



# Dupont Dry Film Resists

## Dry Film Resists for Microsystems Technology and Wafer Level Packaging

*micro resist technology GmbH* is a distributor of DuPont Dry Film Resists for applications in micro systems technology and wafer level packaging.

### Key benefits of Dry Film Resists

Unlike liquid resists for similar high film thicknesses the application of dry film resists results in the same film thickness over the whole substrate, independent on its size. No edge bead is formed. i. e. the substrate utilisation is better than with liquid resists. Furthermore, reliability in film composition is improved. The application of the resist film to the substrates by lamination is easier than spin-coating and softbake of liquid resists. In addition, hardly any coating waste is generated. With dry film resists it is possible to protect holes from metallisation or etching by tenting.

DuPont Dry Film Resists distributed by *micro resist technology GmbH* comprise:

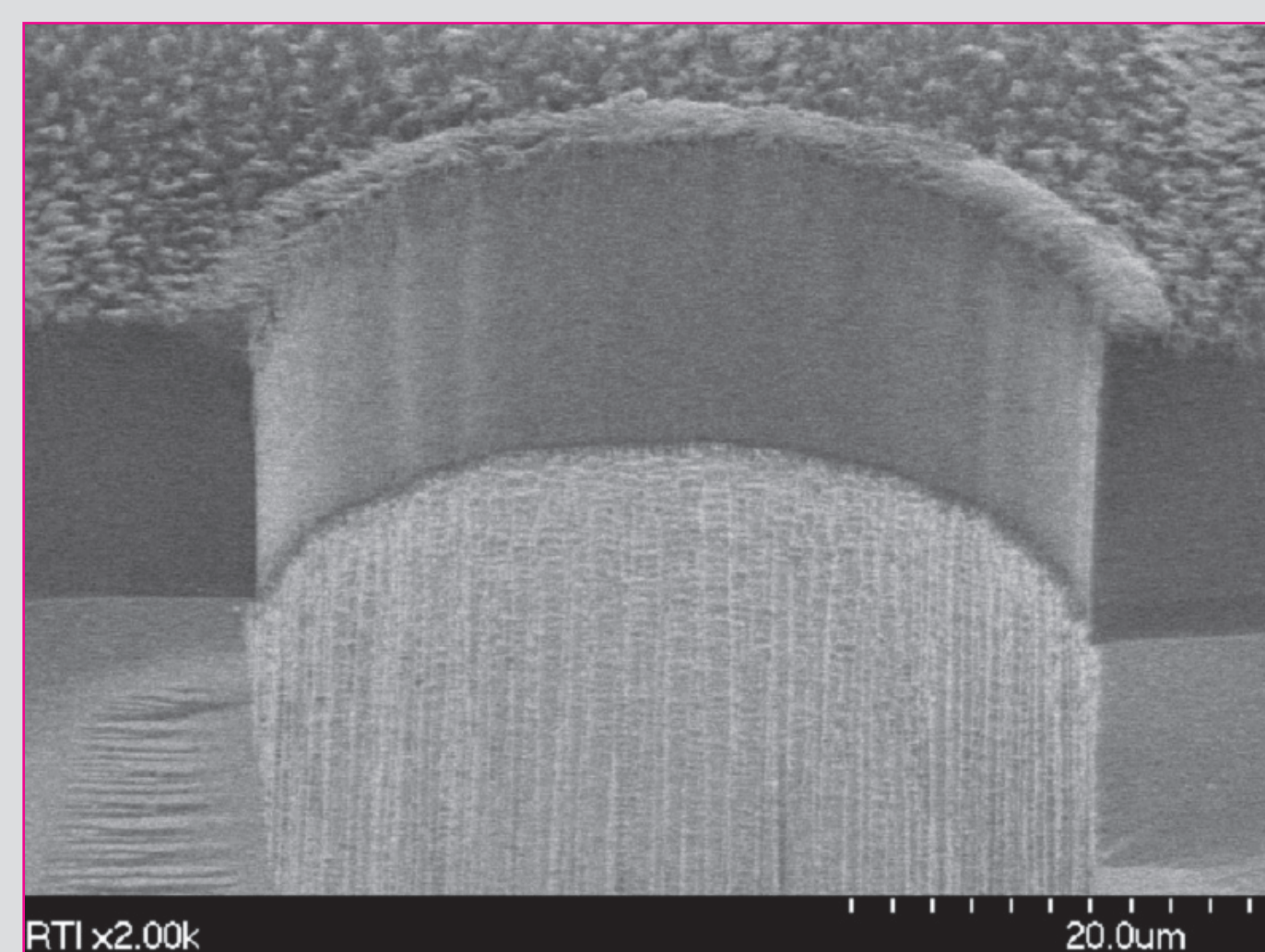
- MX5000 series e.g. for via formation, plating and RDL etching, used in Bosch process
- WBR2000 series e.g. for solder bumping (resist patterns thermally stable at 310 °C) by electroplating or stencil printing and for metal pillar manufacture
- WPR1000 series as cost-efficient resist for permanent applications, aspect ratio ~ 1:1

### Product overview

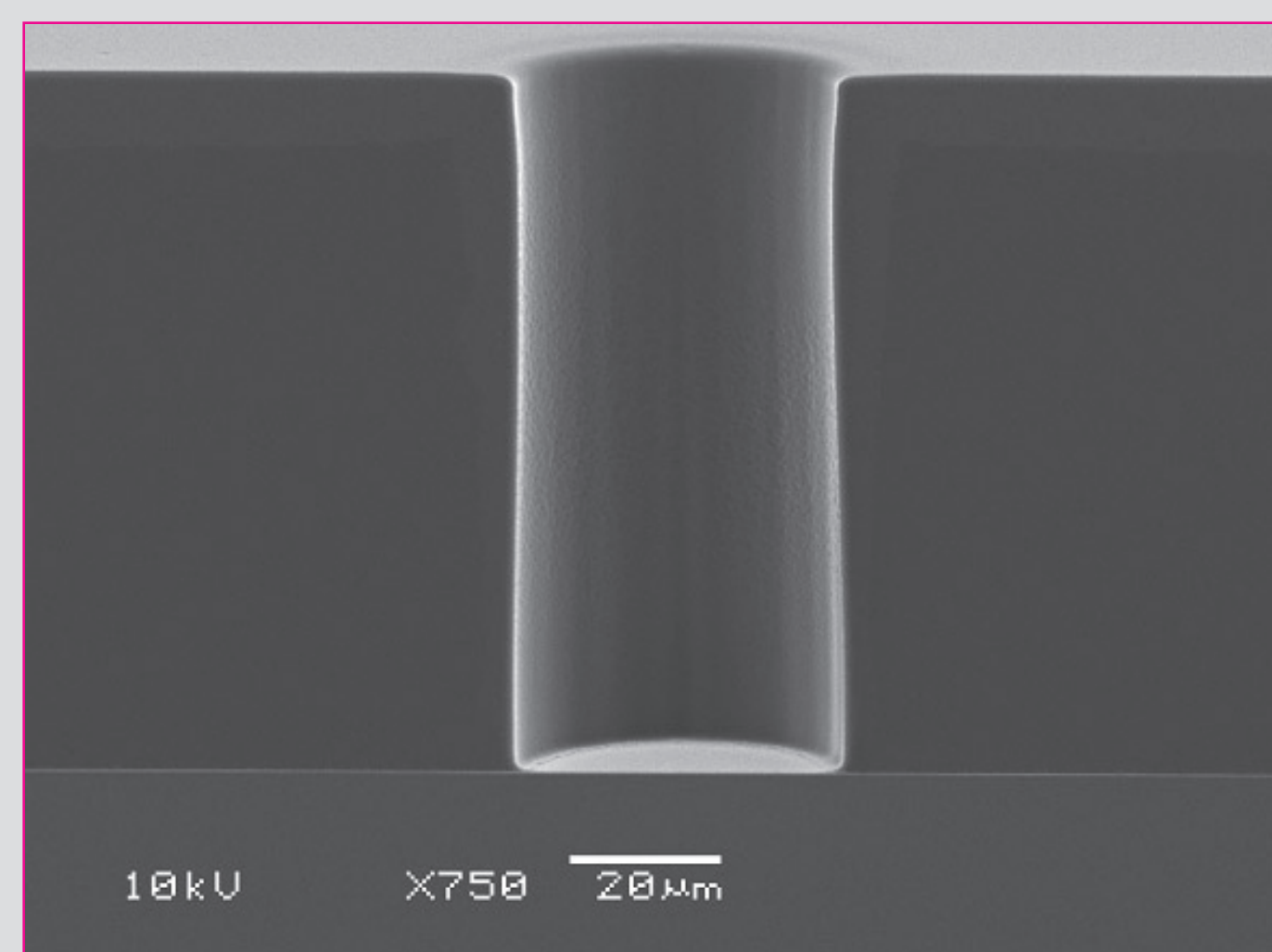
Resist	Application	Film thickness [µm]	Permanent/Removable	Developer
<b>MX 5000 Series</b> MX 5000, MX 5000c	Multipurpose, e.g. Via (TSV) formation (DRIE), plating and protection, RDL etching	15 - 50	Removable	Spray development, 0.75% K <sub>2</sub> CO <sub>3</sub> (mr-D 4000/ 75)
<b>WBR 2000 Series</b>	Creation of solder bumps by electroplating or stencil printing of solder-paste and reflow, copper-pillar plating	50, 75, 100, 120	Removable	Spray development, 1% K <sub>2</sub> CO <sub>3</sub> (mr-D 4000/ 100)
<b>WPR 1000 Series</b>	Multipurpose resist (green-yellow colour) for permanent applications	50, 75, 100	Permanent	Spray development, 0.85% Na <sub>2</sub> CO <sub>3</sub> anhydrous or 1% Na <sub>2</sub> CO <sub>3</sub> monohydrate



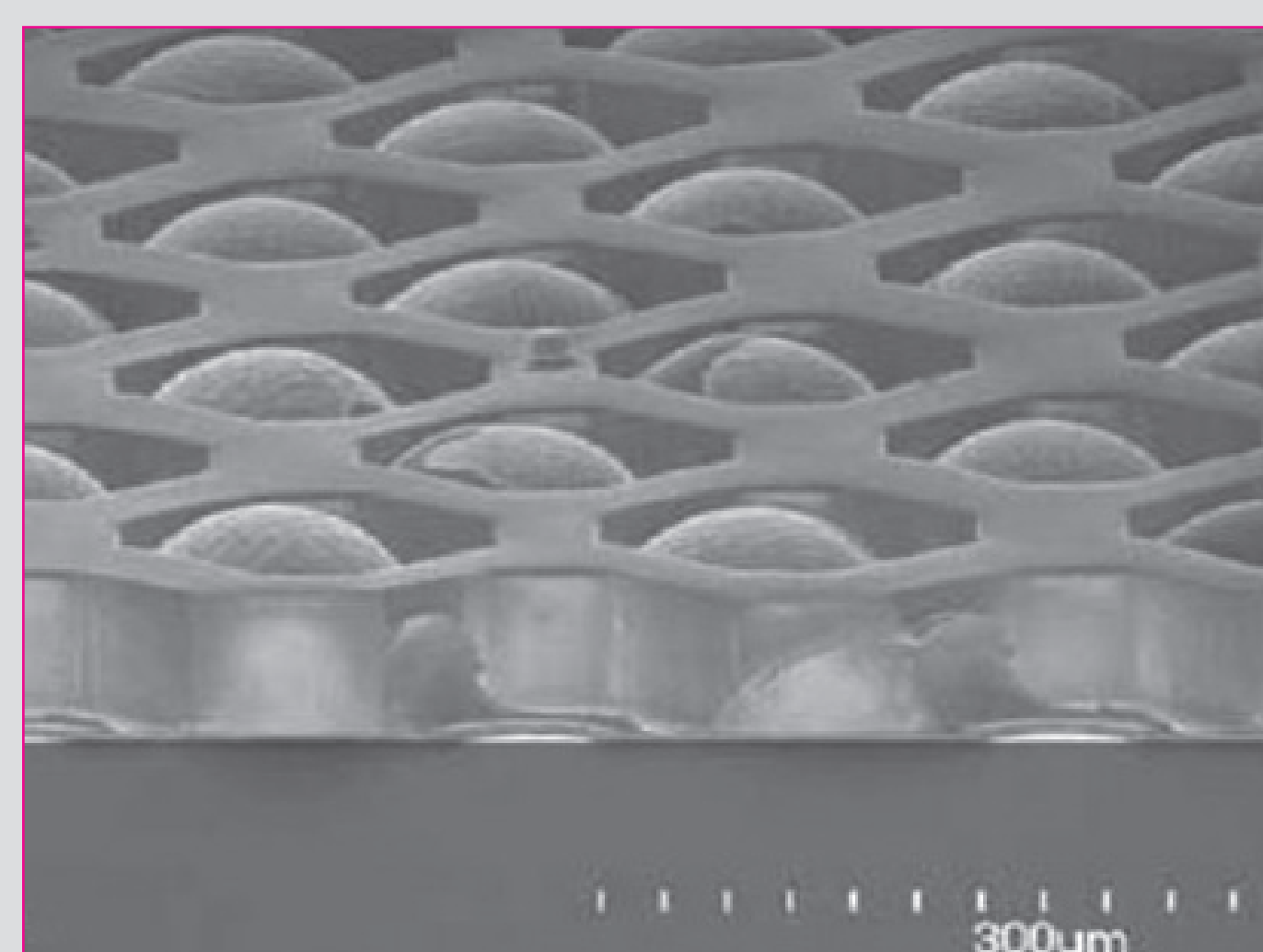
MX5000, Tenting over via-hole



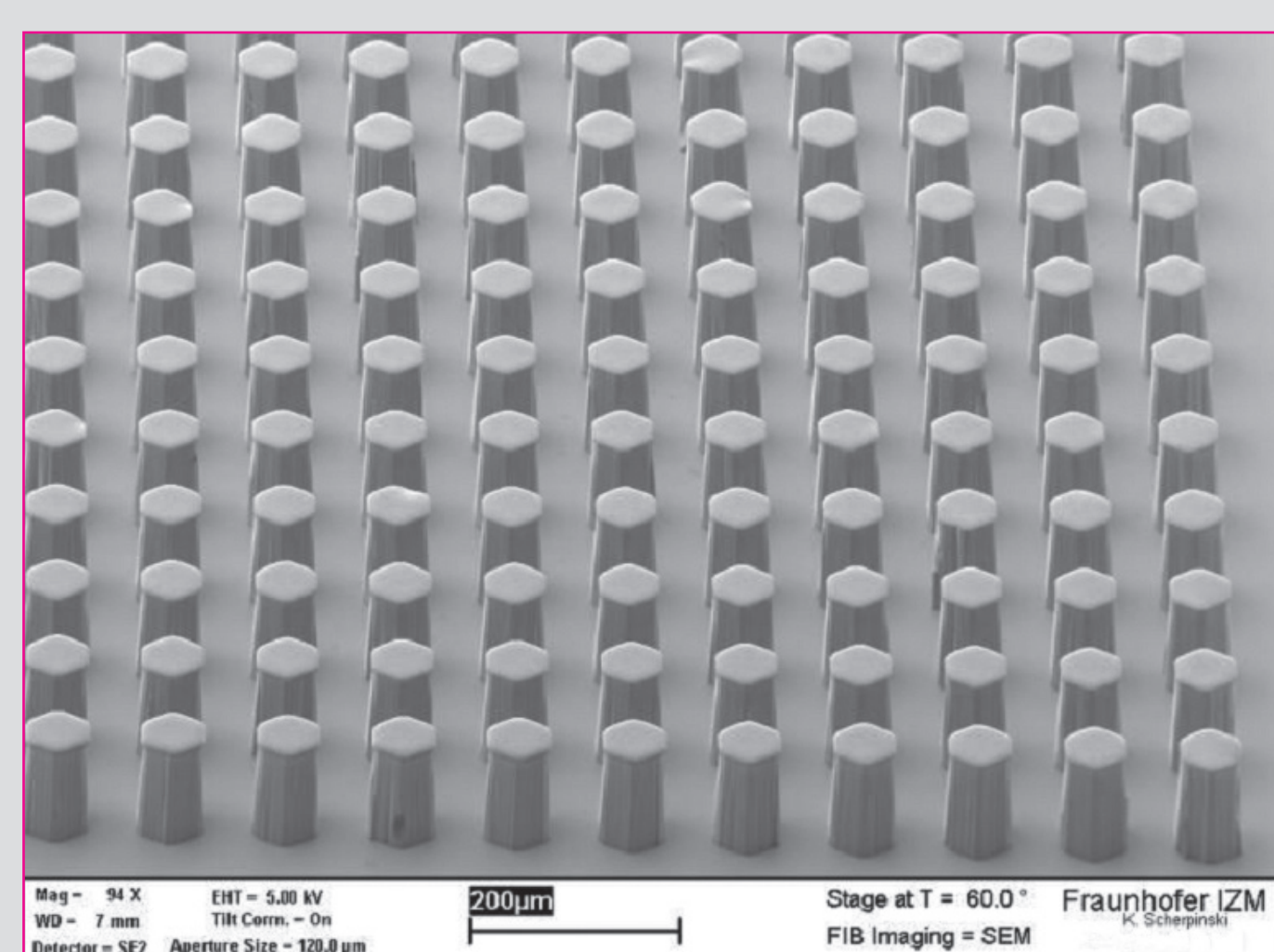
MX5000, etch mask for DRIE



WBR2000, mask aligner broadband exposure



WBR2000, after stencil printing and reflow of the printed metal paste at 310 °C



50 µm Cu posts after electroplating in and removal of WBR2050

Data sheets of DuPont Dry Film Resists can be found here:

[http://www.microresist.de/products/dupont/dupont\\_prod\\_en.htm](http://www.microresist.de/products/dupont/dupont_prod_en.htm)