

CORCHEM[®] 237 ACID TRANSPORT LINING

GENERIC	Advanced technology epoxy novolac vinyl ester resin, which cures by polymerization of reactive vinyl groups in the presence of peroxide catalyst. The polymer structure is extremely resistant to acids and acid/hydrocarbon mixtures.
DESCRIPTION	Thick film heavy-duty vinyl ester lining with all glass flake and silica extender pigments removed for maximum resistance to hydrofluoric acid solutions and fumes. It is designed to cure at ambient temperature conditions to provide exceptional structural strength and corrosion protection for surfaces subject to severe chemical and physical abuse encountered in acid transport service environments. It features a fast cure and early return to service time; and is formulated to be extremely hard, tough and abrasion resistant.
USE	Transport trucks and similar moveable vessels and tanks. Acid transport containment is defined as portable, temporary storage tanks and vessels that have immersion, splash and fumes exposure to acids, and low pH acid/oil field chemical solutions for less than 72 hours at ambient to moderate temperatures. Intended for use in both field and shop operations. Suggested as a heavy-duty protective lining which is resistant to many inorganic and organic acids. Self-priming to steel and most surfaces or may be used in combination with CORCHEM [®] 237 PRIMER.
CAUTION!	<u>CONTACT CORCHEM[®] if lining exposure to strong acids and/or highly corrosive acid solutions will be over 72 hours.</u> Acid transport trucks and tanks should receive a complete clean water rinse of the protective lining within 24 hours of emptying the contents of the vessel.
SERVICE LIMITATIONS	Temperature resistance up to 350°F (dry) and up to 180°F (wet) depending upon the individual exposure. CONTACT CORCHEM[®] FOR SPECIFIC RECOMMENDATIONS BEFORE PROCEEDING for immersion service and exposure to corrosive acids and chemicals, elevated temperatures and/or pressures, or use with cathodic protection systems. Avoid sudden depressurization of lining. NOTE: Exterior insulation of tanks and vessels is recommended to prevent "cold wall effect" if interior lining is subject to elevated temperatures.
COLORS	Beige & Gray.
FINISH	Low Gloss. Chalking will occur with extended exposure to sunlight.
VOLUME SOLIDS	100% (Theoretical) / 85% (Practical). Contains a volatile monomer. <u>Substantial evaporation (loss) during application and curing may result.</u>
DRY COVERAGE	Theoretical (no loss): 1600 sq. ft. per gallon for one mil (.001) / Practical (no loss): 1360 sq. ft. per gallon for one mil (.001). When computing working coverage allow <u>for substantial monomer evaporation</u>, in addition to application loss and for surface irregularities.

DRY FILM THICKNESS	Normal / standard dry film thickness of 32 – 40 mils in two or more application coats. Can be applied up to 25 mils dry per coat. Multiple applications are recommended and may be necessary to achieve the specified or desired film thickness or due to variations in design configurations, application equipment, temperature and other factors. NOTE: See HAND LAY-UP METHOD for alternative system thickness.																
COMPONENTS	Two. Use 2 - 2½ oz. of Peroxide Catalyst to 1-gallon Base material.																
POT LIFE	<1 hour @ 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.																
WARNING!	Check pot life and cure time before applying. Contact CORCHEM® for complete instructions on the amount and use of Peroxide Catalyst to reduce or extend the pot life and cure time. Adding too little or too much Peroxide Catalyst will lower chemical and physical resistance properties.																
VOC CONTENT	178 gms/l or 1.5 lbs/gal. Conforms to United States National Volatile Organic Compound Emission Standards.																
THINNER	CORCHEM® 16 STYRENE. Thin only as required for proper application. Do not exceed applicable volatile organic compound (VOC) regulations. DO NOT USE ANY OTHER TYPE OF THINNER!																
APPLICATION METHODS	Air or airless spray, roller, brush (small areas), and hand lay-up method.																
TEMPERATURES	Apply at 50°F to 100°F (Air and Surfaces) and 5°F above the dew point. Sudden and/or substantial temperature change during curing process or in-service conditions can cause film defects.																
CURING TIME	Suggested curing schedule predicated upon application conditions where the mixed product, substrate, and ambient air temperatures are the same:																
	<table border="1"> <thead> <tr> <th>Temperature</th> <th>50°F</th> <th>70°F</th> <th>90°F</th> </tr> </thead> <tbody> <tr> <td>Minimum Recoat Time</td> <td>8 Hours</td> <td>4 Hours</td> <td>2 Hours</td> </tr> <tr> <td>Maximum Recoat Time</td> <td>24 Hours</td> <td>16 Hours</td> <td>8 Hours</td> </tr> <tr> <td>Immersion – Final Cure</td> <td>7 Days</td> <td>5 Days</td> <td>3 Days</td> </tr> </tbody> </table>	Temperature	50°F	70°F	90°F	Minimum Recoat Time	8 Hours	4 Hours	2 Hours	Maximum Recoat Time	24 Hours	16 Hours	8 Hours	Immersion – Final Cure	7 Days	5 Days	3 Days
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	<u>Curing times are significantly shorter for higher temperatures or lower thickness and are longer for lower temperatures or higher thickness.</u>																
NOTICE!	For faster curing / return to service time and lower temperature applications CORCHEM® 237 WINTER GRADE PEROXIDE CATALYST may be desired. Heat curing will increase drying speed and improve resistance properties. Contact CORCHEM® for instructions and heat cure times.																
PACKAGING	5 gallon pre-measured package kit [Peroxide Catalyst included].																
SHELF LIFE	90 days from shipment date protected between 40°F and 100°F.																
DOT/FLASH POINT	Flammable Liquid Classification.																
PERFORMANCE DATA	Contact CORCHEM® for desired information.																

SURFACE PREPARATION	All seams and joints of tanks and vessels must have continuous interior welds. Skip welds should be solid welded. Round off sharp edges and rough welds. Burrs and weld spatter should be completely removed. Eliminate pits and cavities by grinding or repair welding. Pre-bake and decontamination of used tanks is recommended. Perform substrate repair and degrease surfaces before abrasive blasting. 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.
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>
CHIME AREA	Apply sufficient CORCHEM® 237 ACID TRANSPORT LINING (combine with polyester or other suitable fiber reinforcement) to obtain a smooth radius of 1.5 inches.
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.
APPLICATION MIXING	All equipment should be cleaned with Methyl Ethyl Ketone (MEK) and then flush with CORCHEM® 16 STYRENE. Strain only if required for proper application. Add Peroxide Catalyst (Component A) into Base (Component B). Do not vary proportions. Power-stir until completely mixed and continue agitation during application. <u>Do not allow catalyzed material to stand in equipment after use!</u> Clean immediately with 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 other suitable fiber reinforcement. Adjoining layers must overlap by at least 3 inches. Apply a heavy coat of CORCHEM® 237 ACID TRANSPORT LINING at a rate of 25 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 60 mils (.060). Apply a topcoat by spray or roller to a minimum film thickness of 20 mils (.020). The total dry film thickness for the complete laminate system is a minimum of 80 mils (.080). 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.
INSPECTION	Check for desired dry film thickness and for pinholes, holidays, bare areas, etc. before placing in operating service. Use 2500 - 3000 voltage spark detector on conductive substrates.
AIRLESS SPRAY	Graco or equal. Pump ratio 56:1 or higher, XTR-7 gun with fluid tip .023" or larger orifice size with Reverse-A-Clean tip, 3/8" I.D. or larger high pressure 5600 psi 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.

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	3/8 inch or longer nap. 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	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 3/8" I.D. or larger air supply line connected directly to proper air source capable of producing grade D air 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 STYRENE AND VINYL ESTER RESINS. THE CATALYST (ACTIVATOR) USED IS AN ORGANIC PEROXIDE. DO NOT USE IF YOU HAVE HAD A REACTION TO THESE MATERIALS.

WARNING! FLAMMABLE! VAPOR HARMFUL! CAUSES SEVERE EYE AND SKIN BURNS. MAY CAUSE SKIN SENSITIZATION OR OTHER ALLERGIC RESPONSES. HARMFUL OR FATAL IF SWALLOWED!

Keep away from heat, sparks, and open flame. 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

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The buyer's sole and exclusive remedy against CORCHEM® CORPORATION shall be for replacement of the 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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