

**Randolph Products Company**

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## ISOLEX® R65 NICKEL ACRYLIC RFI/EMI CONDUCTIVE LACQUER



GENERAL INFORMATION	PHYSICAL PROPERTIES	APPLICATION
<p>A nickel acrylic, functional, air dry lacquer designed for RFI/EMI suppression in a variety of electronic plastic products.</p> <p>Isolex R65 produces excellent attenuation levels: 60 dB @ 30 MHz to 75 dB @ 1000 MHz. At 2.0 mils dry film thickness, Isolex R65 has a continuity reading of 0.5 ohms/sq or less.</p> <p>Underwriters Laboratories Inc. has tested Isolex R65 under QMSS2 File No. E76989(N) – Supplier Components for Use in the Fabrication of Metalized Parts.</p> <p><b>Key Benefits:</b></p> <ul style="list-style-type: none"> <li>• High electro-magnetic absorptive properties over a broad frequency range.</li> <li>• Excellent attenuation level.</li> <li>• Adhesion to injection molded plastics.</li> <li>• Low ohms/sq – 0.5 ohms per square or less at 2.0 mils</li> </ul> <p>Randolph Products Co. warrants that its Products meet its internal specifications and are of merchantable quality. However, the purchaser is solely responsible for the Suitability of the product for any particular application. The purchaser should thoroughly test or qualify the product for serviceability, environmental compliance and health and safety factors prior to use. Further, our total liability is limited to the price of the product or replacement in kind.</p> <p>Randolph Products Company 33 Haynes Circle Chicopee, MA 01020 Phone: 413-592-4191 Fax: 413-594-7321</p>	<ol style="list-style-type: none"> <li><b>Solids by Volume:</b> 31 +/- 2%</li> <li><b>VOC content:</b> 4.7 lbs/gallon (561 grams/liter)</li> <li><b>Solids by Weight:</b> 66 +/- 2%</li> <li><b>Viscosity</b> 3,000 – 5,000 cps @ 100 rpm, spindle #5</li> <li><b>Dry Time</b> Air dry lacquer Can be force dried @ 140°F for 30 minutes Full physical properties should not be tested for a minimum of 72 hours at room temperature. Final ohms/square should be &lt;0.5.</li> <li><b>Theoretical Coverage</b> 497 ft<sup>2</sup>/gallon</li> <li><b>Recommended Dry Film Thickness:</b> 2.0 mils (best results and optimum continuity)</li> <li><b>Isolex R65 passes the following testing procedures and methods:</b> Initial Adhesion: ASTM D3359 (Method B) Humidity: ASTM D2247 – 200 hours Humidity - UL® - 56 days @ 90% Humidity @ 90°F Heat Age – 56 days @ 180°F* Thermocycle -40°F to 140°F – 10 cycles Thermocycle Humidity – Class A – 36 hours @ -65°F to 185°F and 120 hours @ 90°F</li> </ol> <p>* Some testing was done at 140°F due to substrate limitations.</p>	<p><b>Application Recommendations:</b> Isolex R65 is designed to be applied with conventional air spray equipment. Binks Model 62 (63B fluid nozzle, 63PB air cap), Devilbiss Model JGA (704FF fluid and air cap) or the equivalent is recommended. An agitator pressure pot system must be utilized and reduced material must be kept under agitation at all times for uniform results. Starting pressures are 5 – 10 psi for pot pressure and 30 – 50 psi for atomization pressure. These pressures are not critical and can be modified for production requirements. Hose diameter on the fluid and air lines should be 3/8" and the minimum length of the fluid hose should be 3 feet; maximum length is 6 feet. The fan adjustment on the spray gun should be opened to allow a 12 inch spray pattern. The coating should be applied so that the parts consistently have 3 – 4 mils wet film thickness. Any time the sprayer must interrupt spraying for more than a period of 5 minutes, the lines from the pressure pot must be flushed.</p> <p><b>Substrates:</b> Isolex R65 has been tested and approved on a wide variety of substrates including both solid and structural foam, polycarbonate, ABS, Noryl and polystyrene.</p> <p><b>Surface Preparation:</b> Parts should be blown off with an air gun to remove loose particles of dirt and dust that may have settled on the part. Some parts may require a wash with 50/50 isopropyl alcohol and heptane to remove oil or mold release prior to coating.</p> <p><b>Mixing:</b> Isolex R65 should be mixed on a shaker for approximately 15 minutes before use. Isolex R65 is reduced 1:1 by volume with T65998 thinner. Other thinners are available for specific substrates and</p>

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production idiosyncrasies. For polystyrene use T21871 thinner.

**Do Not Overthin!**

Overthinning can lead to settling and hardpacking of the conductive coating. It is recommended that the thinner be filtered prior to mixing with the paint. A 100 – 150  $\mu$  filter will be sufficient. Always add the thinner to the paint, not paint to thinner. Add the thinner under agitation. The thinner must be at room temperature prior to adding to the paint.

**Special Considerations:**

Thin only what is to be used in one shift. Do not store thinned material overnight without agitation. Material may settle and hardpack. Store between 40 and 75°F. Rotation of stock is important. A policy of “first in – first out” should be instituted.

**Shelf Life:**

1 year

**Safety Precautions:**

This product is intended for professional use in an industrial environment only. Consult the Material Safety Data Sheet prior to application.