Corolon Coatings & Corrosion Control Technologies Inc.
2 Haas Rd., Toronto, Ont. M9W 3A2, Canada
Tel. (416) 401-8855; fax (416) 401-8878
www.corolon.com

PRODUCT DATA SHEET
Corolon 5400 100% Novolac
Excellent High-temperature Chemical Resistance
Excellent Chemical Resistance
Excellent Wear Resistance
Good Abrasion Resistance

TECHNICAL DESCRIPTION:
Corolon 5400 Sprayable, 100% Solids Industrial Maintenance Coating for Metal and Concrete Substrates. Corolon 5400 is a very high cross-link density, ceramic-filled novolac coating that is designed to provide maximum chemical resistance at higher temperatures as well as excellent wear an abrasion resistance.

RECOMMENDED USAGE:
* Ducts, including FGD service.
* Stacks
* Stainless Mist Eliminators
* Flue Gas Scrubbers
* Steel & Concrete Tanks
* FGD Thickner Tanks
* Secondary Containment Structures

TECHNICAL DATA:

PHYSICAL PROPERTIES

Specific Gravity	1.32
Weight	11.0 pounds/gallon
Flash Point	>250 ^{o}F (121 ^{o}C)
Volatile Organic Compounds **(VOC)**	0 grams/liter
Coefficient of Thermal Expansion (.00001/per degree F)	1.8
Color	Light Gray
Recommended Coverage	2-3 coats x 10 mils,3-4 x 10 mils, if elevated temperature/severe chemical service
Coverage per Gallon (theoretical)	160 square feet per 10 mils of thickness
Container Size	1 & 2 gallon

CHEMICAL RESISTANCE

Ammonium Hydroxide	Hydrogen Sulfide
Aromatic & Aliphatic Solvents	MEK
Black Liquor	Mineral Acids
Bleach (12% concentration of Sodium Hypochlorite)	Nitric Acid up to 45%
Butyl Acetate	(Many) Organic Acids
	Phosphates

Butyl Carbitol
Chlorinated Solvents (except Methylene Chloride)
Chlorides
Hydrochloric Acid up to 100%
Hydrolfluoric Acid up to 40%
Phosphoric Acid up to 100%
Potassium Hydroxide
Sulfides
Sulfuric Acid up to 98%
White Liquor

SERVICE TEMPERATURE

Exposure	**Maximum Recommended Temperature**
Dry Service	450° F (232° C)
Spills, Splashes, & Fumes	360° F (182° C)
Immersion Service	300° F (149° C)

SURFACE PREPARATION

Note: For optimal coating performance, take considerable care with surface preparation.
Metal: Remove all oil, grease or scale from the surface, then blast with sharp sand or grit to finish. Use a non-spherical blast medium to give a 2-3 mil (50 - 75 micron) profile and to achieve the following surface preparation standards or their equivalents.

Non-chemical Service	SSPC-SP 6 Comercial Blast (NACE 3)
Intermittent Splash or Wear	SSPC-SP 10 Near White Metal Blast (NACE 2)
Immersion or Abrasive	SSPC-SP 5 White Metal Blast (NACE 1)

Concrete: Concrete should be aged at least 28 days before coating and the surface should be clean, dry and free of form-release agents, silicone water proofers and/or curing agents. Sand blast, scarify or etch the surface with muriatic acid (15% HCL, not to exceed 20%), using one gallon per 60-75 square feet. Wash down old concrete to remove all residues and neutralize the pH before blasting or scarifying. For severe service, a second wash is recommended.

Novolac products are normally self-priming. However, under certain conditions such as old, porous or poorly finished concrete, a sealer /primer is needed to avoid bubbling caused by outgassing.

MIXING PROCEDURES

Note: Do not mix partial kits.

1. Thoroughly mix the resin before adding the hardner:
Corolon 5400 is 100% solids and contains materials with high specific gravity.
2. Empty the entire amount of hardner into the resin container.
3. Mix thoroughly-until uniform in consistency -then continue to mix for an additional 2-3 minutes. Pay special attention to the bottom and sides of the container to insure complete mixing.

Due to the high viscosity of this product, a mechanical mixer is preferred. Use at low speed and keep the mixing blade down in the product to avoid entrapping air. If mixing by hand, use a square-cornered, flat implement, such as a standard paint stirring stick.

THINNING

If thinning is necessary, especially at temperatures lower than 60° F

(16° C), add 4 to 6 fl oz of MEK to resin and mix thoroughly before adding the hardener. Note: **Do not** exceed 10% solvent by volume. Read the Material Safety Data Sheet for MEK (flammable liquid) before using it.

POT LIFE

Ambient Temperature	Time
40° F (4° C)	1 hour 20 minutes
55° F (13° C)	50 minutes
70° F (21° C)	30 minutes

Do not keep the blended coating in the originalcontainer: exotherm-heat created during the curing process-can considerably shorten port life. Pour the coating into a rolling tray or large aluminum basting pan. Try to keep the depth of the coating in the tray below 3/8".

CAUTIONS

1. If the ambient temperature is 85° F (29° C) or higher, pot life may be as short at 15 minutes. Have the working surfaces ready**,** and mix no more than one gallon of the coating at a time. To increase the pot life under these conditions, put the tray or pan on ice or in ice water. **Do not** get water or ice in the tray with the coating.

2. The substrate temperature must be at least 5° F (3° C) above dew point-the temperature at which moisture will condense on the surface of the substrate-during all blasting and coating procedures. To calculate the dew point, consult the chart below.

Example: if the ambient air temperature is 70° F-top row below- and the relative humidity is 65%-left column-the dew point is 57° F. Under these conditions, the substrate temperature would need to be at least 62° F before proceeding with blasting and coating procedures.

%RH	Ambient Air Temperature, °F (°C)						
	50 (10)	60 (16)	70 (21)	80 (27)	90 (32)	100 (38)	110 (43)
90	47 (9)	57 (14)	67 (19)	77 (25)	87 (31)	97 (36)	107 (42)
85	45 (7)	55 (13)	65 (18)	75 (24)	84 (29)	95 (35)	104 (40)
80	44 (7)	54 (12)	63 (17)	73 (23)	82 (28)	93 (34)	102 (39)
75	42 (6)	52 (11)	62 (17)	71 (22)	80 (27)	91 (33)	100 (38)
70	40 (4)	50 (10)	60 (16)	69 (21)	78 (26)	88 (31)	98 (37)
65	38 (3)	48 (9)	57 (14)	67 (19)	76 (24)	86 (30)	95 (35)
60	36 (2)	46 (8)	55 (13)	65 (18)	74 (23)	83 (28)	92 (33)
55	34 (1)	43 (6)	53 (12)	62 (17)	71 (22)	80 (27)	90 (32)
50	31 (-.5)	41 (5)	50 (10)	59 (15)	69 (21)	78 (26)	87 (31)

APPLICATION Corolon 5400 may be sprayed, brushed, rolled or applied by queegee. Use a medium bristle brush or a non-shed roller-3/8" nap or shorter-designed for use with epoxies. To spray Corolon 5400, use an airless system-such as those available from Binks, DeBibiss or Graco-with the following specifications:

Pump **Tip size** .028 - .035 inch

Product Hose

Ratio 40:1 or greater Minimum-Optimum I.D. .375 - 5 inch Minimum

Output	3500 psi		
In-Line			
Filter	30 mesh	Maximum Length	50 feet

MULTIPLE COATS Second and subsequent coats must be applied **before the previous coat has completely cross-linked.** Apply additional coats when the previous coat will still string out (pigtail) and hold its shape when touched. If only tack remains, allow the product to cure, then brush blast before applying the next coat.

The same requirement applies when overlapping the seams of adjacent coating sections to create a continous protective film. If the coating surface to be overlapped at the seam cannot be brush blasted, use a non-impact means such as wire-brushing or sanding to create a mechanical profile.

CURE TIME

Re-coat Window 1/2- 1 1/2	hours(@ 70° F/21° C)
Light Loading	12 hours
Immersion (Aqueous) Service	30 hours
Full or Chemical Service	72 hours

SPEED CURING The cure time can be reduced and product performance enhanced by applying heat during the curing process of the final coat: 150° F (66° C) for 2 hours is recommended before placing the coating into full service.

CLEAN-UP Use a mixture of MIBK and Butyl acetate (50/50) or MEK for clean up. Read Material Safety Data Sheets for any of these products (flammable liquids) before using them). Skin can be cleaned with denatured alcohol, preferably ethanol.