

BROWN & ROOT, INC. CPSES  JOB 35-1195	PROCEDURE NUMBER	REVISION	EFFECTIVE DATE	PAGE
	CCP-30	11	8/16/83	1 of 5

# ATTACHMENT 2

"Q" Coating XX

Sheet 1 of 5

"Non-Q" Coating \_\_\_\_\_

Procedure # M-9

Rev. 2 Date 11/9/83

SPECIAL COATING PROCEDURE NO. M-9

SCOPE Application of Carboline 191 Primer as a Brush or Spray Primer

pcn # 1

## REQUIREMENTS

### 1. Material

1.1 Coating material shall be Carboline 191 Primer.

### 2. Surface Preparation

2.1 Surface preparation shall be abrasive blast or power tool cleaning per Reference 2, paragraph 4.4.2.5 and 4.4.3.0.

### 3. Mixing

3.1 Mixing ratios are shown in Reference 1.

3.2 Pot Life per Table 1.

### 4. Repair

4.1 Repair procedures are shown in Reference 2.

FOR OFFICE AND  
ENGINEERING USE ONLY

## REFERENCE DOCUMENTS

1. Carboline 191 Primer and Finish Technical Data Sheet
2. Construction Procedure CCP-30 Rev. 11

## APPROVALS

PDE RM Kissner

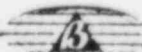
QA/QC CT Miller

TUSI CR Hatten

Engineer Thomas G. Kelly

Rev. 2 Date 11/9/83

8511040488 851016  
PDR FOIA  
GARDE85-59 PDR



ATTACHMENT 2

"Q" Coating   X  

"Non-Q" Coating       

Sheet 1 of 5  
Procedure #M-9  
Rev. 2 Date 11/9/83

SPECIAL COATING PROCEDURE NO. M-9

SCOPE: Application of Carboline 191 Primer as a Brush or Spray Repair Primer

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REQUIREMENTS:

1. Material
  - 1.1 Coating material shall be Carboline 191 Primer.
2. Surface preparation
  - 2.1 Surface preparation shall be abrasive blast or power tool cleaning per Reference 2, section 4.1.
3. Mixing
  - 3.1 Mixing ratios are shown in Reference 1.
  - 3.2 Pot Life per Table 1.
4. Repair
  - 4.1 Repair procedures are shown in Reference 2.

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REFERENCE DOCUMENTS:

1. Carboline 191 Primer and Finish Technical Data Sheet
2. Construction Procedure CCP 30



JOB 35-1195

COMANCHE PEAK STEAM ELECTRIC STATION

Construction Procedure  
DOCUMENT CHANGE NOTICE NUMBER 1

Notice applicable to Construction Procedure No. 35-1195- CCP 30 M-9 Rev. 2

This change will be incorporated in the next revision of the procedure.

Change the procedure as follows:

Please replace the following with the attached:

Sheet 1 of 5

Sheet 2 of 5.

Reviewed by:

Mark Wells 3/4/84  
Originator Date

n/a 1PC iii 3-4-84  
Brown & Root Quality Assurance Date

RM Kissing 3/4/84  
Project Discipline Manager Date

Approved by:

TK Fisher 3/4/84  
TUGCO Quality Assurance Date

REDACTED DF 3-4-84  
Construction Project Manager Date

03/04/84  
Effective Date



ATTACHMENT 2  
(Continued)

Sheet 2 of 5  
Procedure #M-9  
Rev. 1 Date 11/9/83

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REQUIREMENTS (Continued)

- 5. Equipment
  - 5.1 For safety and application equipment see Reference 2.
- 6. Application
  - 6.1 Application procedures are listed in Reference 2.
  - 6.2 Coating shall be applied to a DFT of 2.0 to 4.0 mils. |
  - 6.3 Coating shall not be applied below 50°F, other enviromental conditions per Reference 2, Phenoline 305.
  - 6.4 Curing and time to recoat or topcoat for 191 primer shall be as shown in Reference 2, paragraph 3.6.1e. |
  - 6.5 Application of topcoat shall be per Reference 2.
- 7. General information
  - 7.1 Refer to Reference 2, paragraphs 5.2 for hold points. |



BROWN & ROOT, INC. CPSES  JOB 35-1195	PROCEDURE NUMBER	REVISION	EFFECTIVE DATE	PAGE
	CCP-30	11	8/16/83	3 of 5

ATTACHMENT 2  
(Continued)

Sheet 3 of 5

Procedure M-9

Rev. 2 Date 11/9/83

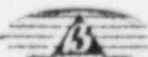
REQUIREMENTS (Continued)

TABLE 1

POT LIFE CARBOLINE 191 PRIMER

<u>TEMPERATURE (°F)</u>	<u>UNTHINNED</u>	<u>THINNED-50%</u>
50-54	10 hrs	24 hrs
55-59	7 hrs	24 hrs
60-64	4½ hrs	24 hrs
65-69	1½ hrs	24 hrs
70-74	2 hrs	24 hrs
75-79	1½ hrs	24 hrs
80-84	1½ hrs	24 hrs
85-89	1½ hrs	24 hrs
90-95	1 hr	24 hrs

Pot life stated above for unthinned coatings are the recommended times and should be utilized as a guideline for coating usage time, however, actual pot life may be longer. For unthinned coatings or coatings thinned 50% or less, actual pot life is determined by the applicability of the coating.





# Carboline

## PRODUCT DATA SHEET

CCP-30 Rev. 11  
M-9 Rev. 2  
Sheet 4 of 5

CARBOLINE 191  
PRIMER AND FINISH

### SELECTION DATA

GENERIC TYPE: Epoxy-polyamide. Catalyst (curing agent) added prior to application.

GENERAL PURPOSE: Tank lining system of heavy build for fresh water, including potable water service and for contact with food products.

RECOMMENDED USES: As a tank lining and heavy duty service system for protection of steel and concrete in water and food products service. Carboline 191 materials may be used in contact with food products in accordance with Food and Drug Administration regulations 121.2514. Extraction tests on the material were far below the limits set by the agency. Excellent lining for sugar solutions, meat products, etc.

NOT RECOMMENDED FOR: Immersion in: Water over 130°F, strong mineral and organic acids, solvents.

### CHEMICAL RESISTANCE GUIDE:

Exposure	
Water	- Excellent to 100°F
Salts	- Excellent to 150°F
Sugar solutions	- Excellent to 150°F
Alkalies	- Excellent to 150°F

### TEMPERATURE RESISTANCE:

Not affected by steam cleaning.

### WEATHERING RESISTANCE:

Very Good (Chalks)

SURFACES: Steel, concrete

COMPATIBILITY WITH OTHER MATERIALS: Apply over clean, dry surfaces.  
May be used over Carbo Zinc 11.

GENERAL PROPERTIES: Carboline 191 has excellent characteristics as a lining for fresh water tanks and food products. The proper thickness of the 3 coat system is 15 mils. Primer contains inhibitive pigments to prevent undercutting corrosion.

### SPECIFICATION DATA

<u>SOLIDS CONTENT:</u>	<u>By Volume</u>	<u>By Weight</u>	<u>THEORETICAL YIELD:</u>
Resin	72% ± 1%	84% ± 2%	1670 mil ft. per 1 1/2 gal. kit
Catalyst	65% ± 1%	73% ± 2%	

COLORS: Primer -- Brick Red; Finish -- White and Gray #724 are standard for food contact.



Carboline 191 Primer and Finish

PDS

RECOMMENDED SYSTEM: Usually the following system is recommended for lining steel tanks for potable water.

	<u>Dry Film Thickness</u>	<u>Theoretical Coverage*</u> per 1 1/2 gallon kit
1 coat Carboline 191 Primer	5 mils	334 sq. ft.
1 coat Carboline 191 Finish	5 mils	334 sq. ft.
1 coat Carboline 191 Finish	5 mils	334 sq. ft.

An alternate system is 1 or 2 coats of Carboline 191 Finish over Carbo Zinc 11.

NOTE: \*Material losses during mixing and application will vary and must be taken into consideration when estimating job requirements.

#### APPLICATION DATA

METHOD OF APPLICATION: Spray - preferred; brush is acceptable.

<u>MIXING RATIO AND KIT CONTENTS:</u>	<u>1 1/2 gallon kit</u>	<u>7 1/2 gallon kit</u>
Carboline 191 (Primer or Finish)	1 gallon can	5 gallons
Carboline 191 Catalyst	1/2 gallon	2 1/2 gallons

#### SHIPPING WEIGHTS:

Carboline 191 Primer	21 pounds	96 pounds
Carboline 191 Finish	21 pounds	97 pounds

DRYING TIME BETWEEN COATS: 18 hours @ 75°F or 12 hours @ 90°F. Fresh air should be circulated throughout the coated area during drying and curing periods.

FINAL CURE: 7 days @ 90°F or 10 days @ 75°F.  
Force curing at 150°F for 10 hours is recommended for all tank lining work.

SHELF LIFE: 1 year minimum.

POT LIFE: 2 hours @ 75°F.

THINNER: Carboline Thinner #15 (up to 1 1/2 pints per 1 1/2 gallon kit for spraying.)  
Amount of thinner may vary depending upon weather conditions.

#### ORDERING INFORMATION

Prices are shown on Carboline Price List or may be obtained from Carboline Sales Representative or Main Office. Quantity prices quoted upon request. Terms -- Net 30 days.

#### FLASH POINTS: (Cleveland Open Cup)

Carboline 191 Primer	107°F	Carboline 191 Catalyst	115°F
Carboline 191 Finish	107°F	Carboline Thinner #15	82°F

**CAUTION: CONTAINS COMBUSTIBLE SOLVENTS. KEEP AWAY FROM SPARKS AND OPEN FLAMES. IN CONFINED AREAS WORKMEN MUST WEAR FRESH AIRLINE RESPIRATORS. HYPERSENSITIVE PERSONS SHOULD WEAR GLOVES OR USE PROTECTIVE CREAM. ALL ELECTRIC EQUIPMENT AND INSTALLATIONS SHOULD BE MADE AND GROUNDED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE. IN AREAS WHERE EXPLOSION HAZARDS EXIST, WORKMEN SHOULD BE REQUIRED TO USE NONFERROUS TOOLS AND TO WEAR CONDUCTIVE AND NONSPARKING SHOES.**

To the best of our knowledge the technical data contained herein are true and accurate at the date of issuance and are subject to change without prior notice. User must contact Carboline 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 or injuries resulting from use. Liability, if any, is limited to replacement of products. Prices and cost data if shown, are subject to change without prior notice. NO OTHER WARRANTY OR GUARANTEE OF ANY KIND IS MADE BY THE SELLER, EXPRESS OR IMPLIED, STATUTORY, BY OPERATION OF LAW, OR OTHERWISE, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.