

475 100% Solids Epoxy Penetrating Sealer

Product Data/Application Instructions (For Marine & Offshore use)

- Solventless sealer and tiecoat
- Penetrates and reinforces rusty steel surfaces
- Compatible with old coatings
- Accepts broad range of topcoats
- Compatible with damp substrates
- Resists high humidity and moisture

Typical Uses

Khemix 475 is a penetrating sealer for marginally prepared steel and aged coatings. Its low viscosity and excellent wetting properties allow it to penetrate rust and discontinuities in existing coatings which in turn improves adhesion of subsequent topcoats. **Khemix 475** has excellent resistance to corrosive environments.

Surface Preparation

Khemix 475 is intended for less than ideal surfaces including most types of properly prepared and tightly adhering coatings. A test patch is recommended for use over existing coatings to insure compatibility.

All oil, grease, contaminants, loose rust, loose scale and inadequately bonded coating must be removed. Best performance will be obtained by treating all surfaces with Khemix 190 Cleaner, followed by a high pressure water wash before applying **Khemix 475** Sealer.

Steel – Remove all loose rust, dirt, moisture, grease or other contaminants from surface. Power-tool clean SSPCSP3 or hand-tool clean SSPC-SP2. For more severe environments, dry abrasive blast SSPC-SP7. Water jetting is also acceptable. For immersion service – dry abrasive blast SSPC-SP10 or power tool SSPC-SP-11.

Aluminum – Remove oil, grease or soap film with neutral detergent or emulsion cleaner, treat with Alodine® 1200, Alumiprep® or equivalent or power tool clean or blast lightly with fine abrasive.

Galvanizing – Remove oil or soap film with detergent or emulsion cleaner, then use zinc treatment such as Galvaprep® or equivalent or power tool clean or blast lightly with fine abrasive.

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Physical Data

Finish	Gloss	
Color	Clear	
Components	2	
Curing mechanism	Chemical reaction	
Volume solids (calculated)	100%	
Dry film thickness per coat	1.5 mils (38 microns)	
Coats	1 or 2	
Theoretical coverage	ft ² /gal	m ² /L
1 mils (25 microns)	1604	39.3
1.5 mils (38 microns)	1069	27.1
VOC (theoretical)	lb/gal	g/L
mixed	1.7	204
Temperature resistance, dry	°F	°C
continuous	250	121
Flash point (SETA)	°F	°C
Khemix 475 base	200	93
Khemix 475 converter	135	57

Application Data

Applied over	Prepared steel, galvanizing, stainless steel, aluminum or aged coatings		
Method	Conventional spray, brush or roller		
Mixing ratio (by volume)	3 part base to 1 part converter		
Pot life (hours)	°F/°C		
	90/32	70/21	50/10
	2	4	6
Environmental conditions			
Temperature	°F		°C
air	32 to 120	0 to 49	
surface	32 to 120	0 to 49	
Drying time (ASTM D1640) (hours)	°F/°C		
	90/32	70/21	50/10
touch	6	10	16
through	11	16	24
Recoat/topcoat time			
minimum (hours)	8	12	20
maximum ^x (days)	3	3	3

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Application Equipment

The following is a guide; suitable equipment from other manufacturers may be used.

Changes in pressure, hose and tip size may be needed for proper spray characteristics.

Conventional spray – Industrial equipment such as DeVilbiss MBC or JGA spray gun with 78 or 765 air cap and “E” fluid tip, or Binks No. 18 or 62 gun with a 66 x 63 PB nozzle set up. Separate air and fluid pressure regulators, mechanical pot agitator, a moisture and oil trap in the main air supply line are recommended.

Power mixer – Jiffy Mixer powered by an air or an explosion-proof electric motor.

Brush – Natural bristle. Maintain wet edge.

Roller – Use industrial roller. Level any air bubbles with bristle brush.

Application Procedure

1. Flush equipment with thinner,
2. Add **Khemix 475** converter to **Khemix 475** base. Mix thoroughly until uniformly blended.

Pot life (hours)	°F/°C		
1 gal unit	90/32	70/21	50/10
	2	4	6

3. Thinning is not recommended.
4. Apply wet coat in even parallel passes, over lapping each pass by 50%..
5. **Khemix 475** is low in viscosity. Apply one coat at 1.5 mils or sufficient thickness to completely cover and penetrate steel. Porous surfaces may require an additional coat of **Khemix 475** sealer.
6. Clean all equipment with thinner, immediately after use.

Safety Precautions

Read each component's material safety data sheet before use. Mixed material has hazards of each component. Safety precautions must be strictly followed during storage, handling and use.

CAUTION – Improper use and handling of this product can be hazardous to health and cause fire or explosion. Do not use this product without first taking all appropriate safety measures to prevent property damage and injuries. These measures may include, without limitation: implementation of proper ventilation, use of proper lamps, wearing of proper protective clothing and masks, tenting and proper separation of application areas. Consult your supervisor. Proper ventilation and protective measures must be provided during application and drying to keep spray mists and vapor concentrations within safe limits and to protect against toxic hazards. Necessary safety equipment must be used and ventilation requirements carefully observed, especially in confined or enclosed spaces, such as tank interiors and buildings.

This product is to be used by those knowledgeable about proper application methods. **Alspec** makes no recommendation about the types of safety measures that may need to be adopted because these depend on application environment and space, of which **Alspec** is unaware and over which it has no control.

If you do not fully understand these warnings and instructions or if you cannot strictly comply with them, do not use the product.

Note: Consult Code of Federal Regulations Title 29, Labor, parts 1910 and 1915 concerning occupational safety and health standards and regulations, as well as any other applicable federal, state and local regulations on safe practices in coating operations.

This product is for industrial use only. Not for residential use.

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Shipping Data

Packaging unit	1-gal
Shipping weight (approx)	lb
1-gal unit	
base	7.5
converter	2.1
5-gal unit	
base	30.3
converter	8.1

Shelf life when stored indoors at 40 to 100°F (4 to 38°C)

1 year from shipment date

Numerical values are subject to normal manufacturing tolerances, colors and testing variances. Allow for application losses and surface irregularities. The mixed material is photochemically reactive as defined by the South Coast Air Quality Management District's Rule 102 or equivalent regulations.

Warranty

Alspec warrants its products to be free from defects in material and workmanship. **Alspec's** sole obligation and Buyer's exclusive remedy in connection with the products shall be limited, at **Alspec's** option, to either replacement of products not conforming to this Warranty or credit to Buyer's account in the invoiced amount of the nonconforming products. Any claim under this Warranty must be made by Buyer to **Alspec** in writing within five (5) days of Buyer's discovery of the claimed defect, but in no event later than the expiration of the applicable shelf life, or one year from the delivery date, whichever is earlier. Buyer's failure to notify **Alspec** of such nonconformance as required herein shall bar Buyer from recovery under this Warranty.

Khemix makes no other warranties concerning the product. No other warranties, whether express, implied, or statutory, such as warranties of merchantability or fitness for a particular purpose, shall apply. In no event shall Khemix be liable for consequential or incidental damages.

Any recommendation or suggestion relating to the use of the products made by **Khemix**, whether in its technical literature, or in response to specific inquiry, or otherwise, is based on data believed to be reliable; however, the products and information are intended for use by Buyers having requisite skill and know-how in the industry, and therefore it is for Buyer to satisfy itself of the suitability of the products for its own particular use and it shall be deemed that Buyer has done so, at its sole discretion and risk. Variation in environment, changes in procedures of use, or extrapolation of data may cause unsatisfactory results.

Limitation of Liability

Khemix's liability on any claim of any kind, including claims based upon **Khemix's** negligence or strict liability, for any loss or damage arising out of, connected with, or resulting from the use of the products, shall in no case exceed the purchase price allocable to the products or part thereof which give rise to the claim. **In no event shall Khemix be liable for consequential or incidental damages.**