

## Underfill Encapsulant for BGA's, CSP's and WL-CSP's

March 31, 2005

EAST HANOVER, NJ – Zymet has introduced a new underfill encapsulant, **CSP-1412**, designed for BGA, CSP, and WL-CSP encapsulation. These packages are not typically encapsulated. However, it has been found that mobile phones and other handheld devices require encapsulation of these components to survive drop tests and repeated keypad actuations.

**CSP-1412** has a viscosity of 7000 cps at room temperature, making it very easy to dispense. It is also fast flowing, capable of flowing a distance of 18 mm, with only a single-side dispense, in as little as 15 seconds.

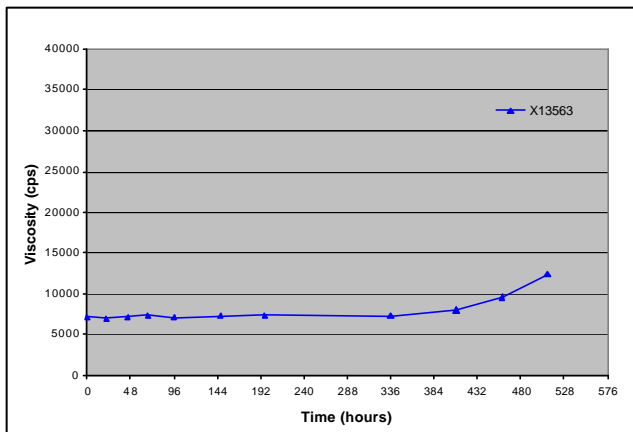


Figure 1. Viscosity vs. time. **CSP-1412** exhibits long pot life.

The product exhibits long pot life. In Figure 1, viscosity is plotted against time. The useful life of **CSP-1412** is greater than two weeks, permitting the use of large cartridges. This, in turn, increases productivity by reducing the frequency of shutdowns to change a cartridge.

The encapsulant exhibits excellent wetting. As seen in Figure 2, the encapsulant self-fillets, eliminating the need for seal passes to create complete and

symmetrical fillets. After flow is complete, **CSP-1412** can be cured in an in-line oven, in 5 minutes at 165°C.

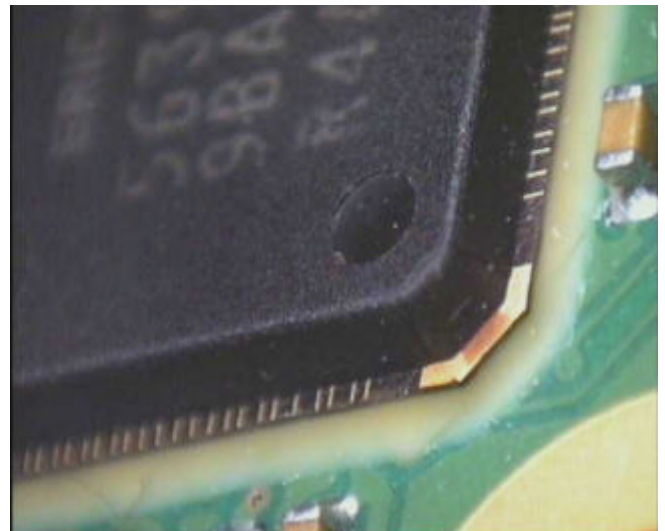


Figure 2. CSP with underfill encapsulant.

The excellent processability of **CSP-1412** makes it suited to high volume manufacturing of competitive consumer electronics, such as mobile phones and other handheld devices.

Zymet is a manufacturer of microelectronic and electronic adhesives and encapsulants. Its products include die attach adhesives, substrate adhesives, UV curable glob top and cavity-fill encapsulants, and underfill encapsulants.

For more information, contact Zymet, Inc., East Hanover, NJ. Requests for information may also be submitted by Email to [info@zymet.com](mailto:info@zymet.com)