

R/flex[®] 8080

Liquid Photoimageable Covercoat

Description

Rogers R/flex[®] 8080 Liquid Photoimageable Covercoats help achieve the ultra-fine patterns needed for today's high density flexible printed circuits. Offering uniform coverage and reliable performance in mass production processes, R/flex 8080 materials allow manufacturing of high precision patterns unattainable through conventional screen printing.

Contact photo exposed and alkaline developable, R/flex 8080 products provide excellent resistance to all plating processes, including electroless nickel and gold plating. Processing stability, along with long shelf life and pot life, make R/flex 8080 covercoats dependable solutions to meet industry performance requirements.

Product Features

- Ideal for high density, ultra-fine feature flexible printed circuits
- Suitable for mass production processes
- Long shelf life and pot life with excellent process stability
- Exceptional adhesion, heat resistance and electrical insulation properties
- Excellent plating resistance, including electroless Ni and Au plating processes
- Outstanding flexibility and creaseability

R/flex 8080 Part Numbering System

To determine the part number for 8080, use the following system.

R/flex 8080LP 1 G 0640-R

1. Product Type
2. Product Color
3. Net Weight (g)
4. Resin or Hardener

For example, a product with the part number listed above would have the following characteristics:

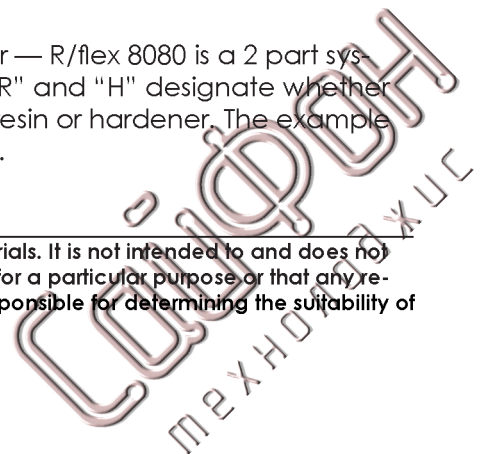
1. Product Type — The first number indicates the product types for R/flex 8080:

Product Type	Critical Mixing Ratio Resin/Hardner	Weight Mix Ratio Resin/Hardner
8080LP1	100g/38g	1/0.38
8080LP2	100g/46g	1/0.46
8080LP4	100g/38g	1/0.38

The example is product type 1.

2. Product Color — The letter "G" indicates Green. "A" indicates Amber. Pigment is in the resin portion.
3. Net Weight (g) — Net weight of the container is expressed in grams. The example product weight is 640 grams.
4. Resin or Hardener — R/flex 8080 is a 2 part system. The letters "R" and "H" designate whether the product is a resin or hardener. The example product is a resin.

The information in this data sheet is intended to assist you in designing with Rogers' circuit materials. It is not intended to and does not create any warranties, express or implied, including any warranty of merchantability or fitness for a particular purpose or that any results shown in this data sheet will be achieved by a user for a particular purpose. The user is responsible for determining the suitability of Rogers' circuit materials for each application



Mixing Calculation

For product types 1 or 4, multiply the weight of base resin used by the hardener weight factor of 0.38 to determine the required quantity of hardener needed. For product type 2 use hardener weight factor of 0.46.

Example:

If 0.155 Kg or (155 grams) of TYPE 1 or 4 resin is used, then multiply by hardener weight factor of 0.38. i.e., 0.155 Kg x 0.38 = 0.0589 Kg (or 58.9 grams).

Typical Values

Specific Properties		8080LP1	8080LP2	8080LP4
Viscosity @ 25°C (77°F)		190-230PS	190-230PS	190-230PS
Pot Life @ ambient		approx. 3 days	approx. 3 days	approx. 3 days
Approx. shelf life @ 5°C (41°F)		6 months	6 months	6 months
Approx. shelf life @ 25°C (77°F)		3 months	3 months	3 months
Drying after screening s/s (167°F)		75°C, 30 min	75°C, 30 min	75°C, 30 min
Photoexposure		400-600mj/cm ²	400-600mj/cm ²	500-700mj/cm ²
Development Time/Rinse Time		1 min each	1 min each	1 min each
Final Cure (do not exceed 60 min.)		150°C/302°F/30 min	150°C/302°F/30 min	150°C/302°F/30 min
Solder dip test 10 seconds @ 260°C/500°F		Pass	Pass	Pass
Thermal Decomposition Temp.		358°C	382°C	382°C
Pencil hardness		5H	5H	5H
Dielectric Strength		500 to 700 V/mil	500 to 700 V/mil	500 to 700 V/mil
Water absorption immersion	24hr/23°C (73°F)	1.29%	1.29%	1.29%
	4 hr/85%/85°C (185°F)	0.73%	0.73%	0.73%
Rated Properties		8080LP1	8080LP2	8080LP4
Note: Rogers relative scale factor 1 to 10 with 10 being excellent.				
Brittleness in Process		2 to 4	2 to 4	2 to 4
Final Flexibility		10	7	7 to 5
Tackiness at Photo		5	5 to 7	10
Heat Resistance		7	10	7
Photosensitivity		10	7	7
Final UV Resistance		10	7	7
Developability		10	7	7
Electro-chemical migration		7	7	10
Plating Resistance to Ni/Au		7	10	10

Typical values should not be used for specification limits."

Notes:

- *Do not use UV heating systems for curing/baking. Use convection oven with good turnover. Total cure time not to exceed 60 minutes.
- Avoid creasing product between coating, photo and final cure to avoid cracking. Full properties develop at final cure.
- UV lamp wavelength in exposing unit should be 365 nm. Do not use collimated light. Artwork and cover must be UV transparent polyester.

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