



# ICAT INDUSTRIES INC.

## CEL-400 Elastomeric Epoxy

### **PRODUCT PROFILE**

**CEL 400 is a flexible, two component, 100% solids, elastomeric epoxy lining for damp concrete and gasproofing.**

<b>EXCELLENT</b>	Adhesion to Damp Concrete
<b>SUPERIOR</b>	Gasproofing Ability
<b>GOOD</b>	Wear & Abrasion Resistance

**CEL 400** is an elastomeric coating specially formulated for the protection and sealing of concrete surfaces. Although tough and chemical resistant, it offers outstanding flexibility and maintains its integrity while bridging normal cracks which may develop within the substrate below. Unlike urethane elastomers, CEL 400 is not moisture sensitive and provides excellent adhesion when applied over damp surfaces.

CEL 400 may be spray applied at ambient temperatures with plural component airless equipment, rolled on, or brushed in film thicknesses exceeding 30 mils (750 micron) in one application. When used in conjunction with CEL 400 fast or slow cure elastomeric primers or CEL 400G grout, intercoat adhesion failures are eliminated since all products are of the same resin system.

### **TYPICAL APPLICATIONS:**

- Waste Water Facilities
- Gasproofing
- Sewer Systems
- Pulp & Paper Facilities
- Secondary Containment
- Concrete Tanks
- Manhole Restoration
- General Maintenance

### **TECHNICAL DATA**

#### **PHYSICAL PROPERTIES:**

Specific Gravity	1.38
Flash Point	>250°F (121°C)
Volatile Organic Compounds (VOC)	0 grams/litre
Colour	As desired, UV good
Recommended Coverage	60 mils (1500 micron)
Container Size	4 x 200L Drums
Adhesion	Concrete: 300 - 600 psi (21-42 kg/cm <sup>2</sup> ) to break
Elongation	40%
Hardness	Shore "D" 55
Impact Resistance	160 + in. lbs. (14.5 J)

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# CEL 400 TECHNICAL DATA

Pot Life	20 minutes at 20°C 2 minutes at 65°C
Tack Free Time	8 hours at 20°C
Full Cure	7 days at 20°C
Relative Humidity Tolerance	0 - 99%
Theoretical Coverage	1 sq. m / litre at 1 mm thickness
Cleaning Solvent	MEK, Xylene

## **APPLICATION PROCEDURES**

### **SURFACE PREPARATION:**

- 1) If contamination due to service is either present, or expected to be present on the existing concrete substrate, cleanse with a 3000 psi (200 BAR) water blast using a detergent solution capable of dissolving the contaminant. Rinse the washed surface with clean water prior to subsequent steps in order to remove the detergent from the concrete.
- 2) Repair loose or damaged concrete using Five Star Structural Concrete (as manufactured by Five Star Products of Fairfield, CT.), or equivalent. Once the repairs have been completed, remove existing coating and/or deteriorated concrete by abrasive sandblast. Sand-blasting will produce a rough surface with a texture that is similar to coarse sandpaper.

### **PREPARATION & APPLICATION:**

- 1) Store all materials in accordance with the manufacturers written recommendations. All materials shall be thoroughly mixed prior to application. Failure to do so may diminish the quality of the coating.
  - 2) Apply **CEL 400G** parging material to all concrete surfaces in the manner specified. CEL 400G acts as both the parging material and the primer.
  - 3) When **CEL 400G parging** material has set up to a tacky state (but not fully cured), apply **CEL 400** Elastomeric Epoxy as the top coat. If the **CEL 400G** parging material has fully cured before the top coat is ready to be applied, the surface should either be abraded or wiped with an acceptable solvent, if deemed appropriate by the Engineer or ICAT Industries, such as MEK, or Xylene.
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# CEL 400 APPLICATION PROCEDURES

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## PREPARATION & APPLICATION CONT'D:

- 4) Preheating **CEL 400** to 65°C is recommended. Apply the coating to a minimum film thickness of 60 mils (1500 micron). The full coating thickness shall be applied in one coat that may, and should be comprised of multiple passes sprayed during a period not exceeding 8 hours. Stripe all edges, rough surfaces and hard to reach areas initially, in order to ensure a good film thickness.

## CURE & RECOAT TIME:

AMBIENT TEMPERATURE	TACK FREE/RECOAT TIME	THOROUGH CURE
32°C	4 hours	18 hours
21°C	8 hours	36 hours

## SUBSTRATE TEMPERATURE:

Minimum recommended: 10°C    Maximum recommended: 32°C

## POT LIFE AT 75°F (24°C):

4 litres	20 minutes
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## CAUTIONS:

1. It is important to remember that the pot life will vary depending on the quantity of epoxy mixed and the ambient temperature. Larger quantities and higher temperatures will reduce the pot life considerably.
2. The substrate temperature must be at least 5°F (3°C) above the dew point during all blasting and coating procedures. To calculate the dew point, consult the chart at the end of the Application Procedures section.

## APPLICATION EQUIPMENT:

Apply with short nap roller, brush, squeegee. **CEL 400** may be spray applied with the use of a plural component airless spray system such as those available from Binks, Graco or DeVilbiss.

## CLEAN UP:

Use **MEK or Xylene** for clean-up. Read the Material Safety Data Sheet for each of these products before using them. To clean skin, wash thoroughly with soap and water.

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# CEL 400 APPLICATION PROCEDURES

## DEW POINT CALCULATION CHART:

%RH	AMBIENT AIR TEMPERATURE °F (°C)							
	50 (10)	<b>60 (16)</b>	70 (21)	80 (27)	90 (32)	100 (38)	110 (43)	120 (40)
90	47(9)	57(14)	67(19)	77(25)	81(31)	97(36)	107(42)	117(47)
85	45(7)	55(13)	65(18)	75(24)	84(29)	95(35)	104(40)	114(46)
80	44(7)	54(12)	63(17)	73(23)	82(28)	93(34)	102(39)	112(44)
75	42(6)	52(11)	62(17)	71(22)	80(27)	91(33)	100(38)	110(43)
<b>70</b>	40(4)	<b>50(10)</b>	60(16)	69(21)	78(26)	88(31)	98(37)	107(42)
65	38(3)	48(9)	<i>57(14)</i>	67(19)	76(24)	86(30)	95(35)	105(41)
60	36(2)	46(8)	55(13)	65(18)	74(23)	83(28)	92(33)	102(39)
55	34(1)	43(6)	53(12)	62(17)	71(22)	80(27)	90(32)	99(37)
50	31(-.5)	41(5)	50(10)	59(15)	69(21)	78(26)	87(31)	96(36)

Dew point is the temperature at which moisture will condense on substrate surfaces. For example (note the *italicized bold* numbers), if the air temperature - top row - is 16°C and the relative humidity - left column - is 70%, the dew point is 10°C.

## ORDERING INFORMATION

For additional information, prices or to place an order, please contact your **ICAT Industries** sales representative or call our offices direct.

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