

# Product Finishes

# CC-C5



## OPEX<sup>®</sup> Clear Lacquers

Clear Bronzing Lacquer ..... T82C5  
 Clear Acrylic Metal Lacquer . T82C13  
 Custom Blend..... T82XX Series

<u>DESCRIPTION</u>	<u>CHARACTERISTICS</u>																																																				
<p><b>OPEX<sup>®</sup> Clear Lacquers</b> are designed for use on metal surfaces for industrial product finishing.</p> <p><b>Advantages:</b></p> <ul style="list-style-type: none"> <li>• Fast air drying</li> <li>• Full gloss</li> <li>• No critical recoat time</li> <li>• T82C5 is an ethyl cellulose lacquer intended for producing metallic bronze effects using aluminum and copper bronze powders</li> <li>• T82C13 is an acrylic lacquer intended for use as is or blended with aluminum pastes. It offers the best durability on exterior applications. It can be used on aluminum, brass, copper, and other nonferrous metals</li> </ul>	<p><b>Product:</b> <b>T82C5</b></p> <p><b>Resin Type:</b> Ethyl cellulose</p> <p><b>Gloss:</b> Full, 85 +</p> <p><b>Volume Solids:</b> 9.8 ± 1%</p> <p><b>Viscosity:</b></p> <table style="width: 100%; border: none;"> <tr> <td style="width: 60%;">seconds #2 Zahn Cup</td> <td style="width: 20%;">17 - 20</td> <td style="width: 20%;">—</td> </tr> <tr> <td>seconds #4 Zahn Cup</td> <td>—</td> <td>17 - 21</td> </tr> <tr> <td>seconds #4 Ford Cup</td> <td>15 - 18</td> <td>48 - 70</td> </tr> </table> <p><b>Recommended film thickness:</b></p> <table style="width: 100%; border: none;"> <tr> <td colspan="3">Interior</td> </tr> <tr> <td style="width: 60%;">Mils Wet</td> <td style="width: 20%;">5.1 - 6.2</td> <td style="width: 20%;">4.0 - 4.8</td> </tr> <tr> <td>Mils Dry</td> <td>0.5 - 0.6</td> <td>0.5 - 0.6</td> </tr> <tr> <td colspan="3">Exterior (achieved with multiple coats)</td> </tr> <tr> <td>Mils Dry (clear)</td> <td>—</td> <td>1.0 - 1.2</td> </tr> <tr> <td>Mils Dry (as metallic)</td> <td>—</td> <td>1.25 - 1.5</td> </tr> </table> <p><b>Spreading Rate @ 0.5 - 0.6 mils DFT:</b></p> <table style="width: 100%; border: none;"> <tr> <td style="width: 60%;">sq ft/gal</td> <td style="width: 20%;">235 -346</td> <td style="width: 20%;">305 - 430</td> </tr> </table> <p><b>Drying (77°F, 50% RH):</b></p> <table style="width: 100%; border: none;"> <tr> <td style="width: 60%;">Tack Free:</td> <td style="width: 20%;">5-10 minutes</td> <td style="width: 20%;">5-10 minutes</td> </tr> <tr> <td>To Recoat:</td> <td>no critical recoat</td> <td>no critical recoat</td> </tr> <tr> <td>To Pack:</td> <td>2-4 hours</td> <td>2-4 hours</td> </tr> <tr> <td>Force Dry:</td> <td>10-15 minutes at 160°F</td> <td>10-15 minutes at 160°F</td> </tr> </table> <p style="padding-left: 20px;">Good air movement is more important than heat</p> <p><b>Flash Point:</b> 30°F PMCC</p> <p><b>Package Life:</b> 3 years, unopened</p> <p><b>Air Quality Data:</b> Photochemically reactive</p> <p><b>Volatile Organic Compounds (VOC)</b></p> <table style="width: 100%; border: none;"> <tr> <td style="width: 60%;">Theoretical as packaged, maximum, less exempt solvents:</td> <td style="width: 20%;">6.4 lb/gal, 768 g/L</td> <td style="width: 20%;">6.05 lb/gal, 726 g/L</td> </tr> <tr> <td>reduced 25% with R2K4:</td> <td>6.6 lb/gal, 792 g/L</td> <td>—</td> </tr> <tr> <td>reduced 125% with R7K120:</td> <td>—</td> <td>6.35 lb/gal, 762 g/L</td> </tr> </table> <p>An Environmental Data Sheet is available from your local Sherwin-Williams facility or at <a href="http://www.paintdocs.com">www.paintdocs.com</a>.</p>	seconds #2 Zahn Cup	17 - 20	—	seconds #4 Zahn Cup	—	17 - 21	seconds #4 Ford Cup	15 - 18	48 - 70	Interior			Mils Wet	5.1 - 6.2	4.0 - 4.8	Mils Dry	0.5 - 0.6	0.5 - 0.6	Exterior (achieved with multiple coats)			Mils Dry (clear)	—	1.0 - 1.2	Mils Dry (as metallic)	—	1.25 - 1.5	sq ft/gal	235 -346	305 - 430	Tack Free:	5-10 minutes	5-10 minutes	To Recoat:	no critical recoat	no critical recoat	To Pack:	2-4 hours	2-4 hours	Force Dry:	10-15 minutes at 160°F	10-15 minutes at 160°F	Theoretical as packaged, maximum, less exempt solvents:	6.4 lb/gal, 768 g/L	6.05 lb/gal, 726 g/L	reduced 25% with R2K4:	6.6 lb/gal, 792 g/L	—	reduced 125% with R7K120:	—	6.35 lb/gal, 762 g/L	<p style="text-align: center;"><b><u>SPECIFICATIONS</u></b></p> <p><b>General:</b> Substrate should be free of grease, oil, dirt, fingerprints, drawing compounds, any contamination, and surface passivation treatments to ensure optimum adhesion and coating performance properties. Consult Metal Preparation Brochure CC-T1 for additional details.</p> <p><b>Aluminum:</b> T82C5 exhibits poor adhesion on bare aluminum. T82C13 may be applied directly to properly cleaned aluminum.</p> <p><b>Steel or Iron:</b> Remove rust, mill scale, and oxidation products. For best results, treat the surface with a proprietary surface chemical treatment of zinc or iron phosphate to improve corrosion protection. On clear coating applications where metal show through is desired, priming is not practical.</p> <p><b>Testing:</b> The information, data, and recommendations set forth in this Product Data Sheet are based upon test results believed to be reliable. However, due to the wide variety of substrates, substrate properties, surface preparation methods, equipment and tools, application methods, and environments, the customer should test the complete system for adhesion, compatibility and performance prior to full scale application.</p>
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## ADDITIONAL INFORMATION

### Product Notes:

- Do not use on exterior wood products.
- T82C13 will quickly gel if mixed with bronze or copper powder and film will drift greener in color upon aging.
- T82C5 is not recommended for exterior use over nonferrous metals due to poor adhesion.
- Greater amounts of metallic powder will increase the brilliance of the finished product, but will reduce the gloss and film durability.
- In very hot or humid conditions, Retarder Thinner, R7K27, may be needed to avoid blushing in T82C13.
- T82C5 and T82C13 should not be mixed with Opex L61 colors for tinting purposes - they are insoluble.

### Recommended Uses

	<b>T82C5</b>	<b>T82C13</b>
Ferrous interior and limited exterior	OK	OK
Nonferrous interior and exterior	interior only	OK
Wood and wood products interior	OK	OK
Wood and wood products exterior	NO	NO
Mix with aluminum powder or paste	OK*	OK*
Mix with bronze powder or paste	OK*	NO
Mix with copper powder or paste	OK*	NO

\*6-8 oz of aluminum paste or aluminum, bronze, or copper powder per gallon of lacquer. Mix well to disperse uniformly.

### Performance Information

Yellowing resistance	Good	Excellent
Gasoline resistance	Poor	Good

### Performance Tests

#### Hardness:

Print Test at one psi .....passes  
After drying one hour at 77°F, product shows no marring or film transfer

#### Flexibility

Conical Mandrel Test .....passes  
after 72 hours drying, on 20 gauge cold rolled steel, at 1 mil dft.

## APPLICATION

With high humidity, it may be necessary to use Retarder Thinner, R7K27, in T82C13 to reduce or eliminate blushing.

	<b>T82C5</b>	<b>T82C13</b>
<b>Conventional Spray:</b>		
Reducer	Xylene, R2K4	Lacquer Thinner, R7K120
Reduction Rate	10-25%	100-125%
<b>Dip:</b>		
Reducer	Toluene, R2K1	Lacquer Thinner, R7K22
Reduction Rate	10-25%	75-100%

Excessive agitation or turbulence on part immersion or withdrawal may cause foaming. Tank maintenance (agitation, turnover rate, viscosity control, and stability) is required

### Cleanup:

Clean tools/equipment immediately after use with reducer solvent.  
Follow manufacturer's safety recommendations when using any solvent.

## CAUTIONS

**FOR INDUSTRIAL SHOP APPLICATION  
ONLY**

**Thoroughly review product label and Safety Data Sheet (SDS) for safety information and cautions prior to using this product.**

To obtain the most current version of the Environmental Data Sheet (EDS), Product Data Sheet (PDS), or Safety Data Sheet (SDS) please visit your local Sherwin-Williams facility or [www.paintdocs.com](http://www.paintdocs.com).

Please direct any questions or comments to your local Sherwin-Williams facility.

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