

## Polymers

### UVD5271

#### Solder Mask/Covercoat

##### Description:

UVD5271 is an UV Curable solder mask, covercoat, or dielectric designed for rigid substrates. UVD5271 offers rapid curing combined with outstanding adhesion and resistance to solvents, moisture, and the soldering process. It is less sensitive to surface cleanliness than other UV curable materials. Excellent electrical and environmental integrity after soldering and cleaning, and outstanding fine line definition, typically  $\geq 8$  mils. Heraeus also offers a series of compatible, thermally cured conductors.

##### ● Key Benefits:

- High adhesion to many substrates
- Excellent chemical and solder resistance
- High insulation resistance and breakdown voltage

##### ● Typical Properties:

##### Form:

Dark Blue thixotropic paste intended for screen printing.

##### Viscosity:

10-30 Kcps; Brookfield HBT Spindle #14 @ 50 rpm, 25°C.

##### Chemical Resistance:

Excellent solvent resistance. Can be immersed for more than 15 minutes in halogenated hydrocarbons, acetone, and lower alcohols without degradation. Resistant to most dilute acids.

##### Thermal Stability/Solder Resistance:

Withstands molten solder (250°C) up to 30 minutes to assure 100% adhesion during normal soldering operations.

Withstands a boiling water immersion for seven consecutive hours without degradation.

##### ● Dielectric Characteristics: (1)

##### Insulation Resistance:

$1 \times 10^{13}$  ohms

##### Breakdown Voltage:

>1000 V/mil

##### Hermeticity I.R.:(2)

$1 \times 10^{12}$  ohms

##### Leakage Current: (3)

30 picoamps

##### ● Recommended Processing Guidelines:

##### Printing:

250-280 mesh screen  
0.5 mil emulsion  
0.02 inch snap-off.

Clear uncured resin with isopropanol or similar solvent.

##### Curing:

200 W/in Hg lamp, cure time <1 second and belt speed 8"/minute at 25 micron film thickness. Cures to a glossy hard film which is highly resistant to surface scratching.

##### Thinner:

RV-825

##### Warranty:

Material guaranteed to meet specifications for 6 months from date of shipment.

##### Storage:

Store in a dry location at 5°C-25°C.

**DO NOT REFRIGERATE.**

Allow paste to come to room temperature prior to opening. Spatulate well before using.

##### Footnotes:

- (1) Properties for single print of 25 microns.
- (2) I.R. measured with water drop present.
- (3) Keithley electrometer, 1M NaCl solution, 4 hour immersion. Heraeus 5260 epoxy conductor

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The descriptions and engineering data shown here have been compiled by Heraeus using commonly-accepted procedures, in conjunction with modern testing equipment, and have been compiled as according to the latest factual knowledge in our possession. The information was up-to date on the date this document was printed (latest versions can always be supplied upon request). Although the data is considered accurate, we cannot guarantee accuracy, the results obtained from its use, or any patent infringement resulting from its use (unless this is contractually and explicitly agreed in writing, in advance). The data is supplied on the condition that the user shall conduct tests to determine materials suitability for a particular application.

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