

## Substrates & Surface Preparation

**General** Before applying PYROLITE 15, the substrate coating must be free of all oil, grease, condensation, or any other contamination. **Note: For certain designs, mechanical attachments or the application of Type DK-1 may be required prior to the PYROLITE 15. Consult the relevant UL Design for details or contact Carboline Technical Service for further information.**

**Carbon Steel** Primers not normally required. If required, steel preparation before priming should be done in accordance with the following recommended primers' Product Data Sheet:

Carbozinc® 11  
 Carboguard® 1340  
 Carbomastic® 90  
 Carboguard® 893  
 Rustbond Penetrating Sealer®

**Asbestos Abatement** The following lock-down primers meet U.L. Bond Strength Criteria and are acceptable for PYROLITE 15  
 Certane 909 or 1000  
 Crown Paint P215  
 Fiberset FT  
 H.B. Fuller Foster 32-60

**Galvanized Steel** Substrate coating must be free of all oil, grease, condensation, or other contamination. **Note: On certain galvanized metal decks, it may be necessary to apply Type DK-1 prior to the PYROLITE 15. Alternatively, mechanical attachments may be used. Consult the relevant UL design for details.**

**Non-Ferrous Metals** Aluminum, copper, etc. shall be primed with one coat of Carboline Rustbond Penetrating Sealer.

**Wood or Concrete** The primer recommended is Carboguard® 1340.

## 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.

General Guidelines:

**Mixer** Use an 8-16 ft<sup>3</sup> (.23m<sup>3</sup> - .42m<sup>3</sup>), 52 rpm minimum heavy-duty mortar mixer with rubber tipped blades which scrape the sides.

**Pumps**

Mfg.	Model	Type	Size
Essick	FM9/FME51	Rotor /Stator	2L4
Muller	R-TEX	Rotor /Stator	2L6
Goldblatt	Supertex	Rotor /Stator	2L6
Sunspray	220	Rotor/Stator	2L4
PFT	ZP3 (HM2 mixer)	Rotor/Stator	N/A
Mayco	PF30	Piston	N/A
Sunspray	HP 320E	Piston	N/A
Putzmeister	Thomsen PTV 700	Piston	N/A
Putzmeister	S5EV	Rotor/Stator	2L6

**Compressor** Be certain that the air supply is a minimum 9 cfm at 100 psi (6.9 kPa) and higher when air hose distances are longer than 75' (22 m).

**Material Line** Minimum 1" (2.5 cm) I.D. hose with 300 psi minimum bursting pressure. For lengths over 50' (15 m) use 1½" to 3" (3.8 to 7.6 cm) I.D. hose. Do not reduce hose diameter by more than ¼" (7mm) per 25' (7.5 m) unless a tapered conical reducer equipped with swivel fitting is used. A 10' (3 m) length if ¾" (19mm) I.D. hose may be added at the gun for use as a whip. Maximum hose length for rotor stator pump should not exceed 250 feet.

**Air line** Use ½" (1.3 cm) I.D. line, with a minimum bursting pressure of 100 psi (6.9 kPa).

**Spray Guns**

Mfg.	Model	Fluid Tip	Air Cap
SpeeFlo	701	3/8" - 9/16" (.95-1.27mm)	3/8" (.95mm)
Plasterer	NA	3/8" - 9/16" (.95-1.27 mm)	N/A
Air Tech	Internal Mix	3/8" or ½" (10-13mm)	N/A

## Mixing & Thinning

**Mixing**

**Single bag mix:** Add 10 ¾ gallon ± 1 ½ gallons (41 ± 5.7) liters of clean, potable water to the mortar mixer. Add one bag of PYROLITE 15 to the mixer, turn mixer on. Mix for 1-2 minutes at 52 RPM. \*\*Caution: do not over mix. Total water must not exceed 12 ¼ gallons (46.4 liters).

## Mixing & Thinning Cont.

**Two bags mixing:** Add 21 ½ ± 3 gallons (82 ± 11.4 liters) of clean, potable water to the mortar mixer. Add one bag of PYROLITE 15 with mixer off, turn mixer on and add second bag. Mix for 3-5 minutes at 52 RPM. **\*\*Caution:** Do not over mix. Total water must not exceed 24½ gallons (92.8 liters). Material volume should not go over the center bar of mixer.

### Density

Wet density measurements are critical to obtaining correct dry densities. Mixer wet density should be 50 +/- 5 lbs/ft<sup>3</sup> (.80 +/- .08 g/cm<sup>3</sup>). To check wet densities, fill a Dixie cup (or other suitable container of known volume in ounces) with mixed material. Screenshot the excess until even with the rim of the container and weigh it on a gram scale. Multiply the weight (in grams) by a conversion factor based on the size of the container. (Conversion factor is calculated by taking 2.107 and dividing by the ounces of the cup used). This will yield density in lbs/ft<sup>3</sup>.

Cup Used	Conversion Factor	Cup Used	Conversion Factor
3 oz.	.702	8 oz.	.263
4 oz.	.527	12 oz.	.175
5 oz.	.421	16 oz.	.132
6 oz.	.351	33.8 (1 liter)	.062

Water Level (per bag)	Spray Wet Density		Dry Density		Coverage (board feet per bag)
	lbs/ft <sup>3</sup>	(g/cm <sup>3</sup> )	lbs/ft <sup>3</sup>	(g/cm <sup>3</sup> )	
9 ¼ gal (34.9 l)	40	(.64)	17	(.27)	37
	44	(.70)	18	(.29)	33
	48	(.77)	21	(.34)	31
	52	(.83)	22	(.35)	28
	56	(.90)	24	(.38)	26
10 ¾ gal (40.6 l)	60	(.96)	26	(.42)	24
	44	(.70)	17	(.27)	37
	48	(.77)	19	(.30)	34
	52	(.83)	20	(.32)	31
	56	(.90)	22	(.35)	29
12 ¼ gal (46.3 l)	60	(.96)	23	(.37)	27
	48	(.77)	17	(.27)	37
	52	(.83)	18	(.29)	34
	56	(.90)	20	(.32)	32
	60	(.96)	21	(.34)	29
	64	(1.02)	23	(.37)	28

**Pot Life** 2 hours at 70°F (21°C) and less at higher temperatures. Pot life ends when the material thickens and becomes unusable.

## Application Procedures

It is suggested that mixed material should be sprayed within 45 minutes of mixing at 70°F (21°C). Pump, mixer and hoses should be cleaned with fresh water every 4 hours at 70°F (21°C) or more often at higher temperatures.

PYROLITE 15 must be applied by spray in a monolithic application. Film build will depend on application method, weather conditions and equipment used. For application requiring more than one coat or when applying overhead, a scratch coat of approximately ½" (13 mm) is recommended. Allow to set for approximately 4-6 hours at 70°F (21°C) before applying subsequent coats. For overhead installations, a longer set time may be required.

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## Application Procedures Cont.

Preceding coats should be left as a spray finish or scored. If the preceding coat has dried, dampen the surface with water before application of additional coats.

## Application Conditions

	Surface or Ambient Temp.		Relative Humidity	
	Minimum	Maximum	Min.	Max.
Interior or Exterior	40°F (4°C)	100°F (38°C)	0%	95%

## Finishing

PYROLITE 15 is normally left as a sprayed finish. Material can be tamped down after spray application.

## Protection of Adjacent Surfaces

Finished surfaces shall be protected from damage and overspray.

## Curing

Fresh PYROLITE 15 must be protected from rain or running water for 24 hours at 70°F (21°C).

**Caution:** Do not start work if ambient temperatures are expected to drop below 35°F (2°C) for 24 hours after application.

## Cleanup & Safety

### Cleanup

Pump, mixer and hose should be cleaned with clean, potable water at least once every 4 hours at 70°F (21°C), and more often at higher temperatures. Sponges should be run through the hoses to remove material left in the lines. Wet PYROLITE 15 overspray must be cleaned up with soapy or clean, potable water. Cured overspray may require chipping and/or scraping to remove.

### Safety

1. Do not breathe dust. PYROLITE 15 is caustic and will irritate mucous membranes. Use OSHA approved dust mask while mixing.
2. For eye contact, flush with copious amount of water in accordance with OSHA instructions. Goggles or safety glasses are recommended.
3. Wash skin with clean water to prevent irritation.



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