

## Selection & Specification Data

|                          |  |
|--------------------------|--|
| TYPE                     | UniCoat 3: A vinyl ester resin combined with pigments to provide a high build coating with excellent chemical resistance. UniCoat 3-H:<br>A high build vinyl ester coating specially formulated for excellent abrasion resistance.   |
| INTENDED USE             | As a chemical-resistant coating for tank lining service and as a maintenance coating to protect against corrosive conditions encountered in waste treatment, chemical/food processing and carbon filters. When combined with abrasive conditions, use UniCoat 3-H.   |
| TEMPERATURE RESISTANCE   | Dry film basis is 250-300°F/121-149°C. Immersion temperature or splash and spill limits are determined by chemical exposure - please consult with Union Compound Technical Service Department for further information.   |
| COLORS                   | UniCoat 3: Off White; Gray; Yellow Oxide.<br>UniCoat 3-H: Off White, Gray.   |
| FILM THICKNESS PER COAT* | One multi-pass (25-30 wet mils) spray coat will produce approximately 15 mils/380 microns DFT. When UniCoat 4(4-H) is used as an IMMERSION lining in corrosive services (dilute acids, etc.), use of a 30 mils/750 microns DFT system applied in a minimum of two coats is recommended. CHEMICAL FUMES AND SPILLAGE normally requires two coats at 20-30 dry mils/500-750 microns DFT.   |
| PACKAGING                | <u>A one-gallon kit consists of:</u><br>One 1-gallon can of Part A<br>One small container of Part B<br>One small container of catalyst Part C<br><br><u>A five-gallon kit consists of:</u><br>One 5-gallon can of coating Part A<br>One small container of promotor Part B<br>One small container of catalyst Part C   |
| SPREADING RATE           | A mixed gallon will cover 28-30 sq. ft./gallon (2.6-2.8 sq. m/gallon) at 30 mils/0.75 mm DFT.  |
| RECOATING TIME           | May be recoated after initial hardening or set which will normally occur in 3 to 6 hours at 75°F/24°C. Following coats must be applied within 30 days.<br>*This product is formulated with reactive additives that become part of the film under ideal conditions. Changing ambient conditions (temperature or humidity) can affect the VOC values and theoretical coverage. The spreading rate given takes into account these variances and is stated as a "practical" coverage for estimating. |

### VOC CONTENT

| Color                           | Coating as Supplied<br>(Determined Theoretically) |         | Thinned 5% by Volume<br>with Thinner 13<br>(Determined Theoretically) |         |
|---------------------------------|---|---------|---|---------|
|                                 | Lbs./Gal.   | g/L     | Lbs./Gal.   | g/L     |
| Off White, Gray<br>Yellow Oxide | 0.34 ± 2%   | 42 ± 2% | 0.64 ± 2%   | 77 ± 2% |

## PHYSICAL SPECIFICATIONS

|                                |   |
|--------------------------------|---|
| Abrasion Resistance:           | 87.6 mg<br>(ASTM D-4060, UniCoat 3-H: 37.5 mg, CS-17 wheel) |
| *Surface Hardness (ASTM D2240) | Shore D: 91   |
| Pot Life:                      | 1 hour @ 70-80°F  |
| Shelf Life:                    | 60 days at 70°F   |
| Spray Viscosity:               | At 70°F/21°C, 17 ± 5 seconds<br>Ford Cup #4.                |
| Shipping Weight:               | Approximately 13 lbs./gallon.                               |
| Thermal Shock:                 | Unaffected in 5 cycles, minus 70°F/21°C to plus 212°F.      |
| Gloss:                         | Low sheen.  |

\*Note: Above tests were conducted on film cured at 150°F.

## CHEMICAL RESISTANCE

Resistant to chemical effluents, organic and inorganic acids, corrosive liquids, salts, and water. UniCoat 3-H also provides protection against abrasion conditions encountered in agitated or flowing solutions.

It is recommended each following coat be diluted approximately 2 to 5% with Thinner 13.

Note: Previously applied coating exposed to an accumulation of 24 hours of sunlight or surface temperatures in excess of 130°F/54°C may result in intercoat disbondment. An applied coating film should be topcoated before an accumulation of 24 hours exposure has occurred, or special procedures (such as shading with tarps) should be used.

Care must be taken to avoid contamination between coats.

## THINNERS

Use Thinner 13 thinning 2 to 5% may be required to adjust coating for higher temperatures and various application conditions.

Topcoating of previously applied films will require the addition of 2 to 5% thinner. Consult Union Compound Technical Service Department for unusual thinning requirements. See RECOATING TIME section.

CLEANUP THINNER: Thinner 13

## CURING

Curing time is 7 days at 70°F/21°C or 5 days at 90°F/32°C. Although coating may be applied at substrate temperatures as low as 60°F/16°C, the substrate temperature must be raised to a least 70°F/21°C within 12 hours and held until coating surface is tack free (approximately 10 hours) to avoid possible loss of cure. A minimum of 70°F/21°C surface temperature is required to obtain polymerization of this coating.

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Listed below are a few curing schedules that may be used for time and work planning. Prior to raising the metal to the force curing temperature, it is necessary that an air dry time of 2 to 5 hours at temperatures from 70- 100°F/21-38°C be allowed. After the air dry time has elapsed, the temperature should be raised in increments of approximately 30°F/17°C every 30 minutes until the desired force curing metal temperatures are reached. Any moisture from condensation of any source will kill the cure on freshly applied coating before it reaches a “non-tacky” stage.

| METAL TEMPERATURE | CURING TIME | METAL TEMPERATURE | CURING TIME |
|-------------------|-------------|-------------------|-------------|
| 110°F/43°C        | 72 Hrs      | 160°F/71°C        | 4 ½ Hrs     |
| 120°F/49°C        | 36 Hrs      | 170°F/77°C        | 3 ½ Hrs     |
| 130°F/54°C        | 18 Hrs      | 180°F/82°C        | 2 ½ Hrs     |
| 140°F/60°C        | 10 Hrs      | 190°F/88°C        | 2 Hrs       |
| 150°F/66°C        | 6 Hrs       | 200°F/93°C        | 1 ¾ Hrs     |

## APPLICATION(Mixing)

The promotor (Part B) and catalyst (Part C) are supplied in separate containers and are premeasured for the coating unit supplied. Thoroughly mix the coating (Part A). After the pigments and liquid are thoroughly mixed, add the entire amount of the measured liquid promotor (Part B). MIX COMPLETELY! NO COLOR STREAKING OR RESIDUE OF PART B SHOULD REMAIN ON CONTAINER SIDEWALLS. Add the catalyst (Part C) and mix completely with the coating.

Warning! The promotor (Part B) and the catalyst (Part C) must be separately mixed into the coating (Part A). Any contact of unmixed Part B with Part C may lead to a fire or explosion!

## LINING REPAIR

Clean damaged area, removing all contaminants and loose coating.

Abrasive blast substrate to original specification where coating has been exposed to environment and where oxidation is evident. Feather the original coating not less than 2 in./5 cm from damaged area.

If new coating is physically damaged and has not been in service, repair as shown above.

For repairing holidays, sand surface and brush apply proper thickness of coating.

Apply coating by brush or spray. Do not apply by brush on areas larger than 1 sq. ft/0.1 sq. m.

Warning: Contamination of previously exposed coating film may be detrimental to adhesion of the repair and may affect service life expectancy.

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## INSPECTION

Degree of surface preparation shall conform to appropriate specifications as outlined in SURFACE PREPARATION section.

Metal temperature shall be recorded at least every 4 hours and before application of coating. Humidity (wet bulb reading) shall be taken to ensure that metal temperature is at least 5°F/3°C higher than wet bulb temperature. Dry bulb temperatures shall be recorded at the same time to ensure curing.

For immersion service, a pinhole-free film is essential and testing with Tinker & Rasor Model AP-W or Stearns Model 14/20 or equivalent is required on final film. Use 3000 volts at the recommended 30 mils/0.75 mm DFT. Allow a minimum cure of 48 hours at 70°F/21°C or 36 hours at 90°F/32°C before holiday testing. Dry film thickness shall be determined utilizing a non-destructive, magnetic type, high range gauge. The anticipated film thickness shall be in the middle range of the gauge.

This data sheet provides standard information on the coating and application procedure. Since varying conditions may not be covered, consult your local sales representative or Union Compound Technical Service Department for further information.

## SAFETY

For tank lining work it is recommended that the operator provide himself with clean coveralls and rubber soled shoes and observe good personal hygiene. Certain personnel may be sensitive to various types of resins which may cause dermatitis.

THE SOLVENT IN THIS COATING IS FLAMMABLE AND CARE AS DEMANDED BY GOOD PRACTICE, OSHA, STATE AND LOCAL SAFETY CODES, ETC. MUST BE FOLLOWED CLOSELY. Keep away from heat, sparks, and open flame and use necessary safety equipment such as air mask, explosion-proof electrical equipment, non-sparking tools and ladders, etc. Avoid contact with skin and breathing of vapor or spray mist. When working in tanks, rooms, and other enclosed spaces adequate ventilation must be provided. . Keep out of the reach of children.

The catalyst or curing agent is relatively stable at room temperatures but must be protected from contamination, heat and fire and is classified by the Interstate Commerce Commission as an "oxidizing material." Subsequently, all shipping containers bear a yellow caution label. The catalyst is highly irritating if it gets into the eyes. Immediately rinse eyes thoroughly with water and get medical attention. The catalyst also can be a skin irritant and should be removed with large quantities of soap and water. Since this is an oxidizing material, it should not be allowed to accumulate or remain in soaked rags or clothing.

**CAUTION** - Read and follow all caution statements on this data sheet, material safety data sheet and container label for this product.