. THE MIXED PRODUCT IS READY FOR IMMEDIATE PLACEMENT.

COVERAGE

PRODUCT COVERAGE IS DEPENDED UPON THE EXISTING SUBSTRATE SURFACE PROFILE AND THICKNESS OF THE DESIGNED SYSTEM. REFER TO CONCRETE COATINGS INC. APPLICATION METHOD GUIDE AND SPECIFICATIONS.

APPLICATION METHODS

APPLY BY SQUEEGEE IN LEFT TO RIGHT MOTIONS, AND BACK ROLL WITH A SHORT NAP ROLLER AT 90° ANGLES TO SQUEEGEE LINES. DO NOT ROLL EXCESSIVELY, ONLY ENOUGH TO SMOOTH MATERIAL.

LIMITATIONS

- SUBSTRATE TEMPERATURE MUST BE 3C (5F) ABOVE MEASURED DEW POINT TEMPERATURE.
- MINIMUM APPLICATION TEMPERATURE IS 10C (50F).
- **DO NOT APPLY ON WET OR DAMP SUBSTRATE.**
- AGGREGATE MUST BE DRY WHEN USED.
- PRE-CONDITION POLYMER AS NEEDED.

MAINTENANCE

FOR MAXIMUM LIFE EXPECTANCY, ROUTINELY SWEEP AND WASH FLOORS WITH APPROPRIATE CLEANERS AND DETERGENTS. ALL CHEMICALS OR ABRASIVE GRIT SHOULD BE REMOVED AS SOON AS POSSIBLE.

CAUTION

COMPONENT "A"- IRRITANT
CONTAINS EPOXY RESINS. PROLONGED CONTACT WITH SKIN MAY CAUSE IRRITATION. AVOID CONTACT WITH EYES.

COMPONENT "B" - CORROSIVE
CONTAINS ALIPHATIC/CYCLOALIPHATIC AMINES. CONTACT WITH SKIN MAY CAUSE SEVERE BURNS. AVOID EYE CONTACT. PRODUCT IS A STRONG SENSITIZER

IMPORTANT INFORMATION

USE OF SAFETY GOGGLES, CHEMICAL-RESISTANT GLOVES, ADEQUATE VENTILATION AND NIOSH/MSHA APPROVED RESPIRATOR IS RECOMMENDED.

CLEAN UP

IN CASE OF SPILLS WEAR SUITABLE PROTECTIVE EQUIPMENT, CONTAIN SPILL, COLLECT WITH ABSORBENT MATERIAL, PLACE IN SUITABLE CONTAINER. VENTILATE AREA. AVOID CONTACT. DISPOSE ACCORDING TO APPLICABLE LOCAL, STATE, AND FEDERAL REGULATIONS.

FIRST AID

IN CASE OF SKIN CONTACT, WASH THOROUGHLY WITH SOAP AND WATER. FOR EYE CONTACT, FLUSH IMMEDIATELY WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. FOR RESPIRATORY PROBLEMS, REMOVE PERSON TO FRESH AIR. CONTACT PHYSICIAN IMMEDIATELY. WASH CLOTHING BEFORE RE-USE.

CONSULT MATERIAL SAFETY DATA SHEET FOR MORE INFORMATION
FOR INDUSTRIAL USE ONLY
KEEP OUT OF REACH OF CHILDREN

KEEP CONTAINERS TIGHTLY CLOSED

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