

490 Epoxy-Phenolic Tank Lining

Product Data

- Low VOC
- Economical tank lining; requires only 2 coats
- Withstands continuous immersion in water up to 140°F (60°C)
- Recommended for use under insulation up to 400°F (204°C)

Typical Uses

Khemix 490 provides excellent protection to prepared steel and concrete exposed to splash, spillage and fumes of corrosive chemical and weather environments. **Khemix 490** is used as a tank lining for ship tanks, roadtankers, barges, railroad cars and storage tanks in the chemical and petrochemical industries. **Khemix 490** has excellent resistance to continuous and alternating service for a wide range of chemicals, solvents, caustic, crude and fuel oils, as well as, neutral, alkaline and nonoxidizing salt solutions in water. It may be cleaned between cargoes with hot cleaning, up to a butterworth temperature of 176°F (80°C).

Physical Data

Finish	Flat	
Color**	White, ivory, RT-1805 blue	
Components	2	
Curing mechanism	Solvent release and chemical reaction between components	
Volume solids (calculated)	64% ± 3%	
Dry film thickness per coat	4-6 mils (100-150 microns)	
Coats	2 or 3	
Total minimum DFT		
water tanks	8-10 mils (250 microns)	
chemical tanks	8-12 mils (300 microns)	
refined petroleum	8-10 mils (200 microns)	
ships tanks	12 mils (300 microns)	
under insulation	12 mils (300 microns)	
suppression chambers	10 mils (250 microns)	
factory-applied and baked lining	8 mils (200 microns)	
Theoretical coverage	ft ² /gal	m ² /L
1 mil (25 microns)	1027	25.2
4 mils (100 microns)	257	6.3
VOC	lb/gal	g/L
mixed	2.7	323
mixed/thinned (1pt/gal)	3.3	395

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Temperature resistance

	°F	°C
Immersion	140	60
Non-immersion	250	121
Under insulation	400	204
Flash point (SETA)	°F	°C
cure	83	28
resin	96	39
Khemix 065	78	25
Khemix 012	2	-17

Application Data

Applied over Prepared steel, concrete, aluminum, galvanizing or **Khemix 493**

Surface preparation

steel	SSPC-SP5(Sa 3) or 10(Sa 21/2)
concrete	ASTM D4259 or 4260
aluminum	Alodine® or light abrasive blast
galvanizing	Galvaprep® or light abrasive blast
Khemix 493	See specific Khemix 493

Method

Airless or conventional spray

Mixing ratio (by volume)

4 parts resin to 1 part cure

Pot life (hours)

	°F/°C
90/30	70/21
2	4
50/10	6

Environmental conditions

Temperature

	°F	°C
air	50 to 100	10 to 38
surface	50 to 120	10 to 49

Surface temperatures must be at least 5°F (3°C) above dew point to prevent condensation.

** Use pearl gray, white or ivory for chemical tank lining.

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Application Data Summary

To obtain maximum performance, apply as recommended. Adhere to all safety precautions during storage, handling, application and drying periods.

Surface Preparation

Coating performance is, in general, proportional to the degree of surface preparation. All surfaces must be clean, dry, and free of all contamination, including salt deposits before applying coating.

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.

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

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.

Alspec 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 Alspec be liable for consequential or incidental damages.

Any recommendation or suggestion relating to the use of the products made by Alspec, 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.

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Limitation of Liability

Alspec's liability on any claim of any kind, including claims based upon Alspec'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 Alspec be liable for consequential or incidental damages.**

Drying time (ASTM D1640) (hours)	°F/°C			
	100/38	90/32	70/21	50/10
touch	1	1 1/2	3	6
through	6	8	12	24
recoat				
minimum	3	4	8	12
maximum (days)	3 1/2	5	7	12

Roughen surface if maximum recoat time is exceeded.

Curing time for immersion service***

Steel substrate		Ambient cure	
Temperature		12 mils/300μ	18 mils/450μ
°F	°C	Heat cure† hours	days
212	100	1.5	NA
180	82	2.5	NA
160	71	5	NA
140	60	12	NA
122	50	24	NA
104	40	60	NA
86	30	NA	4
70	21	NA	7
59	15	NA	10
50	10	NA	14

*** After application and during the above curing schedule tanks must be ventilated to prevent solvent entrapment.

† For maximum chemical resistance, minimum cure temperature is 104°F (40°C).

Thinner **Khemix 065**
Equipment cleaner Thinner or **Khemix 012**

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Shipping Data

Packaging units	1 gal	5 gal
cure	0.20 gal in 1-qt can	1 gal in 1-gal can
resin	0.80 gal in 1-gal can	4 gal in 5-gal can
Shipping weight (approx)	lb	kg
1-gal unit		
cure	2.0	0.9
resin	11.3	5.1
5-gal unit		
cure	8.7	3.9
resin	55.0	25.0

Shelf life when stored indoors at 40 to 100°F (4 to 38°C)
cure and resin 1 year from shipment date

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