

## Selection & Specification Data

Generic Type	Modified Epoxy
Description	A high-build, modified epoxy lining with good overall chemical resistance and versatility. It can be used as a "caulk" for application in tanks for transition areas; floors and walls, lap welds, pitted steel; bolts; etc. It is ideal for the relining or reconditioning of older tanks. It has excellent flexibility and its sprayapplied capability (plural component) makes it unique over other similar products that usually require hand lay-up/trowel application. UniCoat 1 can be used as a barrier coat for concrete or steel surfaces that are exposed to moderately corrosive environments. Applications include floors, piping, storage, tanks, and process vessels in oil refineries, chemical processing, and wastewater treatment plants.
Features	<ul style="list-style-type: none"> <li>. Excellent adhesion to prepared steel &amp; concrete surfaces</li> <li>. Excellent abrasion resistance</li> <li>. Excellent flexibility; will withstand the expansion and contraction effect encountered in large storage/processing facilities</li> <li>. Does not require a primer or a topcoat (selfpriming)</li> <li>. Designed for application using plural component, airless spray equipment</li> </ul>
Color	Blue (0100)
Primers	Self-priming
Topcoats	Depends on exposure. Consult Union Compound Technical Service.
Dry Film Thickness	As needed; May be applied up to ½" (500 mils) in a single coat horizontally.
Solids Content	By Volume: 100%
Theoretical Coverage Rate	1,604 mil ft <sup>2</sup> (39.6 m <sup>2</sup> /l at 25 microns) Allow for loss in mixing and application
VOC Values	As supplied: 0.0 lbs./gal (0 g/l)
Dry Temp. Resistance	Continuous: 200°F (93°C) Non-Continuous: 250°F (121°C) Discoloration and loss of gloss is observed above 200°F (93°C).
Limitations	Epoxies lose gloss, discolor, and eventually chalk in sunlight exposure.

## Substrates & Surface Preparation

General	All surfaces must be thoroughly cleaned to remove dirt, grease, mill scale, loose rust, and any other contaminants that can reduce adhesion.
Steel	Immersion : SSPC-SP5 Non-Immersion : SSPC-SP6 Surface Profile : 3.0-4.0 mils (38-75 microns)
Concrete	Concrete must be cured 28 days at 75°F (24°C) and 50% relative humidity or equivalent. Laitance, form oils, curing agents and hardeners should be removed by suitable method before coating application.

## Performance Data

Shear Strength: (ASTM D1002)	1820 psi
Tensile Strength (30-50 mils)	2700 psi 22% Elongation
Tensile Strength (with 1.5 oz fiberglass mat)	4000 psi 6% Elongation
Abrasion Resistance (Tabor Abrasion)	89 mg loss
Elcometer Adhesion (over SP10 blasted steel)	1400 psi
Elcometer Adhesion (over damp concrete)	800 psi

Exposure	Immersion	Fumes
Acids, Dilute	Good	Excellent
Alkalies, Dilute	Good	Excellent
Solvents, Aliphatic	Excellent	Excellent
Salts	Excellent	Excellent
Water	Excellent	Excellent
Sour Crude Oil	Excellent	Excellent
Gasoline	Excellent	Excellent

## Application Equipment

Listed below are general equipment guidelines for the application of this product. Job site conditions may require modifications to these guidelines to achieve the desired results.

### Plural Component Spray Application:

- (1) Proportioning pump set up for 2:1 ratio with filters on the inbound and outbound sides.
  - (2) 220 volt in-line heaters.
  - (2) Band heaters. May be needed to pre-heat the material, depending on application temperatures and equipment system used.
  - (2) 5:1 ratio transfer pumps.
  - 23:1 ratio solvent flush pump with reservoir
- Insulated airless material hose bundle or insulated heat traced airless material hose bundle, depending on application temperatures. Hose I.D.'s shall be 3/8" minimum.
- Mix manifold with a 12-element static mixer, 25 feet of 1/4" I.D. airless whip hose to a standard airless gun with a second 6- element static mixer and a standard airless gun (Binks 1M, Graco XTR 7, WIWA 500 or equal) with a .025 - .031" reversible spray tip.
- Each equipment supplier has a number of different systems that may change or modify these basic components. For example, the use of heated, false wall material hoppers can eliminate the need for transfer pumps and band heaters.

Graco, Inc., Minneapolis, MN and Binks Manufacturing Company, Inc., Chicago, IL have plural proportioning equipment components that have been found acceptable for applying this material. Contact their offices or Union Compound Company for more detailed information. Equivalent equipment can be substituted if it is proven

To the best of our knowledge the technical data contained herein is true and accurate on the date of publication and is subject to change without prior notice. User must contact union compound Company to verify correctness before specifying or ordering. No guarantee of accuracy is given or implied. We guarantee our products to conform to union compound quality control. We assume no responsibility for coverage, performance or injuries resulting from use. Liability, if any, is limited to replacement of products. NO OTHER WARRANTY OR GUARANTEE OF ANY KIND IS MADE BY union compound, EXPRESS OR IMPLIED, STATUTORY, BY OPERATION OF LAW, OR OTHERWISE, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

an acceptable application.

### Squeegee, Trowel, Roller, or Brush:

Recommended for small jobs, touch up work and forming of material after spraying. When applying to concrete, these are useful tools for working the material into voids, honeycombed areas, etc.

## Mixing & Thinning

Mixing	PLURAL COMPONENT SPRAY EQUIPMENT IS RECOMMENDED FOR APPLICATION, THEREFORE PREMIXING OF THE PRODUCT IS NOT REQUIRED. When applying by squeegee, trowel, roller, or brush, power mix each component separately, then combine and power mix.
Ratio	2:1 Ratio (by volume) (Part A to Part B)
Thinning	Not Recommended
Pot Life	20 - 30 minutes at 75°F (24°C) Pot life ends when coating exotherms and begins to gel. Pot life times will be less at higher temperatures.

## Cleanup & Safety

Cleanup	Use Thinner 11. In case of spillage, absorb and dispose of in accordance with local applicable regulations.
Safety	Read and follow all caution statements on this product data sheet and on the MSDS for this product. Employ normal workmanlike safety precautions. Hypersensitive persons should wear protective clothing, gloves and use protective cream on face, hands and all exposed areas.
Ventilation	When used in enclosed areas, thorough air circulation must be used during and after application until the coating is cured. The ventilation system should be capable of preventing the solvent vapor concentration from reaching the lower explosion limit for the solvents used. User should test and monitor exposure levels to insure all personnel are below guidelines. If not sure or if not able to monitor levels, use MSHA/NIOSH approved respirator.

## Application Conditions

Application Conditions Condition	Material*	Surface	Ambient	Humidity
Normal	110°F (43°C)	60°-80°F (16°-27°C)	60°-80°F (16°-27°C)	30-70%
Minimum	95°F (35°C)	50°F (10°C)	50°F (10°C)	0%
Maximum	140°F (60°C)	110°F (43°C)	100°F (38°C)	85%

\*For non-spray applications, the normal material temperature is 75°F (24°C) and the minimum is 60°F (16°C).

Do not apply when the surface temperature is less than 5°F (3°C) above the dew point. To reduce outgassing when applying to concrete substrates, do not apply in direct sunlight or when surface temperatures are increasing. Best results are obtained when ambient and surface temperatures are decreasing or constant. Special application techniques may be required above or below normal application conditions.

To the best of our knowledge the technical data contained herein is true and accurate on the date of publication and is subject to change without prior notice. User must contact union compound Company to verify correctness before specifying or ordering. No guarantee of accuracy is given or implied. We guarantee our products to conform to union compound quality control. We assume no responsibility for coverage, performance or injuries resulting from use. Liability, if any, is limited to replacement of products. NO OTHER WARRANTY OR GUARANTEE OF ANY KIND IS MADE BY union compound, EXPRESS OR IMPLIED, STATUTORY, BY OPERATION OF LAW, OR OTHERWISE, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

## Curing Schedule

Surface Temp. & 50% Relative Humidity	Maximum Recoat	Final Cure
50°F (10°C)	72 Hours	-
60°F (16°C)	48 Hours	12 days
75°F (24°C)	24 Hours	6 days
90°F (32°C)	12 Hours	3 Days

These times are based on a 25 mil (625 micron) dry film thickness and consistent ambient conditions as stated. In practice, it may be difficult to maintain consistent curing temperatures which may and will affect the dry times as stated. Should the curing temperatures deviate during the curing cycle it is recommended to follow the dry times as stated for the lower ambient temperature reached. Higher film thickness, insufficient ventilation or cooler temperatures will require longer cure times and could result in solvent entrapment and premature failure. Excessive humidity or condensation on the surface during curing can interfere with the cure, can cause discoloration and may result in a surface blush or haze. If the maximum recoat time has been exceeded, the surface must be abraded by sweep blasting or sanding prior to the application of additional coats.

## Packaging, Handling & Storage

Shipping Weight (Approximate)	<u>1.5 Gallon Kit</u> 17 lbs (8 kg)	<u>15 Gallon Kit</u> 167 lbs (76 kg)
	<u>150 Gallon Kit</u> 1711 lbs (778 kg)	
Flash Point (Setaflash)	Part A: >200°F (93°C) Part B: >200°F (93°C)	
Storage (General)	Store Indoors.	
Storage Temperature & Humidity	40° -100°F (4°-43°C) 0-95% Relative Humidity	
Shelf Life	Part A & B: Min. 24 months at 75°F (24°C)	

\*Shelf Life: (actual stated shelf life) when kept at recommended storage conditions and in original unopened containers.