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Quality System...The Stan-  
dard for World Class Quality



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### FREE Users Guide to Adhesives

Part 1 Assessment of Bonding

Part 2 Essential stages of the Pretreatment Process

Call 1-800-323-5158 or Email [gluguru@on-hand.com](mailto:gluguru@on-hand.com)

You can depend on your Glu Guru™ as your reliable one-stop source for Adhesives and Adhesive Dispensers.

## ADHESIVE FOCUS

On-Hand Adhesives, Inc.  
Adhesive Tech Center  
1850 So. Elmhurst Road  
Mount Prospect, IL 60056

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## Fall 2004 Issue

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The Glu Guru™'s Catalog of Adhesives can be seen on: [www.gluguru.com](http://www.gluguru.com)

# ADHESIVE FOCUS

Volume X Issue 2

FALL 2004

## Electronics Materials Solutions

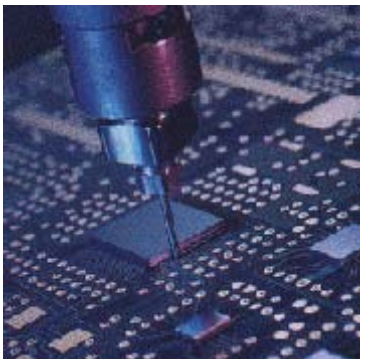
### Multicore® Solder & Flux Materials

The Multicore® line of solder pastes and fluxes are designed to meet the rigorous demands of a variety of electronic manufacturing soldering processes. Whether your process requires **long abandon times, wide process windows, or high speed printing**, Henkel Corporation has a Multicore® solder and flux material for your needs. Henkel is also breaking new ground in the development of **lead-free** products. Henkel Corporation has developed the solder technology to meet the need. [SEE Page 3]



### Board Level Underfills

The proliferation of hand held devices and the trend toward thinner, less rigid PCBs are driving the demand for improved shock resistance and increased electronic device reliability. Loctite® underfills offer easy reworkability as well as excellent vibration and impact resistance. These underfills offer many processing advantages such as fast flow, fast cure, and long pot life. New Corner Bond technology fits easily into an SMT process and **eliminates a separate underfill dispense and cure process, saving time and money.**



Product	Viscosity @25C	Pot Life	Cure Schedule
<b>3515™</b> CSP Cornerbond	7,400 cps	7 days	Reflow Cure
<b>3593™</b> Snap Cure Rapid Flow CSP	4,500 cps	7 days	5 min @ 150C

### Thermal Management Adhesives

In applications where the need for process convenience outweighs the need for extremely low thermal impedance, Loctite® Thermally Conductive Adhesives provide **ease-of-use along with thermal conductivity** [See Page Two]

### Loctite® Brand Chipbonder® Syringe Dispense Adhesives

**Cornerbond 3515™** Specially formulated to allow component realignment in double sided reflow applications.

**Color:** Black **Cure:** In solid paste reflow cycle after paste has reached liquidation. **Process Method:** Syringe Dispense Self-Alignment

**Storage:** (Protect from heat 5C- + 3C **Shelf Life:** 6 months DOM **Syringe Size:** 30 ml STD

**3621™** High performance for ultra high-speed syringe dispense. Good green strength. Superior humidity resistance and electrical properties. Can be used in lead-free solder applications. Room temperature storage capable.

**Color:** Red **Cure:** 90 sec. @ 150C or 2-3 min @ 125C **Process Method:** Very high speed Syringe Dispensing - 47,000 DPH capable Jettable

**Storage:** (Protect from heat 5C- + 3C or 8C-21C for 30 days **Shelf Life:** 10 months DOM **Syringe Size:** 10 and 30 ml STD, 30 ml Iwashita Clear syringe, 20 ml Panasert syringe, 30 ml Fuji syringe.

Thermal Management Adhesives	Cure/Chemistry	Shelf Life	Cure Schedule
315™ Output-Selfshimming forelectricalisolation; room Temp curing	OneComponent Activator Acrylic	9 months @ 5C	5 min @ 20C 4-24 hr@ 20C
383™ Output-High Strength, Room Temp curing for permanent assemblies	OneComponent Activator Acrylic	9 months @ 5C	5 min @ 20C 4-24 hr@ 20C
384™ Output-Repairable, Room Temp Curing. Utilized for parts subject to disassembly	OneComponent Activator Acrylic	9 months @ 5C	5 min @ 20C 4-24 hr@ 20C
3151™ Output-Self Shimming, UV heatcure repairable for automated heatsink applications	OneComponent UV HeatCure Acrylic	5 months @ 5C	5 min @ 150C-180C
3872™ Medium strength, flexible for sensitive components and extreme temperature ranges.	OneComponent Acrylic/Urethane UV HeatCure	12 months @ 5C	10 min @ 140C
3873™ - Fast curing, high conductivity, self shimming for bonding heat generated devices to themal spreader	OneComponent Activator Acrylic	21 months @ 5C	5 min @ 20C 4-24 hr@ 20C
3874™ - Fast curing, high conductivity, self shimming for bonding heat generated devices to themal spreader "without glass beads"	OneComponent Activator Acrylic	21 months @ 5C	5 min @ 20C 4-24 hr@ 20C
5404™ Output-Self-shimming, flexible silicone for demolding parts such as ceramic boards.	OneComponent HeatCure Silicone	5 months @ 4C	10 min @ 150C
5405™ Output-Bonds die to lead in compliant themally conductive material applications that does not induce stress. Capable of very thin bond line.	OneComponent HeatCure Silicone	6 months @ 4C	10 min @ 150C
5406™ Output-Potting or sealing of electronic enclosures that require themal dissipation of heat	RTV Silicone	5 months @ 8C	72 hours @ 20C 25 min skin over @ 20C
7387™ Activator- for use with Loctite products 315, 383, 384, and 3873.	Base Heptane/Isopropanol	On part Life 2 hours	Dry Time 2-5 min.

Thermal Potting Compounds	Cure/Chemistry	Viscosity	Work Life	Cure Schedule
3860™ Themally Conductive, room temperature curing potting compound for general applications requiring themal conductivity	2-part Epoxy 10095	20,000 cps	2 Hours	48 hrs @ 25C 2 hrs @ 65C
3861™ Themally -conductive potting compound for automotive electronic applications requiring themal conductivity and chemical resistance. Resistant to water, gases, and petroleum vapors.	2-part Epoxy 10095	10,000 cps	12 Hours	4 hrs @ 100C 2 hrs @ 130C
3862™ Themally -conductive potting compound for automotive electronic applications requiring themal conductivity and themal shock resistance. Suitable for Military class H applications.	2-part Epoxy 10028	20,000 cps	24 Hours	4 hrs @ 100C 2 hrs @ 130C

For more information and/or to order, call 1-800-323-5158 or Email [gluguru@on-hand.com](mailto:gluguru@on-hand.com)



# Multicore® Solder & Flux Materials

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**MP200 Solder Paste WIDE PROCESS WINDOW** A high activity, soft, colorless, low residue, no clean, solder paste that exhibits excellent print definition with long open and abandon time. Alloy: 6N62/SN63 63S4 Anti-Tombstoning % Metal Load 90 90.5 Tack: (G./MM<sup>2</sup>) 1.1 Print Speed 25-200

**CR36™ No Clean Solder Paste HIGHEST ACTIVITY OFFERING** A high activity colorless residue paste. Exhibits good abandon time, long stencil life and minimum hot slump. Alloy: 6N62/SN63 % Metal Load 89.5 Tack: (G./MM<sup>2</sup>) 13-16 Print Speed 20-200

**LF320™ Lead Free Paste WIDE PROCESS WINDOW** A no clean flux system specially formulated for Pb-free alloys. High temperature tolerance and wide printing capability. Alloy: 96SC % Metal Load 88 Tack: (G./MM<sup>2</sup>) 1.2 Print Speed 20-150

**WS200™ Water Wash Paste WIDE PROCESS WINDOW** High performance water washable solder paste. Residues are readily removed with D1 Water, without the need for a saponifier. Alloy: SN62/SN63 % Metal Load 90.5 Tack: (G./MM<sup>2</sup>) 0.8 Print Speed 25-100

## Multicore® No-Clean Fluxes Application: Spray/Foam

**X32-10™ No-Clean Flux - Clear Residue Wide Process Window** A general purpose halide-free low solids flux which leaves clean, dry boards after wave soldering. Suitable for foam and spray flux application systems. % Solids: 2.2 % Halides: Zero Acid Value: 15.3 IPC Class: REMO

**MF200™ Liquid Flux - Contract Manufacturing Grade-Lead-Free Compatible** A general purpose halide-free flux with sustained activity to extend flux life in dual wave and PB-free wave soldering applications. Suitable for spray flux application systems. Solvent-based flux may be thinned with IPA. % Solids: 6.4 % Halides: Zero Acid Value: 48.5 IPC Class: ORMO

**MF300™ VOC-Free-Clear Residue-Resin- Lead-Free -Free Compatible** General purpose VOC-Free (water based), no clean, halide free and resin free flux with special formulation to minimize solder balling. Compatible with Pb-free processes. % Solids: 4.6% Halides: Zero Acid Value: 37 IPC Class: ORMO

**MRF301™ IPA-Based Rosin Flux- Lead-Free Compatible** Higher solids flux for better wetting on reduced solderability surfaces and to minimize bridging on complex geometries. Fully Bp-Free and dual wave compatible. Solvent based flux may be thinned with IPA. % Solids: 6.5 % Halides: Zero Acid Value: 41 IPC Class: ROMO

## Multicore® Water Wash Fluxes-IPA Based

**Hydro-X/20™ High Activity Flux** A high activity water washable flux designed for the soldering of the most difficult electronic assemblies. Unique activator package enables a wider process window and the soldering of all common electronic surfaces with ease. Residues are readily and completely removed by water wash after soldering. Suitable for lead-free wave soldering. % Solids: 20 % Halides: 1.0 Acid Value: 24

**Multicore® Cored Wire** Typical wire diameters are 0.015, 0.024, 0.032, 0.040, and 0.064 In

**400™** Halide-free, no clean, clear residue, increased flux content for improved wetting. Halide Content: Zero

**502™** No clean, clear residue, minimal activation for increased wetting. Halide Content: 0.2%

**Hydro-X™** High Activity water washable. Halide Content: 3%

**Multicore® Cleaners Pozone™ SCO1™** Designed for the stencil cleaning and hand cleaning of process soldering residues. Highly effective cleaner that dries rapidly.

**CIRCUIT BOARD PROTECTION: CALL 1-800-323-5158 OR Email [gluguru@on-hand.com](mailto:gluguru@on-hand.com) for Circuit Board Protection (Potting/Encapsulating and Conformal Coatings) Products Brochure.**