

PRODUCT DESCRIPTION

A high solids epoxy cured with an amine curing agent. Formulated with particular attention to latex resin resistance with special modification to provide superior release properties.

USES/APPLICATIONS

PLASITE 9145 is used as a tank lining applied in two spray coats to a 12-15 mil/300-350 microns film. When additional product release properties are required, the PLASITE 9145TFE can be used as the second coat.

TEMPERATURE RESISTANCE

Dry temperature basis is 350°F/177°C for short periods; 250°F/121°C continuous. Immersion temperatures depend on particular reagent.

CHEMICAL RESISTANCE

PLASITE 9145 TFE has excellent resistance to a wide range of latex resin solutions.

COLORS

PLASITE 9145/9145 TFE is offered in white, light gray and light blue.

PACKAGING

PLASITE 9145/9145 TFE is available in one and five gallon kits that include the following:

One gallon kits include:

- 1 1 gallon can Part A
- 1 1 gallon can Part B

Five gallon kits include:

- 1 5 gallon bucket Part A
- 1 3 gallon bucket Part B

FILM THICKNESS

A 6-7 mil/150-175 microns film is produced in one multi-pass spray coat.

COVERAGE

The theoretical coverage of PLASITE 9145 TFE is 1,331 mil sq. ft./gal. For estimating purposes, 82 sq. ft./gal. will produce a 13 mil/225 microns film (20% loss included). Two coats will produce a 12-15 mil/300-350 microns film.

THINNERS

PLASITE Thinner #71 is recommended. The amounts required will vary depending on air and surface temperatures and application equipment. Normal application temperatures and conditions will require the addition of approximately 5-10% thinner by volume with approximately 5% additional thinner added for each 5°F/3°C of increased temperature.

It is recommended that the amount of thinner included on each order amount to approximately 20% of the coating order.

CLEANUP THINNER: Thinner #71

VOC CONTENT

	Coating as Supplied (ASTM Method D2369)		Thinned 10% by Volume with PLASITE Thinner #71 (Determined Theoretically)	
System	Lbs./Gal.	g/L	Lbs./Gal.	g/L
9145/ 9145TFE	0.61 ± 2%	73.26 ± 2%	1.17 ± 2%	140.52 ± 2%

PHYSICAL SPECIFICATIONS

Solids:.....89% ± 2% by weight

83% ± 2% by volume

Pot Life (Approx.):.....1 hour at 70°F/21°C

Shelf Life:.....24 months at 70°F/21°C

Shipping Weight (Approx.):.....11.5 lbs./gal.

***Abrasion Resistance:**PLASITE 9145: 71 milligrams

PLASITE 9145TFE: 19 milligrams

average loss per 1000 cycles; Taber CS-17 Wheel; 1000 gram wt.

***Surface Hardness:**.....PLASITE 9145: 161 seconds

PLASITE 9145TFE: 136 seconds

Konig Pendulum Hardness (Glass Standard = 250 seconds): ASTM Method D4366-84.

Thermal Shock: Unaffected 5 cycles minus

70°F/-56°C to plus 200°F/93°C.

Gloss: PLASITE 9145TFE: 43 @ 60°

***Note:** Above tests were conducted on film cured at 200°F/93°C.

SURFACE PREPARATION**Steel****High Temperature & Immersion Service**

All sharp edges shall be ground to produce a radius and all imperfections such as, skip welds, delaminations, scabs, slivers and slag shall be corrected prior to abrasive blasting. Skip welds shall be welded solid.

Degrease surface prior to sandblasting. Organic solvents, alkaline solutions, steam, hot water with detergents or other systems that will completely remove dirt, oil, grease, etc. may be used. Prebaking of used tanks is required when recommended force curing procedure is followed.

The surface shall be blasted to an SSPC-SP5 or NACE No. 1 white metal surface using a Venturi blast nozzle supplied with 80-100 psi. An anchor pattern or "tooth" in the metal shall correspond to approximately 20-25% of the total film thickness of the coating.

Contaminated grit shall not be used for the finish work.

The blasting media used shall be a natural abrasive, steel grit or slag grit (similar or equal to BLACK BEAUTY®). These abrasives shall be sharp with a hard-cutting surface, properly graded, dry and of best quality. The media shall be of proper size to obtain the specified anchor pattern and shall be free of objectionable contaminants.

The anchor pattern shall be sharp and no evidence of a polished surface is allowed.

Remove all traces of grit and dust with a vacuum cleaner or by brushing. Care must be taken to avoid contaminating the surface with fingerprints or from detrimental material on the workers' clothes.

The surface temperature shall be maintained at a minimum of 5°F/3°C above the dew point to prevent oxidation of the surface. The coating shall be applied within the same day that the surface has been prepared. Visible oxidation or condensation is not allowed.

PLASITE® 9145 TFE

Service in Corrosive Atmosphere

Degrease as described above.

SSPC-SP10 or NACE No. 2 (near white metal blast cleaning) - strong fumes and splash spill.

Concrete

Consult Carboline for use over concrete surfaces.

Aluminum

Surface shall be clean and grease-free with a blast produced anchor pattern or "tooth" as described earlier under STEEL. In addition, the blasted surface shall be given a chemical treatment such as:

ALODINE 1200S available from Henkel Surface Tech

IRIDITE 14-2 produced by MacDermid Incorporated

OAKITE CRYSCOAT 747LTS and OAKITE CRYSCOAT ULTRASEAL produced by Oakite Products

For immersion, blasting with sharp grit followed by the chemical surface treatment is required.

Note: On metallic surfaces prepared only by chemical etching, the total coating film thickness applied should be restricted to only half the film normally applied to blasted surfaces. This reduced film thickness should be considered during the selection of the coating for the service and the type of surface preparation performed.

APPLICATION

Mixing

The curing agent is in a separate container and measured for the resin unit supplied. Thoroughly mix the pigments. After the pigment and liquid are thoroughly mixed, add the measured liquid curing agent slowly and mix completely with the resin.

Spray

All spray equipment should be thoroughly cleaned and the hose, in particular, should be free of old paint film and other contaminants.

Use standard production-type spray guns:

GUN	FLUID	AIR
DeVilbiss JGA-510	E	797
Binks #2001	66-SS	63-PB
Graco P800	04	02

When airless spray equipment is used, the recommended liquid pressure is 1500-1800 psi with tip size from 0.017-0.021 inches. Thinning requirements are more than for conventional spray.

Air supply shall be uncontaminated. Adjust air pressure to approximately 50 lbs. at the gun and provide 5-10 lbs. of pot pressure. Adjust spray gun first by opening liquid valve and then adjusting air valve to give an 8-12 inch wide spray pattern with best possible atomization.

Apply a "mist" bonding pass.

Allow to dry approximately one minute, but not long enough to allow film to completely dry.

Apply crisscross multi-passes, moving gun at fairly rapid rate, maintaining a wet appearing film. Fast multi-passes may be applied until you have a film thickness of approximately 6-7 mil/150-175 microns (approximately 7-9 wet mil/175-225 microns). Repeat this procedure for the second coat to obtain a 12-15 mil/300-350 microns DFT.

Overcoat time will vary both with temperature and ventilation and will require from 10-12 hours at 70°F/21°C for enclosed spaces. Less time will be required for exteriors. Remove all overspray by dry brushing or scraping if required.

Equipment must be thoroughly cleaned immediately after use with Plasite thinner to prevent the setting of the coating.

Note: Prior to spray application, stripe brush all welds, attachments and surface irregularities using PLASITE 9145/9145TFE thinned a minimum of 50% by volume with PLASITE Thinner #71.

CURING

Surface will normally be tack-free in 10-12 hours at 70°F/21°C.

Normally, polymerization and curing will take place in 5 days at 90°F/32°C and 7 days at 70°F/21°C. This coating should not be applied when air

temperature or temperature of surface to be coated is below 50°F/10°C. Within 24 hours after coating is applied, a minimum substrate temperature of 70°F/21°C is required for proper polymerization.

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 2-5 hours at temperatures from 70-100°F/21-37°C be allowed. After the air dry period has elapsed, the temperature should be raised by approximately 30°F/18°C each 30 minutes until the desired force curing temperatures are reached.

METAL TEMPERATURE	CURING TIME
150°F/66°C	12 Hrs
175°F/79°C	6 Hrs
200°F/93°C	4 Hrs

Note: The 200°F/93°C cure will result in maximum hardness and release properties.

Final cure may be checked by exposing coated surface to MIBK for 10 minutes. If no dissolving and only minor softening of film occurs, the curing can be considered complete. The film should reharden after exposure if cured.

INSPECTION

Degree of surface preparation shall conform to appropriate specification as outlined in SURFACE PREPARATION section. Film thickness of each coat and total dry film thickness of coating system shall be determined with a nondestructive magnetic gauge, properly calibrated. Refer to Plasite Bulletin PA-3, Section 3, for inspection requirements.

RECOMMENDATIONS

- Apply only on a clean, sound, properly prepared substrate.
- Minimum ambient, material and surface temperatures are 50°F/10°C at the time of application.
- Maximum ambient, material and surface temperatures are 110°F/43°C, 90°F/32°C and 125°F/52°C respectively, at the time of application.
- Relative humidity should be between 0-80%.
- Substrate temperature should be 5°F/3°C above the dew point.
- Application and curing times are dependent upon ambient conditions. Consult Carboline's Technical Service Department if conditions are not within recommended guidelines.

PRECAUTIONS

- PLASITE Thinner #71 or acetone is recommended for clean up of the PLASITE 9145 TFE material.
- Before handling and application of this material consult the MSDS sheets. As with any product, those handling PLASITE 9145 TFE materials should employ proper safety practice. Hypersensitive persons should wear protective clothing, gloves, and use protective cream on any exposed areas.
- When PLASITE 9145 TFE is used as a tank lining or in an enclosed area circulation should be used during and after the installation. Circulation can be discontinued once the material has cured. The ventilation equipment should be capable of preventing the solvent concentration from reaching the lower explosion level for the solvents used. The applicator should monitor the exposure levels or use MSHA/NIOSH approved air respirators.

NOTES

- Material Safety Data Sheets on PLASITE 9145 TFE are available upon request.
- Specific information regarding the chemical resistance of PLASITE 9145 TFE can be found by contacting Carboline's Technical Service Department.
- A staff of technical service engineers is available to assist with product application, or to answer questions related to Carboline products.
- Requests for technical literature or service can be made through local sales representatives and offices worldwide.



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