



# ICAT INDUSTRIES INC.

## CEL 375 Product Data Sheet

### Description:

CEL 375 by ICAT Industries Inc. is an extensively tested external pipeline coating. CEL 375 is a 100% solids epoxy that creates an extremely strong resilient protective film which provides full resistance to cathodic disbondment. CEL 375 is formulated to be spray applied (brush kits also available) with plural component heated airless pumps at a wet film thicknesses up to 60 mils DFT in a single application with excellent adhesion and abrasive characteristics. CEL 375 epoxy coating is formulated to address new construction, rehabilitation of existing pipelines, girth welds, valves, bends & field joints. CEL 375 carries a wide and extremely successful track record for over 15 years.

### Uses:

CEL 375 is a two component, 100% solids epoxy coating system which may be applied directly to steel.

### Features:

- Quick set / fast turn around times
- High build – up to 60 mils in a single coat
- Grey in colour
- Finish: Gloss
- Pipeline: New Construction & Rehabilitation
- 100% solids content - VOC Compliant
- Excellent Adhesion and Cathodic Protection
- High Abrasion & Impact Resistance – Excellent for slip bores, directional drilling, etc.
- Provides monolithic membrane protection to the substrate
- Quick return to service
- Available in 200L drums, 20L pails and brush grade kits of various sizes

### Application:

#### *Surface Prep:*

Surfaces must be clean and dry. Remove all contaminants such as dust, dirt and oils. SSPC SP 10 / NACE 2 Near White with a jagged profile of 2.5 – 5.0 mils utilizing a suitable abrasive such as silica sand, nickel / copper slag, garnet.

#### *Spray:*

CEL375 coating shall be applied to the abrasive blasted steel surface using plural component spray equipment. A VR Coatings Cheetah, with a Rhino air motor, or equivalent, shall be used to provide the desired application pressure of 3000 psi. The ratio of the pump shall be 3 parts base (part A) to one part curing agent (part B).

CEL375 base and curing agent shall be preheated to a temperature of 40°C/105°F while being agitated. A transfer pump at a minimum fluid to air ratio of 5:1 is recommended to feed the plural component pump.



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In-line heaters shall be used on the base side and curing agent side to raise the temperature from 40°/105°F to 65°/150°F upon application.

The hose bundle leaving the plural component pump shall be heat traced and insulated to maintain material temperature.

The base line shall be 3/8 inch ID and the curing agent shall be 1/4 inch ID. A maximum length of 50 meters (55 yards) shall be used.

The mixing block shall have a material shut off valve prior to entry and must have a solvent flush attachment that will allow the whip hose to be flushed of mixed material.

The whip hose shall be no more than 8 meters (9 yards) in length and 1/4 inch.

The gun shall be a high pressure airless spray gun with a minimum pressure rating of 3000 psi. The tip sizing shall be a minimum of 0.023.

**\*RATIO CHECKS ARE HIGHLY RECOMMENDED AFTER EACH START UP**

## *Brush & Roll:*

Combine pre-measured base material (Part A) with pre-measured curing agent (Part B) and mix thoroughly using a drill with a mixing attachment.

Once mixed, apply to abrasion blasted steel surface using a brush/roller/trowel to attain an even coat.

## *Repair Procedure:* Repairs to coating shall be performed in one of 2 ways:

Small Area Repairs – areas of damage in the coating up to 1000 cm<sup>2</sup> (155 in<sup>2</sup>) may be fixed by grinding out the defective area using an angle grinder or similar tool fitted with an abrasive disc and abrading the surrounding area to attain a transitional bond with the undamaged coating. The entire area may then be coated by brush or roller using CEL375 Epoxy Brush Grade material.

Large Area Repairs – areas larger than those above are recommended to be prepared in the same manner and then repaired by spray application.

## *Testing:*

Holiday testing may be performed when the coating is tack free and has a shore D hardness of at least 60. Destructive testing should be performed after the coating has had at least 24 hours at 25C to cure.

**\*During the blasting operation and until the final coating procedure has been finished, the temperature of the steel shall not be less than 3°C/37°F above the dew point.**



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<b>Properties</b>	<b>Value</b>
<b>Solids Content</b>	100%
<b>Mixed Material</b>	
• Colour	Grey
• Specific Gravity	1.4 combined A and B
<b>Mixing Ratio</b>	3:1 Ratio
<b>Full Cure Time (25°C)*</b>	24 hours
<b>Recoat Window</b>	
• (15°C)	6 hours
• (25°C)	3 hours
• (35°C)	1 hour
<b>Theoretical Coverage</b>	1 sq. m/liter at 1 mm thickness
<b>Thickness- weld joints/ FBE Repairs</b>	
• Minimum/Maximum	20/80 mils (500/2000 microns)
• Recommended	25/40 mils (750/1000 microns)
<b>Thickness- Bore Pipe</b>	
• Minimum/Maximum	40/80mils (1000/2000 microns)
• Recommended	40/60 mils (1000/1500 microns)
<b>Holiday Detection</b>	125 volts/mil (5000 V/mm)
<b>Cathodic Disbondment Test</b>	
• 28 days @ 20°C	3 mm
• 28 days @ 65°C	2.5 mm
• 28 days @ 80°C	4 mm
<b>Hardness</b>	Shore "D" 80
<b>Impact Resistant @ 0°C</b>	8 Joules
<b>Tabor Abrasion</b>	
CS 17 wheel 1000 cycles 1 kg load	95 mg
<b>Dielectric Strength</b>	15.86 V/um
<b>Adhesion to steel</b>	3000+ psi (glue breaks)
<b>Adhesion to FBE</b>	3000+ psi (glue breaks)
<b>Service Temperature</b>	-50°F to 212°F (-45°C to 100°C)
<b>Application Temperature</b>	32°F to 212°F (0°C to 100°C)

\* For additional data, including curing schedules, please contact the product manufacturer.



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**Storage:** Minimum 24 months when stored in original containers @ 32°F (0°C) to 113°F (45°C). When temperatures are below 32°F (0°C) product should be properly mixed.

**Cleaning:** use suitable solvent such as MEK, Acetone, Xylene, Lacquer Thinner (contact manufacture if unknown) to clean equipment.

**Health and Safety:** Always wear protective gear and avoid contact with skin. Do not ingest. See material safety data sheet for further information.

**Packaging:** 18L Pails, 200L drums & premeasured repair kits available upon request

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