

TYPE

PLASITE 5309 is an ambient cured epoxy novolac monolithic liner formulated for optimum chemical and abrasion resistance in continuous immersion service.

INTENDED USE

Heavy duty lining system for:

Containment Areas	Trough Walls
Fourdrinier Pits	Foundations
Conveyor Troughs	Cyclones
Conveying Tunnels	Sand Hoppers
Pumps	Clarifiers
Bases	Metal Pans
Chutes	Trenches
Tanks	Acid Pits

ADVANTAGES

Cures quickly to form an exceptionally tough, impact and abrasion resistant surface. Excellent adhesion to concrete, steel and wood. Minimum down time. Non-shrinking.

COLOR: Gray

SURFACE PREPARATION

All surfaces must be clean, dry and free of contamination prior to application.

New Concrete

New concrete must have a minimum of 28 days cure and no curing agents or sealers shall be used (unless approved by Carboline).

Remove oil, grease or other loose or foreign materials and contaminants.

A good bonding tooth, a texture of 40 to 60 grit sandpaper, is desired with the removal of all glaze. To provide the foregoing bonding tooth, it is necessary to prepare the surface using one of the following methods: sandblast with fine sand and reduced pressure, scarify or, rotary shot blast such as Blastrac®.

Old Concrete

Remove all powdery, weak concrete, paint, wax, oil, grease or other contaminants.

Once the concrete has been cleaned and neutralized, one of the following methods shall be used to provide a good bonding tooth, a surface with a texture of 40 to 60 grit sandpaper, with the removal of all glaze: sandblast with fine sand and reduced pressure, scarify or rotary shot blast such as Blastrac®.

Metal Surfaces

Degrease surface prior to sandblasting. Use organic solvents, alkaline solutions, steam, hot water with detergents or other systems that will completely remove dirt, oil, grease, etc.

Blast the surface to near white SSPC-SP10 or NACE No. 2 using a Venturi blast nozzle with 100 psi air. To produce the 4 mil minimum anchor pattern or "tooth," the blasting media used shall be a properly graded, clean, sharp angular abrasive similar to Humble Abrasive Flint S7 (6-30 mesh), steel grit (HG25) or BLACK BEAUTY® (BB1040).

APPLICATION TEMPERATURE

For application, the material must be 70 to 85°F. Do not apply when surface temperature is below 40°F.

August 2003 replaces May 2003

PHYSICAL SPECIFICATIONS

Compressive Strength: ASTM D695: 13,000 - 15,000 psi

Modulus of Elasticity: ASTM D695: 1.312×10^6

Tensile Strength: ASTM D638: 1500 - 2500 psi

Flexural Strength: ASTM D790: 5300 - 6000 psi

Thermal Coefficient of Linear Expansion: ASTM D696: 9.16×10^{-6} in/in°F

Solids: 100%

CHEMICAL RESISTANCE

Offers a wide range of chemical resistance to acids and solvents. Exceptional resistance to sulfuric acid up to 98%.

PACKAGING

A unit of 5309 consists of primer, liner and gel coat.

A unit of 5309 contains:

8 Cartons of Liquid

A carton contains:

2 cans Part A

2 cans Part B

12 Bags 5300 Series Aggregate**COVERAGE**

Coverage based on a normal surface. A standard unit of 5309 will cover 132 ft² at 1/8" thick.

Primer

One Part A and one Part B primes a surface area of 60 to 80 ft².

Liner

One Part A, one Part B and one Part C covers 11ft² at 1/8" thick.

Gel Coat

One Part A and one Part B covers a surface area of 66 ft².

Note: The resins (Part A) and the hardeners (Part B) for the primer, liner and gel coat are identical (both generically and in quantity) and are used interchangeably.

MIXING**Primer**

Mix Part A & B thoroughly (the pot life or working life is approximately 20 minutes in the can).

Mixer

A mechanical mixer designed for quick, thorough mixing of aggregated epoxy coatings similar to those manufactured by:

KOL MIXAL Div. of Man U Fab, Inc.
Minneapolis, MN

KENRICH PRODUCTS
Portland, OR

IMPORTANT! The pot life or working life of the liner blend is 30 minutes. Always pour mixed batches as soon as blended.

PLASITE® 5309

Liner

Empty the contents of Part B into Part A and mix thoroughly. Then empty the mixture into a mixer, draining the can for about 1/2 minute. Start mixer and slowly add Part C and mix approximately 5 minutes.

Note: Person mixing should wear a dust mask or respirator.

Gel Coat

Mix Parts A & B thoroughly (the pot life or working life is approximately 20 minutes in the can).

IMPORTANT! Mixed materials remaining in container will produce heat and may smoke. Keep away from combustible materials. Do not reseal containers!

APPLICATION

Application in direct sunlight and rising surface temperatures may result in blistering of the materials due to expansion of entrapped air or moisture in the concrete.

Concrete surfaces that have been in direct sunlight must be shaded for 24 hours prior to application and remain shaded until the initial set has taken place. When the surface temperatures are rising, it may be necessary to postpone the application or apply during the cooler evening hours.

Primer

Apply a thin coat of primer by brush or roller. Apply as thin a film as possible to wet the surface. Excessive primer application may cause liner to sag. If primer hardens before liner is applied, it must be whip blasted removing all gloss before topcoating.

Liner

Spread liner evenly over surface. Build up low spots to desired thickness. Finish each batch as you go. A 3 1/2" x 10" trowel with rounded corners (referred to as a swimming pool trowel) is recommended for liner application.

Gel Coat

A gel coat is recommended to provide maximum chemical resistance. The gel coat may be applied by brush or roller once the liner has hardened enough to allow application without damaging the liner. Make sure all pores or trowel pulls are completely sealed keeping as thin a film as possible.

EDGES

If it is necessary to stop when applying PLASITE 5309 liner, do not feather the liner out, use the edge of your trowel to cut a sharp (90°) edge. When work is resumed, simply prime edge as you prime substrate.

CURE TIME

Hardening Time: 8 hours at 70°F

Curing Time: 72 hours at 70°F

Temperature schedule listed below may be used as a guide when rapid curing is necessary.

Temperature	Curing Time
130°F	8 Hrs
150°F	6 Hrs
170°F	4 Hrs

CLEAN UP

Cured or hardened PLASITE 5309 is almost impossible to remove. Clean tools and equipment immediately with hot, soapy water or Plasite Thinner #71.

STORAGE TEMPERATURE

PLASITE 5309 should not be stored at temperatures below 25°F or higher than 85°F for long periods of time.

Storage life is 12 months at 70°F.

Prior to application, all three components and equipment must be stored at 70 to 85°F for at least 48 hours.

INSPECTION

A pinhole-free film is essential for immersion service. Testing with a Tinker & Rasor Model AP-W, Stearns Model 14/20 or equivalent is required. 10,000 to 14,000 volts should be used. Allow a minimum of 48 hours at 70°F before holiday testing.

SAFETY

READ THIS NOTICE SAFETY AND MISCELLANEOUS EQUIPMENT

It is recommended that the operator provide himself with clean coveralls and rubber soled shoes and observe good personal hygiene. Certain personnel may be sensitive to various types of resins which may cause dermatitis.

FIRE AND EXPLOSION HAZARDS: PRODUCT CONTAINS LESS THAN 1% VOLATILE COMPONENTS. HOWEVER, VAPORS ARE HEAVIER THAN AIR AND COULD TRAVEL LONG DISTANCES, IGNITE, AND FLASHBACK. ELIMINATE ALL IGNITION SOURCES. Keep away from heat, sparks and open flame and use necessary safety equipment, such as, air mask, explosion-proof electrical equipment, non-sparking tools and ladders, etc. Avoid contact with skin and breathing of vapor or spray mist. When working in tanks, rooms and other enclosed spaces, adequate ventilation must be provided and respirators or fresh air supplied hoods may be required. Refer to Plasite Bulletin PA-3. Keep out of the reach of children.

CAUTION - Read and follow all caution statements on this product data sheet, material safety data sheet and container label for this product.

This data sheet provides standard information on the coating and application procedure. Since varying conditions may not be covered, consult with your local sales representative or Carboline Technical Service Department for further information.



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