

SELECTION & SPECIFICATION DATA

Generic Type	Vinyl ester
Description	A high build, 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. For abrasive conditions use Plasite 4006 HAR.
Features	Complies with FDA 21 CFR 175.300 criteria for food contact
Color	Off White, Gray, and Yellow Oxide.
Finish	Eggshell
Dry Film Thickness	10 - 15 mils (254 - 381 microns) per coat, 2-3 coats total Immersion lining in corrosive services use a 30 mil DFT system applied in a minimum of two coats. Chemical fumes an spillage normally requires a 20-30 mil system applied in two coats.
Solid(s) Content	96±2 % solids by volume (Calculated)
Coverage 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. 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 Values	Plasite Thinner #20 5% by volume: 0.64 lbs/gal (77g/l) As Supplied 0.34 lbs/gal (42 g/l)
Dry Temp. Resistance	Continuous: 250°F (121°C) Non-Continuous: 300°F (149°C) Immersion temperature of splash and spill limits are determined by chemical exposure. Please consult with Carboline Technical Service Department for future information.
Topcoats	Not Applicable

SUBSTRATES & SURFACE PREPARATION

General	Surfaces must be clean and dry. Employ adequate methods to remove dirt, dust, oil and all other contaminants that could interfere with adhesion of the coating.
Steel	Cleanliness: Abrasive blast to SSPC-SP10 (minimum) Profile: Minimum 3 mil (75 micron) dense, sharp anchor profile free of peening, as measured by ASTM D 4417. Defects exposed by blasting must be repaired.
Aluminum	Consult Carboline Technical Service
Concrete or CMU	Concrete shall be designed, placed, cured, and prepared per NACE No. 6/SSPC-SP 13, latest edition. Abrade to remove all laitance, loose concrete, etc. and to create surface profile in accordance with the appropriate ICRI CSP 5-7.

PERFORMANCE DATA

Test Method	System	Results
*Surface Hardness	Plasite 4006	Shore D: 91 (ASTM D2240)
Abrasion Resistance	Plasite 4006	87.6 mg (ASTM D-4060, CS-17 wheel)
Gloss	Plasite 4006	Low sheen
Spray Viscosity	Plasite 4006	At 70 °F/21 °C, 17 ± 5 seconds Ford Cup #4.
Thermal Shock	Plasite 4006	Unaffected in 5 cycles, minus 70 °F/21 °C to plus 212 °F

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

MIXING & THINNING

Mixing | Plasite 4006 Part A, the promoter (Part B) and catalyst (Part C) are supplied in separate containers and are premeasured for the coating unit supplied. Thoroughly mix the Part A and then add the entire amount of the measured liquid promoter (Part B). When completely mixed (no color streaking or residue of Part B should remain on container sidewalls) add the catalyst (Part C), thoroughly mix and then if needed add thinner.
WARNING! The promoter (Part B) must be separately mixed into the coating (Part A). Any contact of unmixed Part B with Part C may lead to a fire or an explosion!

Thinning | Use PLASITE Thinner #20. Thinning of 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. See RECOATING TIME section.

Pot Life | 1 hour at 80 °F

APPLICATION EQUIPMENT GUIDELINES

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.

Conventional Spray | Fluid Nozzle 59ASS
 Air Cap 251
 Needle 559SS
 Output Pressure approximately 60 PSI
 Use standard production type pressure pot with air motor drive agitator.

Airless Spray | GMP output 3.0 minimum
 Tip Size 0.025" or larger
 Output PSI 1600-1800
 Material Hose 3/8" I.D. (minimum)
 Continuous mixing during use is required
 12" minimum spray width is recommended
 All screens should be removed from pump and gun

Brush | Brush application is not recommended, but may be used for repairs or touch-up. Continuous mixing during use is required.

APPLICATION PROCEDURES

Application

The mixed coating shall be applied utilizing a multi-pass spray system. Apply horizontal and vertical passes with 50% overlap. Special precautions are required at overlaps and welds to eliminate excessive film build. Spray gun should be perpendicular to surface at all times, approximately 14" from surface. Coating may be overcoated after initial "set" which will occur normally in 3 to 6 hours at 70 °F (21 °C) with proper ventilation. Initial "set" time will decrease as surface temperature increases.

When physical contact (foot traffic, scaffolding, etc.) with the previously applied coating is required, a minimum of 10 hours at 70 °F (21 °C) substrate and air temperature with ventilation is normally required before proceeding. Previously applied coats must have reached a "non-tacky" state before being exposed to physical contact. This condition will occur in less time as surface temperature increases. Over coating shall be performed as soon as possible to prevent contamination.

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. It is recommended each following coat be diluted approximately 2 to 5% with PLASITE Thinner #20.

APPLICATION CONDITIONS

Condition	Material	Surface	Ambient	Humidity
Minimum	70°F (21°C)	60°F (16°C)	60°F (16°C)	0%
Maximum	90°F (32°C)	100°F (38°C)	100°F (38°C)	80%

A minimum surface temperature of 70 °F (21 °C) is required to obtain polymerization of the coating system. Coating can be applied at a surface temperature as low as 60 °F (16 °C) but polymerization will not take place. Succeeding coats cannot be applied without damaging the system until the surface temperature rises sufficiently to obtain polymerization. Refer to CURING. When surface temperatures are over 100 °F (38 °C). Consult Tech Service for special thinner and thinning instructions.

CURING SCHEDULE

Surface Temp.	Cure Time
70°F (21°C)	7 Days
90°F (32°C)	5 Days
110°F (43°C)	72 Hours
120°F (49°C)	36 Hours
130°F (54°C)	18 Hours
140°F (60°C)	10 Hours
150°F (66°C)	6 Hours
160°F (71°C)	1.5 Hours
170°F (77°C)	3.5 Hours
180°F (82°C)	2.5 Hours
190°F (88°C)	2 Hours

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.

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.

CLEANUP & SAFETY

Cleanup

Use Thinner 71. In case of spillage, absorb and dispose of in accordance with local applicable regulations.

CLEANUP & SAFETY

Safety	Read and follow all caution statements on this product data sheet and on the SDS for this product. Employ normal workmanlike safety precautions. Keep container closed when not in use.
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, use MSHA/NIOSH approved respirator.
Caution	This product contains flammable solvents. Keep away from sparks and open flames. All electrical equipment and installations should be made and grounded in accordance with the National Electric Code. In areas where explosion hazards exist, workers should be required to use non-ferrous tools and wear conductive and non-sparking shoes.

PACKAGING, HANDLING & STORAGE

Shelf Life	Part A: 60 days at 70 °F (21 °C) Part B: 24 months at 70 °F (21 °C) Part C: 12 months at 70 °F (21 °C)
Shipping Weight (Approximate)	Approximately 13 lbs./gallon
Flash Point (Setaflash)	Pt A : 88 °F (31 °C) Pt B : 142 °F (61 °C) Pt C : 24 °F (-5 °C)

WARRANTY

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 Carboline Company to verify correctness before specifying or ordering. No guarantee of accuracy is given or implied. We guarantee our products to conform to Carboline quality control. We assume no responsibility for coverage, performance, injuries or damages resulting from use. Carbolines sole obligation, if any, is to replace or refund the purchase price of the Carboline product(s) proven to be defective, at Carbolines option. Carboline shall not be liable for any loss or damage. NO OTHER WARRANTY OR GUARANTEE OF ANY KIND IS MADE BY CARBOLINE, EXPRESS OR IMPLIED, STATUTORY, BY OPERATION OF LAW, OR OTHERWISE, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. All of the trademarks referenced above are the property of Carboline International Corporation unless otherwise indicated.