

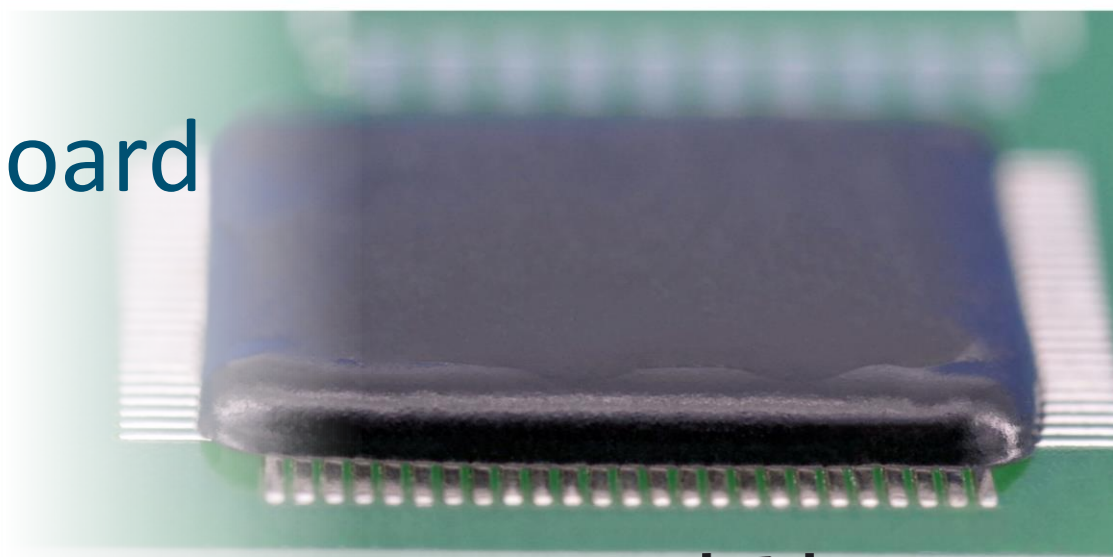
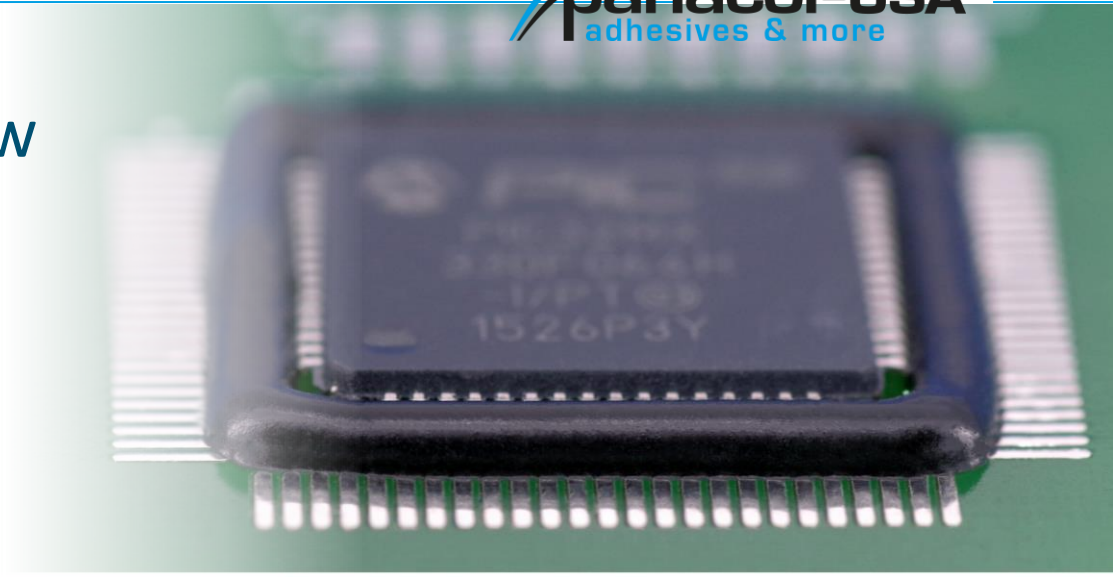
Panacol introduces new  
high-performance

## frame-and-fill

adhesives for

printed circuit board

assembly



Frame-and-fill processes are used to protect highly sensitive areas on printed circuit boards. In the first step, a highly viscous barrier (the frame) is applied around the perimeter of the area. In the next step, this area is quickly filled with lower viscosity filler material (the fill). Frame and Fill offers three primary advantages: 1) Barrier and fill heights can be kept to a minimum, 2) the area being coated is contained, preventing material from flowing into undesired areas, 3) the frame and fill materials combine to form one homogenous coating when cured. These new materials from Panacol protect specific areas on the PCB from physical and environmental damage.

The frame material, Structalit® 5704, is a black, thermally curable and single-component epoxy. This frame and glob top compound features excellent bead stability and high glass transition temperature of 150°C up to 190°C, depending on the curing parameters and the layer thicknesses. When using Structalit® 5704, no bleeding effects occur. Due to the very low ion content of less than 20 ppm, Structalit® 5704 is suitable for chip encapsulation on electronic circuit boards.

For the filling process, Panacol has developed several adhesives with differing viscosity and rheological properties. Structalit® 5717, 5719, 5720, and 5721 adhesives provide the ability to select the flow properties best suited for the chip and wire geometries being coated. This optimization results in higher UPH, (units per hour).

As the fill materials have the same chemical base as the frame material, the frame-and -fill process creates a homogenous protective barrier with uniform physical and chemical properties. This includes high glass transition range, ionic purity, temperature stability, and minimal shrinkage. Once cured, Structalit® 5704 and all of the new Structalit® fill selections will form a black, opaque, and scratch-resistant coating. These properties, together with a temperature resistance of up to 200°C, ensure maximum reliability during operation.

- ▶ [\*Click here for technical datasheet of Structalit® 5704\*](#)
- ▶ [\*Click here for technical datasheet of Structalit® 5717\*](#)