

Selection Data

GENERIC TYPE : Self curing, inorganic zinc primer. The coating consists of a basic silicate complex. Base and zinc filler mixed prior to application.

GENERAL PROPERTIES : An inorganic zinc base coat that protects steel galvanically, eliminating sub-film corrosion. Has outstanding application properties. Can be applied at the recommended thickness in one coat.

• **Tested for Nuclear service Level 1.(Approved for APR-1400 Nuclear Power Plant)**

RECOMMENDED USES : Carbozinc11SG N(K) (the first self-curing inorganic zinc primer) is used as a single coat protection of steel structures in weathering exposure and as a base coat for organic and inorganic topcoats in more severe services. Excellent for interiors and exteriors of storage tanks containing fuels and organic solvents. Has many uses as a maintenance primer, with or without topcoats, depending on exposure. Used widely in chemical plants, paper mills, refineries and coastal or salt atmospheres including offshore structures and bridges.

NOT RECOMMENDED FOR : Immersion or direct exposure to acids or alkalies without suitable topcoat.

CHEMICAL RESISTANCE GUIDE :

Exposure*	Immersion	Heavy Fumes or Light Splash and Spillage	Outside Weathering or Mild Fumes
Acids	NR	Fair	Excellent
Alkalies	NR	Very Good	Excellent
Solvents	Excellent	Excellent	Excellent
Salt	Excellent	Excellent	Excellent
Water	Excellent	Excellent	Excellent

*Certain exposures may require topcoats for maximum service.

TEMPERATURE RESISTANCE : (Non-immersion)

Continuous : 750°F(399°C)
Non-continuous : 800°F(427°C)

FLEXIBILITY : Fair - Good.

WEATHERING : Excellent

ABRASION RESISTANCE : Excellent

SUBSTRATES : Apply over properly prepared steel, or other surfaces as recommended.

TOPCOAT REQUIRED : May be topcoated with epoxies, phenolics, vinyls, acrylics, silicones, chlorinated rubbers or other as recommended.

NOTE : Under certain conditions a mist coat or tie coat is required to minimize topcoat bubbling.

Specification Data

THEORETICAL SOLIDS CONTENT OF MIXED MATERIAL :

	By Weight
Carbozinc 11 SG N(K)	79% ± 2%
Zinc Content in the Dry Film	85% minimum

RECOMMENDED DRY FILM THICKNESS PER COAT :

3-5 mils (75-125μ)

NOTE : Apply material as close as possible to recommended dry film thickness. Excessive film thickness will result in mud cracking.

THEORETICAL COVERAGE PER MIXED GALLON*:

1000 mil sq. ft. (24.5 sq. m/l at 25μ).
333 sq. ft. at 3 mils (8.2 sq. m/l at 75μ).

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

SHELF LIFE : (When stored at 75°F(24°C))

Base : 12 months at 75°F(24°C)
Zinc Filler : 24 months at 75°F(24°C)

COLORS : Gray or Green standard.

GLOSS : Matte Finish.

VOC Values As supplied: 3.96 lbs/gal(475 g/l)
Thinned: #21, 6%(by Volume) 4.11lbs/gal(493 g/l)
#26, #33 6%(by Volume) 4.16lbs/gal(499 g/l)

Ordering Information

Prices may be obtained from your Carboline Sales Representative or Main Office.

APPROXIMATE SHIPPING WEIGHT :

	1's	5's
Carbozinc 11 SG N(K)	23 lbs.(10 kg)	113 lbs.(51 kg)
Carboline Thinner #26	9 lbs.(4 kg)	42lbs.(19 kg)
Carboline Thinner #21	8 lbs.(4 kg)	36 lbs.(16 kg)
Carboline Thinner #33	9 lbs.(4 kg)	42lbs.(19 kg)

FLASH POINT : (Pensky-Martens Closed Cup)

Carbozinc 11 SG N(K) Base	59°F(15°C)
Carboline Thinner #26	104°F(40°C)
Carboline Thinner #21	54°F(12°C)
Carboline Thinner #33	104°F(40°C)

Application Instructions

SURFACE PREPARATION : Remove any oil or grease from surface to be coated with clean rags soaked in Carboline Thinner #2 in accordance with SSPC-SP 1-82.

Steel : For immersion service, abrasive blast to a White Metal finish(SSPC-SP 5-85). Degree of cleanliness in accordance with NACE #1. Obtain a 1-3 mil (25-75μ) blast profile. For non-immersion service, abrasive blast to a commercial finish (SSPC-SP 6-85). Degree of cleanliness in accordance with NACE #3. Obtain a 1-3 mil (25-75μ) blast profile. For steel tank linings, welds should be continuous. Remove weld spatter, slag, and oxides caused from welding.

April 2013 replaces June 2010

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

Carbozinc® 11 SG N(K)

MIXING : Power mix base, then combine and mix in the following proportions

	<u>1 Gal. Kit</u>	<u>5 Gal. Kit</u>
Carbozinc 11 SG N(K)	1 Gal.	5 Gal.
Base	(Partially filled)	(Partially filled)
Zinc Filler	14.6 lb.unit	73 lb.unit

Mix as supplied; Sift zinc filler slowly into base with continuous agitation. Mix until free of lumps. Pour mixture through a 30 mesh screen. Thin, as required up to 6% by volume with Carboline Thinner #21 in cool weather (below 60°F[16°C]). For warmer or windy conditions, use Carboline Thinner #26, #33 up to 6% by volume.

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

POT LIFE : 8 Hours at 75°F(24°C) and less at higher temperatures. Moisture contamination will shorten pot life. Pot life ends when coating becomes too viscous to use.

APPLICATION TEMPERATURES :

	<u>Material</u>	<u>Surfaces</u>
Normal	40-95°F(4-35°C)	40-110°F(4-43°C)
Minimum	0°F(-18°C)	0°F(-18°C)
Maximum	130°F(54°C)	200°F(93°C)
	<u>Ambient</u>	<u>Humidity</u>
Normal	40-95°F(4-35°C)	40-85%
Minimum	0°F(-18°C)	30%
Maximum	130°F(54°C)	90%

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

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

SPRAY : Use sufficient air volume for correct operation of equipment. Use a 50% overlap with each pass of the gun. On irregular surfaces coat the edges first, making an extra pass later.

NOTE : The following equipment has been found suitable; however, equivalent equipment may be substituted.

Conventional : Use a 3/8" minimum I.D. material hose. Hold gun approximately 12-14 inches from the surfaces and at a right angle to the surface.

<u>Mfr. & Gun</u>	<u>Fluid Tip</u>	<u>Air Cap</u>
Binks #18 or #62	66	63PB
DeVilbiss P-MBC or JGA	E	704
	Approx..070" I.D.	

Airless : Use a 3/8" minimum I.D. material hose. Hold gun approximately 18-20 inches from the surface and at a right angle to the surface. Keep material under mild agitation during application.

Use agitated pot. Maximum 50 foot hose. Keep pot at same elevation as gun. If spraying stops for more than 15 minutes, blow the material from hose back into pot.

<u>Mfg. & Gun</u>	<u>Pump</u>
DeVilbiss JGB-510	QFA-514 or QFA-519
Graco 208-663	President 30:1 or Bulldog 30:1
Binks Model 700	B5-18 or B8-36

* Teflon packing are recommended and are available from pump manufacturer.

BRUSH : For areas less than one square foot. For touch-up only, using medium bristle brush. Avoid rebrushing.

DRYING TIMES :

<u>Temperature with over 50% RH</u>	<u>Before Placing Into Service Untopcoated*</u>	<u>Before Topcoating</u>
0°F(-18°C)	7 days	7 days
40°F(4°C)	24 hours	48 hours
60°F(16°C)	16 hours	24 hours
80°F(27°C)	8 hours	18 hours
100°F(38°C)	6 hours	16 hours

* Represents minimum times. If allowed to weather, excessive salting should be removed.

VENTILATION & SAFETY : When used as a tank lining or 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. In addition to proper ventilation, fresh air respirators or fresh air hoods must be used by all application personnel. Where flammable solvents exist, explosion-proof lighting equipment must be used. Hypersensitive persons should wear clean protective clothing, gloves and/or protective cream on face, hands and all exposed areas.

CLEAN UP : Use Carboline Thinner #2.

STORAGE CONDITIONS : (Store indoors)

Temperature : 40-110°F(4-43°C)
Humidity : 0-100%

NOTE :

- a) When Carbozinc 11 SG N(K) is used for immersion service untopcoated where zinc pickup could be detrimental or when dry spray is evident and Carbozinc 11 SG N(K) is to be topcoated, remove loose zinc after curing by rubbing with aluminum screen wire.
- b) For interior application, or tank linings, if the relative humidity is low, the curing time can be reduced by raising the relative humidity by steam or a water spray on the coated surface after allowing to dry for two hours at 75°F(24°C).

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.

