

CORCHEM[®] 252 NOVOLAC FLAKE LINING

GENERIC	Proprietary advanced technology di-functional epoxy novolac resin reacted with a modified, multiple ring cycloaliphatic amine adduct. The polymer structure is very chemical resistant with an increase heat deflection temperature and reinforced with laminar flake pigments.
DESCRIPTION	Thick film heavy-duty epoxy novolac lining will cure at ambient temperature conditions to provide superior structural strength and corrosion protection for surfaces at elevated temperatures in severe chemical and physical environments. It features a fast cure, and early return to service time; and is formulated to be extremely adhesive, hard, tough and abrasion resistant.
USE	Storage vessels, containment walls and floors, railcars, tank trucks, heater treaters, free water knockouts, separators, frac tanks, clarifiers, filters, piping and processing equipment handling oil field products at elevated temperature and pressure including hot sour crude, brine waters, and drilling muds. Also resistant to petroleum products such as kerosene, diesel, gasoline, aviation fuels, motor oils, lubrication materials, greases, hydraulic fluids, alcohols, aliphatic and aromatic hydrocarbon solvents. It will provide a high degree of protection against corrosive moisture, fumes, carbon dioxide, hydrogen sulfide, methane gases, industrial water and wastewater solutions containing salts, detergents, many acids, alkalis, and other chemicals. Use as a heavy-duty chemical resistant protective lining.
SERVICE LIMITATIONS	Temperature resistance up to 250°F (wet) depending upon the individual exposure. CONTACT CORCHEM [®] FOR SPECIFIC RECOMMENDATIONS BEFORE PROCEEDING for immersion service or elevated temperatures.
COLORS	Gray (also available in other colors upon request).
FINISH	High Gloss. Finish may vary due to texture and porosity of substrate.
CAUTION!	Subject to color change (yellowing, darkening, etc.) Chalking will occur with extended exposure to sunlight.
VOLUME SOLIDS	100%
DRY COVERAGE	Theoretical (no loss): 1600 sq. ft. per gallon for one mil (.001). Allow for application loss and surface irregularities when computing coverage.
DRY FILM THICKNESS	Up to 25 mils if thinner is added. Up to 40 mils if no thinner added. Multiple applications may be necessary to achieve desired film thickness due to variations in design configurations, application equipment, temperature and other factors.
COMPONENTS	Two. By volume 4 to 1 (Base:Activator).
POT LIFE	< 1hour @ 70°F (one gallon mixed quantity). Pot life is <u>significantly shorter for higher temperatures or larger quantities</u> and longer for lower temperatures or smaller quantities.

VOC CONTENT	0 gms/l or 0.0 lbs/gal. Conforms: to United States National Volatile Organic Emission Standards.				
THINNER	CORCHEM [®] 4. Thin <u>only if required</u> for proper application. Do not exceed applicable volatile organic compound (VOC) regulations. Thinner added:				
	<table border="1"> <tr> <td>05% - 41 gms/lit or 0.34 lbs/gal</td> <td>10% - 79 gms/lit or 0.66 lbs/gal</td> </tr> <tr> <td>15% - 113 gms/lit or 0.94 lbs/gal</td> <td>20% - 145 gms/lit or 1.21 lbs/gal</td> </tr> </table>	05% - 41 gms/lit or 0.34 lbs/gal	10% - 79 gms/lit or 0.66 lbs/gal	15% - 113 gms/lit or 0.94 lbs/gal	20% - 145 gms/lit or 1.21 lbs/gal
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APPLICATION METHODS	Air or airless spray (heaters and plural component equipment not required), roller, squeegee, brush (small areas), "chopped" and "hand lay-up" method.				
TEMPERATURES	Apply at 35°F to 125°F (Air and Surfaces) and 5°F above the dew point. Contact CORCHEM [®] for special instructions if applied at lower temperature.				
CURING TIME	Recoat 2-8 Hours @ 70°F (<u>refer to RECOAT AND REPAIR Section if coating reaches complete cure and hardness or if subjected to extended exposure to sunlight</u>). Final cure for immersion is 24 hours @ 70°F. Curing time is <u>significantly shorter for higher temperatures or lower thickness and longer for lower temperatures or higher thickness</u> . Curing time is affected by the method of application; quantity of thinner (if used); the amount of ventilation and air circulation; relative humidity; etc.				
NOTICE!	Heat curing may be used to increase drying speed and resistance properties. Contact CORCHEM [®] for instructions and heat cure time cycles.				
PACKAGING	5 gallon premeasured packaged kits.				
SHELF LIFE	One year from shipment date protected between 40°F and 100°F.				
DOT/FLASH POINT	Non-Flammable Liquid Classification.				
PERFORMANCE DATA	Contact CORCHEM [®] for desired information.				
SURFACE PREPARATION	Round off sharp edges and rough welds. Burrs and weld spatter should be completely removed. Surfaces must be clean, dry and free of any dirt, chalk, grease, oils, salts, and deleterious materials before application is performed. Vacuum the topside of all horizontal and sloped surfaces. Fill pitted steel by troweling CORCHEM [®] 263 FILLER SURFACER over pits leaving them flush with surface. Repair perforations in steel by patching or plugging with $\geq 3/16$ -inch steel using full fillet welds on large perforations and CORCHEM [®] 263 FILLER SURFACER as bonding adhesive on small perforations. Grind top edges of patches to a round contour.				
CARBON STEEL	Immersion or Severe Exposures: SSPC-SP-5 (White Metal Blast Cleaning). Metal surfaces should have an anchor profile of <u>three mils (.003) or more</u> . If metal substrate has "cavities" or "indentations" apply primer application coat and back roll to <u>completely wet and thoroughly penetrate surface</u> to ensure all voids and irregularities are filled.				
CHIME AREA	Apply sufficient CORCHEM [®] 263 FILLER SURFACER to obtain a smooth radius of 1.5 inches (or make grout by mixing 4 parts clean, dry 100 mesh silica sand with 1 part CORCHEM [®] 263 FILLER SURFACER). Premix base grout and activator in small quantities and hand apply with trowel.				
NON-FERROUS METALS	SSPC-SP-7 (Brush-Off Blast Cleaning). Coatings applied to these surfaces may not achieve the same degree of adhesion and toughness.				
WELDING	Welding should precede coating. If already coated, follow instructions in U.S.A. Standard Z49.1 Safety in Welding and Cutting.				

CONCRETE AND MASONRY

Concrete and masonry to cure at least 28 days. Surface and substrate must be dry. Clean and open surfaces by dry abrasive "brush-off" blast. All concrete laitance should be removed. "Blow" holes and cavities should be opened in order to properly fill and seal. Level protrusions and repair cavities, voids, and cracks. Apply primer application coat and back roll to completely wet and thoroughly penetrate surface to ensure that all irregularities are filled and sealed.

APPLICATION MIXING

All equipment should be cleaned and flushed with CORCHEM® 4 THINNER. Add Component A into Component B. Do not vary proportions. Power stir, until completely mixed and continue agitation during application. Strain only if required for proper application. Do not allow catalyzed material to stand in equipment after use! Clean immediately with CORCHEM® 4 THINNER or Methyl Ethyl Ketone (MEK).

APPLY

In an even wet coat. Ensure seams and irregularities are completely covered. Application below minimum or above maximum suggested dry film thickness ranges might adversely affect performance. Use of a thin or "mist" coat prior to regular application may be needed to reduce pinholing and/or blistering over a rough/porous type primer or substrate.

HAND LAY-UP METHOD

Use two or more layers of polyester felt or glass mat or other suitable fiber reinforcement. Adjoining layers must overlap by at least 3 inches. Apply a heavy coat of CORCHEM® 252 NOVOLAC FLAKE LINING at a rate of 30 square feet per gallon by roller or spray. Lay sections of fiber reinforcement into wet coating and work in thoroughly with ribbed metal roller to fully wet the fiber reinforcement and remove air bubbles. Minimum film thickness should be 50 mils (.050). Apply a topcoat by spray or roller to a minimum film thickness of 10 mils (.010). Total minimum dry film thickness for the complete laminate system is 60 mils (.060). Ensure all seams and irregularities are completely covered.

RECOAT AND REPAIR

If material has reached complete cure and hardness, or if subjected to extended exposure to sunlight, uniformly abrade the surface and feather the edges. The surface must be roughened sufficiently to provide a profile adequate to ensure a mechanical bond. The use of CORCHEM® 11 ADHESION PROMOTER may be desired.

INSPECTION

Check for desired dry film thickness and for pinholes, holidays, bare areas, etc. before placing in operating service. Use 2500 voltage spark detector for thick film laminates on conductive substrates.

AIRLESS SPRAY

Graco or equal. Pump ratio 45:1 or higher, 206-718 gun with fluid tip of .017" or larger orifice size with Reverse-A-Clean tip, 3/8" I.D. or larger high-pressure solvent resistant fluid line, 1/2" I.D. or larger air supply line. Continuous air source capable of 80 to 100 psi inbound pressure at pump.

CONVENTIONAL SPRAY

Binks or equal. Pressure material pot with mechanical agitator, dual regulators, air-gages, and oil and moisture separators. No. 18 gun (external mix), 67 fluid nozzle, 65 fluid needle, 67 PB air cap, heavy-duty fluid spring, Teflon fluid packing, 1/2" I.D. or larger high solvent resistant fluid line and 3/8" I.D. or larger air-supply line. Continuous air source capable of 20 cfm or more at 80 psi per nozzle and 60 psi to the pot.

GENERAL

Regulate pressure as required for proper application. Proportionally adjust pressure higher for smaller hose diameter and/or longer hose length and adjust pressure lower for larger hose diameter and/or shorter hose length. Select tip angles and orifice diameters according to application needs.

BRUSH

Short hair or natural bristle.

- ROLLER** Short nap synthetic covers for back rolling. Ribbed metal roller for hand lay-up application.
- CLOTHING** Wear protective garments, shoes, goggles, and filter masks. Use protective barrier creams on exposed skin areas.
- TANKS & VESSELS** If thinner is added to this product use explosion-proof lighting and electrical equipment, non-sparking tools, clothes and shoes. Ground all structures and equipment. Use procedures that prevent static electrical sparks. Wear properly fitted appropriate NIOSH/MSHA approved fresh air respirator such as MSA or equal with 1/4" I.D. or larger air supply line connected directly to proper air source during and after application unless air monitoring demonstrates vapor/mist levels are within safe limits. Use suction type exhaust fans and blowers with sufficient cfm capacity to keep solvent vapors below 20% of the explosive limit. **CAUTION!** Air circulation and exhausting of solvent vapors must be continued until the coatings have fully cured to insure that no potential for fire, explosion or health hazard remains.

SAFETY INFORMATION

THIS PRODUCT CONTAINS EPOXY NOVOLAC RESINS AND AMINE COMPOUNDS. DO NOT USE IF YOU HAVE HAD A REACTION TO THESE MATERIALS. WARNING! VAPOR HARMFUL! CAUSES SEVERE EYE AND SKIN BURNS. MAY CAUSE SKIN SENSITIZATION OR OTHER ALLERGIC RESPONSES. HARMFUL OR FATAL IF SWALLOWED!

Use only with adequate ventilation. Prevent breathing of vapor or spray mists. Wear a properly fitted appropriate respirator during application and until all vapors and spray mists are gone. Prevent contact with eyes and skin. Do not take internally. Keep closures tight and upright to prevent leakage. Keep container closed when not in use. In case of spillage, absorb and dispose of in accordance with local applicable regulations. **FIRST AID:** In case of skin contact, wash thoroughly with soap and water; for eyes, flush immediately with plenty of water for 15 minutes and call a physician. Remove and wash contaminated clothing before reuse. (Discard contaminated shoes). If inhaled, remove to fresh air. If breathing difficulty persists or occurs later, consult a physician and have label and MSDS information available. If swallowed, **CALL A PHYSICIAN IMMEDIATELY. DO NOT INDUCE VOMITING.**

IN CONFINED SPACES AND TANKS OBEY SPECIAL SAFETY AND EQUIPMENT INSTRUCTIONS!

FOR INDUSTRIAL USE BY PROFESSIONAL APPLICATORS ONLY. NOT INTENDED FOR SALE TO THE GENERAL PUBLIC. This product should not be sold or delivered to any person under 18 years of age. KEEP OUT OF THE REACH OF CHILDREN! IF, FOR ANY REASON, ADDITIONAL PRODUCT AND SAFETY INFORMATION, INSTRUCTIONS OR EXPLANATIONS ARE NEEDED, CONTACT CORCHEM® IMMEDIATELY!

LIMITED WARRANTY

WARRANTY & LIMITATION OF SELLER'S LIABILITY: CORCHEM® CORPORATION warrants only that its coatings represented herein meet the formulation standards of CORCHEM® CORPORATION.

THE ABOVE WARRANTY SHALL BE IN LIEU OF ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. THERE ARE NO WARRANTIES THAT EXTEND BEYOND THE DESCRIPTIONS ON THE FACE HEREOF.

The buyer's sole and exclusive remedy against CORCHEM® CORPORATION shall be for replacement of this product, in the event a defective condition of the product should be found to exist. NO OTHER REMEDY (INCLUDING, BUT NOT LIMITED TO, INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR LOST PROFITS, LOST SALES, INJURY TO PERSON OR PROPERTY, OR ANY OTHER INCIDENTAL OR CONSEQUENTIAL LOSS) SHALL BE AVAILABLE TO THE BUYER. The sole purpose of this exclusive remedy shall be to provide buyer with replacement of the product if any defect in materials is found to exist. This exclusive remedy shall not be deemed to have failed its essential purpose so long as CORCHEM® CORPORATION is willing and able to replace the defective materials.

Technical and application information is provided for the purpose of establishing a general profile of the coating and proper coating application procedures. Test performance results were obtained in a controlled environment and CORCHEM® CORPORATION makes no claim these tests or any other tests, accurately represent all environments. As application, environmental and design factors can vary significantly, due care should be exercised in the selection and use of the coating.

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CONTACT YOUR CORCHEM® REPRESENTATIVE FOR CURRENT TECHNICAL DATA AND INSTRUCTIONS.

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