

## Randolph Products Company

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## CONDUCTIVE URACHEM

GENERAL INFORMATION	PHYSICAL PROPERTIES	APPLICATION
<p>A two component polyurethane enamel suitable for use on a variety of substrates that require superior appearance and durability. <i>Conductive Urachem</i> has excellent solvent resistance and chemical resistance. <i>Conductive Urachem</i> is recommended for both metal and plastic substrates used in the electronic enclosure and medical and office equipment manufacturing industries. <i>Conductive Urachem</i> is designed to dry and cure at ambient temperature so it is an excellent choice for pre-assembled parts that are too large for baking ovens or for parts that cannot tolerate the heat. <i>Conductive Urachem</i> will cure at ambient temperature or by force drying 20 – 30 minutes at 125° - 180°F.</p> <p><i>Conductive Urachem</i> can be textured or applied as a smooth coat.</p> <p><i>Conductive Urachem</i> is custom color matched and formulated to meet each customer's specifications.</p> <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 www.randolphproducts.com</p>	<p>Physical and chemical tests were performed on iron phosphate treated steel panels. All panels were cured for 72 hours at 140°F and then air dried for 14 days. Adhesion tests were performed on the appropriate substrates.</p> <ol style="list-style-type: none"><li><b>Volume Solids:</b> 40 – 45% (varies by color)</li><li><b>Pencil Hardness:</b> 2H</li><li><b>Cross Hatch Adhesion:</b> 5B</li><li><b>Taber Abrasion (1000 grams; 1000 cycles; CS10 wheel):</b> &lt; 100 mg loss</li><li><b>Flexibility:</b> Pass 1/8" Mandrel</li><li><b>Theoretical Coverage @ 1 mil dft:</b> 641 - 721 ft<sup>2</sup>/gallon (varies by color)</li><li><b>Direct Impact:</b> 100 inch lbs.</li><li><b>Reverse Impact:</b> 80 inch lbs</li><li><b>Humidity Exposure:</b> 250 hours with no blistering</li><li><b>Pot Life:</b> 4 hours</li><li><b>Salt Spray Exposure:</b> 100 hours no blistering</li><li><b>Solvent Resistance:</b> 50 double rubs – "No effect" is defined as no permanent softening of film and/or permanent change in appearance.</li></ol>	<p>Use conventional air pressurized spray equipment or HVLP.</p> <p><b>Surface Preparation:</b> <i>Conductive Urachem</i> can be applied directly to chemically treated steel. Use W6583 WB Wash Primer on Yellow/Clear Zinc Plate or any chromated aluminum if aged longer than 24 hours. Wash Primer 2035-534 or R1953 Tu-Com Chromate Primer must be applied if no chemical pretreatment is available. Structural plastics such as ABS (CYCOLAC™), Polycarbonate (LEXAN™) and PPO (NORYL™) that have been injected, foamed, or thermoformed should be clean and free from mold release. Wash with isopropyl alcohol or other mild wash solution.</p> <p><b>Mixing:</b> <i>Conductive Urachem</i> is a two component polyurethane. <i>Urachem R500</i> is the recommended hardener for interior use only. <i>Urachem R1100</i> is the recommended hardener for exterior use (Note ratio change when using <i>Urachem R1100</i> – see below).</p> <p><b>Mix Ratio:</b></p> <p><b>Interior Application:</b> <b>6 parts</b> <i>Conductive Urachem Part A</i>; <b>1 part</b> <i>Urachem R500</i> hardener; <b>3 parts</b> W283 Reducer</p> <p><b>Exterior Application:</b> <b>4 parts</b> <i>Conductive Urachem Part A</i>; <b>1 part</b> <i>Urachem R1100</i> hardener; <b>2 parts</b> W283 Reducer</p> <p><b>Base Coat:</b> Apply smooth wet coat approximately 3.0 mils wet. Allow 15 – 20 minutes flash off prior to texture coat or force drying.</p> <p><b>Texture Coat:</b> Use same admixed paint for texture. Adjust pressures accordingly</p>

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**Isopropyl Alcohol:** No effect  
**Lacquer Thinner (T4-1):** No effect  
**MEK:** No effect  
**Skydrol:** No effect

**13. Chemical Resistance:** 30 minutes uncovered exposure spot test.

**409 Cleaner:** No effect  
**Fantastic:** No effect  
**Household Ammonia:** No effect  
**10% NaOH:** No effect  
**10% HCl:** Slight staining  
**5% Acetic Acid:** Slight staining  
**Ketchup:** Slight staining  
**Mustard:** Slight staining  
**Coffee:** No effect  
**Windex:** No effect  
**Hospital Antiseptic Cleaners:** No Effect

**14. Surface Conductivity:**  
<10<sup>9</sup>

**15. VOC (as applied):** 5.1 lbs/gallon

**16. Shelf Life:** One Year

to match texture pattern. Allow 15 – 20 minutes flash off before force drying.

**Pressure:**

**Base Coat:**

Fluid pressure 8 – 15 psi  
Atomizing pressure 45 -55 psi

**Texture Coat:**

Fluid pressure 8 – 15 psi  
Atomizing pressure 10 – 20 psi

Pressures will vary according to spray equipment and part configuration.

**Drying Times:**

Flash off prior to texture coat or force dry for 15 – 20 minutes.

Dry to handle: Overnight or 20 minutes at 150°F.

Dry to package or secondary operation: Overnight or 40 minutes at 150°F – always allow parts to cool prior to secondary processing.

**Do not pack in plastic bags.**

**Clean Up:** Use lacquer thinner or #928 Washing Thinner.

**Safety Precautions:**

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