

## Selection Data

**GENERIC TYPE :** Two component, cross-linked epoxy.

**GENERAL PROPERTIES :** CARBOGUARD 893N(K) is a high solids, high build epoxy primer with excellent corrosion resistance. Can be applied by spray, brush or roller to yield a cured film which is tough and abrasion resistant, Performs extremely well under a wide variety of topcoats and application conditions. Available in five standard colors. Features include :

- Excellent corrosion protection.
- Good flexibility and lower stress upon curing than most epoxy coatings.
- Tested for Nuclear Service Level 1.
- Can be spray applied at up to 6mils film thickness in one coat.
- Meets the most stringent VOC (Volatile Orange Content) regulations.

**Recommended Uses :** Recommended as a general purpose epoxy primer over commercially blasted steel or intermediate coat over inorganic zinc primers. It is recommended with an appropriate topcoat for protection of structural steel, concrete, equipment and tank exteriors exposed to corrosive conditions. Consult Carboline Technical Service Department for other specific uses.

**Not Recommended For :** Immersion service, splash and spillage of very strong solvents or concentrated acids.

### TYPICAL CHEMICAL RESISTANCE :

<u>Exposure*</u>	<u>Splash and Spillage</u>	<u>Fumes</u>
Acids	Good	Very Good
Alkalies	Good	Excellent
Solvents	Very Good	Excellent
Salt solutions	Excellent	Excellent
Water	Excellent	Excellent

### TEMPERATURE RESISTANCE :

Continuous	200°F(93°C)
Non-continuous	250°F(121°C)

**SUBSTRATES:** Apply over suitably prepared metal, concrete, or other surfaces as recommended.

**TOPCOAT REQUIRED:** CARBOGUARD 890N(K), CARBOLINE 834, CARBOLINE 134, 133HB other surfaces as recommended.

**COMPATIBLE COATINGS:** CARBOGUARD 893N(K) may be used as an intermediate coat over inorganic zincs. A mist coat is required to minimize bubbling over inorganic zincs. As a primer for catalyzed epoxies, catalyzed urethanes and others as recommended.

## Specification Data

	By Volume
CARBOGUARD 893N(K)	77% ± 2%

### VOLATILE ORGANIC CONTENT:

**As Supplied :** 1.62 lbs./gal(195 gm/liter)

Thinned: The following are nominal values utilizing:

Carboline Thinner #2 (spray application)

<u>% Thinned</u>	<u>Fluid Ounces/Gal</u>	<u>Pounds/Gallon</u>	<u>Grams/Liter</u>
10%	13	2.12	255
12%	16	2.18	261

CARBOLINE Thinner #33(brush & roller application)

12%	13	2.15	258
12%	16	2.22	266
25%	32	2.75	329

### RECOMMENDED DRY FILM THICKNESS PER COAT :

3mils (75microns) for use in mild environments or as an intermediate coat over CARBOZINC 11.

4-6mils(100-150microns)for use in more severe environments.

Dry film thicknesses in excess of 10mils (250microns) per coat are not recommended. Excessive film thickness over inorganic zinc may increase damage during shipping or erection.

### THEORETICAL COVERAGE PER MIXED GALLON :

1235 mil sq.ft.(30.8 sq.m/l at 25microns)
412 sq.ft. at 3mils(10.3 sq.m/l at 75microns)
247 sq.ft. at 5mils(6.2 sq.m/l at 125microns)

\*Mixing and application losses will vary and must be taken into consideration when estimating job requirements.

### STORAGE CONDITIONS :

Store indoors.

Temperature: 40-110°F (4-43°C)

Humidity: 0-90%

**SHELF LIFE :** Twenty-four months minimum when stored at 75°F (24°C)

**COLORS :** Red(0500), Gray(0700), Green(0300), Yellow(0600) and White(0800) are standard.

GLOSS: Egg shell

## Ordering Information

Prices may be obtained from your Carboline Sales Representative Carboline Customer Service Department.

### APPROXIMATE SHIPPING WEIGHT :

	2'S	10'S
CARBOGUARD 893N(K)	29lbs.(13kg)	143lbs.(65kg)
Carboline Thinner #2	9lbs.(4kg) in 1's	45lbs.(20kg) in 5's
Carboline Thinner #33	9lbs.(4kg) in 1's	45lbs.(20kg) in 5's
FLASH POINT : (Seta Flash)		
CARBOGUARD 893N(K) Part A		57°F (14°C)
CARBOGUARD 893N(K) Part B		57°F (14°C)
Carboline Thinner #2		24°F (-5°C)
Carboline Thinner #33		91°F (33°C)

APR 2013 replaces SEP 2007

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 OR LAW, OR OTHERWISE, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE

# Carboguard® 893N(K)

These instructions are not intended to show product recommendations for specific service. They are issued as an aid in determining correct surface preparation. Mixing instructions and application procedure. It is assumed that the proper product recommendations have been made. These instructions should be followed closely to obtain the maximum service from the material

**SURFACE PREPARATION** : Remove oil or grease from surface to be coated with clean rags soaked in CARBOLINE Thinner #2 or Surface Cleaner #3 (refer to Surface Cleaner #3 instructions) in accordance with SSPC-SP 1.

**STEEL**: Apply over clean, dry steel, abrasive blasted to a Commercial Finish in accordance with SSPC-SP6 (or NACE#3) TO OBTAIN A 1-2mil(25-50micron)blast profile.

**Concrete**: Apply over clean, dry recommended surfacer. Can be applied directly to dry concrete where an uneven surface can be tolerated. Remove laitance by abrasive blasting or other means.

**MIXING** : Mix separately, than combine and mix in the following proportions :

	2 Gallon Kit	10 Gallon Kit
CARBOGUARD 893N(K) Part A	1 gallon	5 gallons
CARBOGUARD 893N(K) Part B	1 gallon	5 gallons

DO NOT MIX PARTIAL KITS.

**THINNING** : For spray applications, may be thinned up to 12% by volume (16 fl.oz./gallon) with CARBOLINE Thinner #2

For brush and roller application, may be thinned up to 25% by volume (32fl.oz./gallon) by volume with CARBOLINE Thinner #33.

Refer to Specification Data for VOC information.

Use of thinners other than those supplied or approved by Carboline may adversely affect product performance and void product warranty, whether express or implied.

**POT LIFE**: Four hours at 75°F(24°C) and less at higher temperatures. Pot life ends when coating loses body and begins to sag. Thinning rates above 12% will shorten the working time to two hours due reduced film build.

## APPLICATION TEMPERATURES :

	<u>Material</u>	<u>Surfaces</u>
normal	50-86°F(10-30°C)	50-89°F(10-32°C)
Minimum	39°F(4°C)	41°F(5°C)
Maximum	90°F(32°C)	135°F(57°C)
	<u>Ambient</u>	<u>Humidity</u>
normal	50-89°F(10-32°C)	0-80%
Minimum	41°F(5°C)	0%
Maximum	110°F(43°C)	90%

Do not apply when surface temperature is less than 5°F(or 3°C) above the dew point.

Special thinning and application techniques may be required above or below normal conditions.

**SPRAY** : This is a high solids coating and may require slight adjustments in spray techniques. Wet film thicknesses are easily and quickly achieved. The following spray equipment has been found suitable and is available from manufacturers such as Binks, DeVilbiss and Graco.

Conventional: Pressure pot equipped with dual regulators, 3/8" I.D. minimum material hose, .0700" I.D. fluid tip and appropriate air cap.

## AIRLESS :

Pump Ratio	:	30 : 1 (min.)
GPM Output	:	3.0 (min.)
Material Hose	:	3/8" I.D.(min.)
Tip Size	:	0.17-0.21"
Output PSI	:	2000-2500
Filter Size	:	60 mesh

\* Teflon packings are recommended and are available from the pump manufacturer.

**BRUSH OR ROLLER** : Use medium bristle brush, or good quality short nap roller, avoid excessive rebrushing and rerolling. Two coats may be required to obtain desired appearance, hiding and recommended DFT. For best results tie-in within 10 minutes at 75°F(24°C)

**DRYING TIMES**: These times are at 4mils (100microns) dry film thickness. Film thicknesses higher than 4mils(100microns) will lengthen cure times.

Dry to Touch: 3hours at 75°F (24°C)

Dry to Handle: 6hours at 75°F (24°C)

<u>Temperature</u>	<u>Dry to Topcoat</u>
41°F (5°C)	48 hours
50°F (10°C)	24 hours
60°F (16°C)	16 hours
75°F (24°C)	8 hours
90°F (32°C)	4 hours

If allowed to weather, chalking should be removed by water washing and then allowed to dry thoroughly prior to topcoating.

**CLEANUP** : Use CARBOLINE Thinner #2.

**CAUTION : READ AND FOLLOW ALL CAUTION STATEMENTS ON THIS PRODUCT DATA SHEET AND ON THE MATERIAL SAFETY DATA SHEET FOR THIS PRODUCT.**

CAUTION: CONTAINS FLAMMABLE 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.

