



Integrated Device Technology, Inc.  
2975 Stender Way, Santa Clara, CA - 95054

### PRODUCT/PROCESS CHANGE NOTICE (PCN)

PCN #: **A-0309-05**      DATE: 10/6/2003  
Product Affected: PBGA package family  
(see attachment for affected part #s).  
  
Date Effective: 1/6/2004

**MEANS OF DISTINGUISHING CHANGED DEVICES:**

- Product Mark
- Back Mark      Lot Number
- Date Code
- Other

Contact: Geoffrey Cortes  
Title: Manager, Corporate Quality & Reliability      Attachment:  Yes       No  
Phone #: (408) 492-8321  
Fax #: (408) 727-2328      Samples: See attachment  
E-mail: [Geoffrey.Cortes@idt.com](mailto:Geoffrey.Cortes@idt.com)

**DESCRIPTION AND PURPOSE OF CHANGE:**

- Die Technology
- Wafer Fabrication Process
- Assembly Process
- Equipment
- Material      IDT has qualified the PBGA package family using new mold compound Sumitomo EME-G770 series and a new die attach material Ablestik 2300. This notification is to advise our customer of qualification and addition of new assembly materials. The new mold compound and die attach material can meet 260°C peak reflow temperature requirements. Please see attachment for qualification data and additional details.
- Testing
- Manufacturing Site
- Data Sheet
- Other

**RELIABILITY/QUALIFICATION SUMMARY:**

Please see attached reliability qualification data.

**CUSTOMER ACKNOWLEDGMENT OF RECEIPT:**

IDT records indicate that you require written notification of this change. Please use the acknowledgement below or E-Mail to grant approval or request additional information. If IDT does not receive acknowledgement within 30 days of this notice it will be assumed that this change is acceptable.  
IDT reserves the right to ship either version manufactured after the process change effective date until the inventory on the earlier version has been depleted.

Customer: \_\_\_\_\_       *Approval for shipments prior to effective date.*  
Name/Date: \_\_\_\_\_      E-Mail Address: \_\_\_\_\_  
Title: \_\_\_\_\_      Phone# /Fax# : \_\_\_\_\_

**CUSTOMER COMMENTS:** \_\_\_\_\_

**IDT ACKNOWLEDGMENT OF RECEIPT:**

RECD. BY: \_\_\_\_\_      DATE: \_\_\_\_\_



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### ATTACHMENT - PCN #: A-0309-05

**PCN Type:** Assembly Material Change

**Data Sheet Change:** None

**Detail Of Change:** A new mold compound material Sumitomo EME-G770 series and a new die attach material Ablestik 2300 has been qualified for PBGA package family. The successful completion of this qualification has improved IDT's support of current and future production needs for components that meet 260°C peak reflow temperature. There is no change in Moisture Sensitive Level (MSL). Products will be shipped at the existing MSL and each shipment is labeled with the correct MSL. Please refer to the label for MSL information. Customer should not be adversely impacted by this change.

Description	Material	
	Existing	Add
Mold compound material	SMT B1RC SMTB1LAR Nitro HC100XJAA	Sumitomo EME-G770 series
Die attach material	QMI 596 Ablestik 2000 Ablestik 8360	Ablestik 2300

Please see attachment for affected part #s (Appendix - 1).

**Samples are not built ahead of the change and are limited to selective devices. Please contact your local field sales representative for sample availability and additional information.**



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## PRODUCT/PROCESS CHANGE NOTICE (PCN)

### ATTACHMENT - PCN #: A-0309-05

**Qualification Plan #:** P02-11-10

**Test Vehicle:** IDT72815BG

**Qualification Test Plan and Results:**

Test Description	Test Method	Test Results BG121 IDT72815BG (SS / # of Fails)
* High Accelerated Stress Test (Biased, 130 °C/85% RH, 100 Hrs)	JESD22-A110-B	45/0
* Temperature Cycling (-55 °C to 125 °C, 1000 cycles)	JESD22-A104-B	45/0
* Auto Clave (121 °C, 2 ATM, 168 Hrs)	JESD22-A102-C	45/0
High Temperature Life Test (1000 Hrs @ 125 °C or equivalent)	JESD22-A108-B	77/0
High Temp Bake (1000 Hrs @ 150 °C)	JESD22-A103-B	77/0
Moisture Sensitivity Classification	J-STD-020B	90/0
Internal Visual Inspection	MIL-STD-883, M2010	5/0
External Visual Inspection	JESD22-B101	25/0
X-ray Examination	MIL-STD-883, M2015	45/0
Bond Pull Test	MIL-STD-883, M2011	5/0
Bake & Ball Shear Strength	JESD22-B116	5/0
Physical Dimensions	JESD22-B100-B	5/0
Die Shear Strength	MIL-STD-883, M2019	5/0

**Notes:** \* Test requires moisture pre-conditioning sequence per JESD22-A113C.



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#### Appendix - 1

IDT5T2010BBI	IDT71T75902S75BG	IDT71V2558S133BG	IDT71V3548SA100BG	IDT71V3559SA75BG
IDT5T2110BBI	IDT71T75902S75BGI	IDT71V2558S133BGI	IDT71V3548SA133BG	IDT71V3559SA80BG
IDT5V996BBI	IDT71T75902S80BG	IDT71V2558S166BG	IDT71V3556S100BG	IDT71V3559SA85BG
IDT70V5378S100BG	IDT71T75902S80BGI	IDT71V2558S166BGI	IDT71V3556S100BGI	IDT71V35761S166BG
IDT70V5378S100BGI	IDT71T75902S85BG	IDT71V2558S200BG	IDT71V3556S133BG	IDT71V35761S166BGI
IDT70V5378S133BG	IDT71T75902S85BGI	IDT71V2558SA100BG	IDT71V3556S133BGI	IDT71V35761S183BG
IDT70V5378S133BGI	IDT71V2546S100BG	IDT71V2558SA133BG	IDT71V3556S150BG	IDT71V35761S183BGI
IDT70V5378S166BG	IDT71V2546S100BGI	IDT71V2559S75BG	IDT71V3556S166BG	IDT71V35761S200BG
IDT70V5378S166BGI	IDT71V2546S133BG	IDT71V2559S80BG	IDT71V3556S166BGI	IDT71V35761S200BGI
IDT70V5378S200BG	IDT71V2546S133BGI	IDT71V2559S80BGI	IDT71V3556S200BG	IDT71V3576S133BG
IDT70V5388S100BG	IDT71V2546S150BG	IDT71V2559S85BG	IDT71V3556S200BGI	IDT71V3576S133BGI
IDT70V5388S100BGI	IDT71V2546SA100BG	IDT71V2559S85BGI	IDT71V3556SA100BG	IDT71V3576S150BG
IDT70V5388S133BG	IDT71V2546SA100BGI	IDT71V2559SA75BG	IDT71V3556SA100BGI	IDT71V3576S150BGI
IDT70V5388S133BGI	IDT71V2546SA133BG	IDT71V2559SA80BG	IDT71V3556SA133BG	IDT71V3577S75BG
IDT70V5388S166BG	IDT71V2546SA133BGI	IDT71V2559SA85BG	IDT71V3556SA133BGI	IDT71V3577S75BGI
IDT70V5388S166BGI	IDT71V2546SA150BG	IDT71V25761S166BG	IDT71V3556SA150BG	IDT71V3577S80BG
IDT70V5388S200BG	IDT71V2546SA150BGI	IDT71V25761S166BGI	IDT71V3556SA166BG	IDT71V3577S80BGI
IDT71T75602S100BG	IDT71V2548S100BG	IDT71V25761S183BG	IDT71V3556SA166BGI	IDT71V3577S85BG
IDT71T75602S100BGI	IDT71V2548S100BGI	IDT71V25761S183BGI	IDT71V3556SA200BG	IDT71V3577S85BGI
IDT71T75602S133BG	IDT71V2548S133BG	IDT71V25761S200BG	IDT71V3556SA200BGI	IDT71V35781S166BG
IDT71T75602S133BGI	IDT71V2548S133BGI	IDT71V2576S133BG	IDT71V3557S75BG	IDT71V35781S166BGI
IDT71T75602S150BG	IDT71V2548S150BG	IDT71V2576S133BGI	IDT71V3557S75BGI	IDT71V35781S183BG
IDT71T75602S150BGI	IDT71V2548S150BGI	IDT71V2576S150BG	IDT71V3557S80BG	IDT71V35781S183BGI
IDT71T75602S166BG	IDT71V2556S100BG	IDT71V2576S150BGI	IDT71V3557S80BGI	IDT71V35781S200BG
IDT71T75602S166BGI	IDT71V2556S100BGI	IDT71V2577S75BG	IDT71V3557S85BG	IDT71V3578S133BG
IDT71T75602S200BG	IDT71V2556S133BG	IDT71V2577S75BGI	IDT71V3557S85BGI	IDT71V3578S133BGI
IDT71T75602S200BGI	IDT71V2556S133BGI	IDT71V2577S80BG	IDT71V3557SA75BG	IDT71V3578S150BG
IDT71T75602S225BG	IDT71V2556S166BG	IDT71V2577S80BGI	IDT71V3557SA75BGI	IDT71V3578S150BGI
IDT71T75602S225BGI	IDT71V2556S166BGI	IDT71V2577S85BG	IDT71V3557SA80BG	IDT71V3579S75BG
IDT71T75702S75BG	IDT71V2556S200BG	IDT71V2577S85BGI	IDT71V3557SA80BGI	IDT71V3579S80BG
IDT71T75702S75BGI	IDT71V2556SA100BG	IDT71V25781S166BG	IDT71V3557SA85BG	IDT71V3579S80BGI
IDT71T75702S80BG	IDT71V2556SA100BGI	IDT71V25781S166BGI	IDT71V3557SA85BGI	IDT71V3579S85BG
IDT71T75702S80BGI	IDT71V2556SA133BG	IDT71V25781S183BG	IDT71V3558S100BG	IDT71V3579S85BGI
IDT71T75702S85BG	IDT71V2556SA133BGI	IDT71V25781S183BGI	IDT71V3558S100BGI	IDT71V65602S100BG
IDT71T75702S85BGI	IDT71V2557S75BG	IDT71V25781S200BG	IDT71V3558S117BG	IDT71V65602S133BG
IDT71T75802S100BG	IDT71V2557S80BG	IDT71V2578S133BG	IDT71V3558S133BG	IDT71V65602S150BG
IDT71T75802S100BGI	IDT71V2557S80BGI	IDT71V2578S133BGI	IDT71V3558S133BGI	IDT71V65603S100BG
IDT71T75802S133BG	IDT71V2557S85BG	IDT71V2578S150BGI	IDT71V3558S166BG	IDT71V65603S100BGI
IDT71T75802S133BGI	IDT71V2557S85BGI	IDT71V2579S75BG	IDT71V3558S166BGI	IDT71V65603S133BG
IDT71T75802S150BG	IDT71V2557SA75BG	IDT71V2579S80BG	IDT71V3558S200BG	IDT71V65603S133BGI
IDT71T75802S150BGI	IDT71V2557SA75BGI	IDT71V2579S80BGI	IDT71V3558SA100BG	IDT71V65603S150BG
IDT71T75802S166BG	IDT71V2557SA80BG	IDT71V2579S85BG	IDT71V3558SA133BG	IDT71V65702S75BG
IDT71T75802S166BGI	IDT71V2557SA80BGI	IDT71V2579S85BGI	IDT71V3559S75BG	IDT71V65702S80BG
IDT71T75802S200BG	IDT71V2557SA85BG	IDT71V3548S100BG	IDT71V3559S80BG	IDT71V65702S85BG
IDT71T75802S200BGI	IDT71V2557SA85BGI	IDT71V3548S100BGI	IDT71V3559S80BGI	IDT71V65703S75BG
IDT71T75802S225BG	IDT71V2558S100BG	IDT71V3548S133BG	IDT71V3559S85BG	IDT71V65703S80BG
IDT71T75802S225BGI	IDT71V2558S100BGI	IDT71V3548S133BGI	IDT71V3559S85BGI	IDT71V65703S85BG

Note: For T & R (shipping method) "8" is added to the part number and for industrial grade, letter "I" is added to the part number.



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IDT71V65703S85BGI	IDT71V67803S133BG	IDT72T1865L5BB	IDT72T36115L6-7BB	IDT72T4088L4BB
IDT71V65802S100BG	IDT71V67803S150BG	IDT72T1865L5BBI	IDT72T36125L10BB	IDT72T4088L5BB
IDT71V65802S133BG	IDT71V67803S166BG	IDT72T1865L6-7BB	IDT72T36125L4-4BB	IDT72T4088L6-7BB
IDT71V65802S150BG	IDT71V67902S65BG	IDT72T1875L10BB	IDT72T36125L5BB	IDT72T4088L6-7BBI
IDT71V65803S100BG	IDT71V67902S75BG	IDT72T1875L4-4BB	IDT72T36125L5BBI	IDT72T4098L10BB
IDT71V65803S100BGI	IDT71V67902S75BGI	IDT72T1875L5BB	IDT72T36125L6-7BB	IDT72T4098L4BB
IDT71V65803S133BG	IDT71V67902S80BG	IDT72T1875L5BBI	IDT72T3645L10BB	IDT72T4098L5BB
IDT71V65803S133BGI	IDT71V67902S80BGI	IDT72T1875L6-7BB	IDT72T3645L4-4BB	IDT72T4098L6-7BB
IDT71V65803S150BG	IDT71V67902S85BG	IDT72T1885L10BB	IDT72T3645L5BB	IDT72T4098L6-7BBI
IDT71V65902S75BG	IDT71V67902S85BGI	IDT72T1885L4-4BB	IDT72T3645L5BBI	IDT72T51233L5BB
IDT71V65902S80BG	IDT71V67903S65BG	IDT72T1885L5BB	IDT72T3645L6-7BB	IDT72T51233L6BB
IDT71V65902S85BG	IDT71V67903S75BG	IDT72T1885L5BBI	IDT72T3655L10BB	IDT72T51233L6BBI
IDT71V65903S75BG	IDT71V67903S80BG	IDT72T1885L6-7BB	IDT72T3655L4-4BB	IDT72T51236L5BB
IDT71V65903S80BG	IDT71V67903S85BG	IDT72T1895L10BB	IDT72T3655L5BB	IDT72T51236L6BB
IDT71V65903S85BG	IDT72805LB15BG	IDT72T1895L4-4BB	IDT72T3655L5BBI	IDT72T51236L6BBI
IDT71V67602S133BG	IDT72805LB25BG	IDT72T1895L5BB	IDT72T3655L6-7BB	IDT72T51243L5BB
IDT71V67602S133BGI	IDT72815LB15BG	IDT72T1895L5BBI	IDT72T3665L10BB	IDT72T51243L6BB
IDT71V67602S150BG	IDT72815LB25BG	IDT72T1895L6-7BB	IDT72T3665L4-4BB	IDT72T51243L6BBI
IDT71V67602S150BGI	IDT72825LB15BG	IDT72T20108L10BB	IDT72T3665L5BB	IDT72T51246L5BB
IDT71V67602S166BG	IDT72825LB25BG	IDT72T20108L4BB	IDT72T3665L5BBI	IDT72T51246L6BB
IDT71V67603S133BG	IDT72T18105L10BB	IDT72T20108L5BB	IDT72T3665L6-7BB	IDT72T51246L6BBI
IDT71V67603S133BGI	IDT72T18105L4-4BB	IDT72T20108L6-7BB	IDT72T3675L10BB	IDT72T51248L5BB
IDT71V67603S150BG	IDT72T18105L5BB	IDT72T20108L6-7BBI	IDT72T3675L4-4BB	IDT72T51248L6-7BB
IDT71V67603S150BGI	IDT72T18105L5BBI	IDT72T20118L10BB	IDT72T3675L5BB	IDT72T51248L6-7BBI
IDT71V67603S166BG	IDT72T18105L6-7BB	IDT72T20118L4BB	IDT72T3675L5BBI	IDT72T51253L5BB
IDT71V67612S166BG	IDT72T18115L10BB	IDT72T20118L5BB	IDT72T3675L6-7BB	IDT72T51253L6BB
IDT71V67612S183BG	IDT72T18115L4-4BB	IDT72T20118L6-7BB	IDT72T3685L10BB	IDT72T51253L6BBI
IDT71V67612S200BG	IDT72T18115L5BB	IDT72T20118L6-7BBI	IDT72T3685L4-4BB	IDT72T51256L5BB
IDT71V67613S166BG	IDT72T18115L5BBI	IDT72T20128L10BB	IDT72T3685L5BB	IDT72T51256L6BB
IDT71V67613S183BG	IDT72T18115L6-7BB	IDT72T20128L4BB	IDT72T3685L5BBI	IDT72T51256L6BBI
IDT71V67613S200BG	IDT72T18125L10BB	IDT72T20128L5BB	IDT72T3685L6-7BB	IDT72T51258L5BB
IDT71V67702S65BG	IDT72T18125L4-4BB	IDT72T20128L6-7BB	IDT72T3695L10BB	IDT72T51258L6-7BB
IDT71V67702S75BG	IDT72T18125L5BB	IDT72T20128L6-7BBI	IDT72T3695L4-4BB	IDT72T51258L6-7BBI
IDT71V67702S75BGI	IDT72T18125L5BBI	IDT72T2098L10BB	IDT72T3695L5BB	IDT72T51268L5BB
IDT71V67702S80BG	IDT72T18125L6-7BB	IDT72T2098L4BB	IDT72T3695L5BBI	IDT72T51268L6-7BB
IDT71V67702S80BGI	IDT72T1845L10BB	IDT72T2098L5BB	IDT72T3695L6-7BB	IDT72T51268L6-7BBI
IDT71V67702S85BG	IDT72T1845L4-4BB	IDT72T2098L6-7BB	IDT72T40108L10BB	IDT72T51333L5BB
IDT71V67702S85BGI	IDT72T1845L5BB	IDT72T2098L6-7BBI	IDT72T40108L4BB	IDT72T51333L6BB
IDT71V67703S65BG	IDT72T1845L5BBI	IDT72T36105L10BB	IDT72T40108L5BB	IDT72T51333L6BBI
IDT71V67703S75BG	IDT72T1845L6-7BB	IDT72T36105L4-4BB	IDT72T40108L6-7BB	IDT72T51336L5BB
IDT71V67703S80BG	IDT72T1855L10BB	IDT72T36105L5BB	IDT72T40108L6-7BBI	IDT72T51336L6BB
IDT71V67703S85BG	IDT72T1855L4-4BB	IDT72T36105L5BBI	IDT72T40118L10BB	IDT72T51336L6BBI
IDT71V67802S133BG	IDT72T1855L5BB	IDT72T36105L6-7BB	IDT72T40118L4BB	IDT72T51343L5BB
IDT71V67802S133BGI	IDT72T1855L5BBI	IDT72T36115L10BB	IDT72T40118L5BB	IDT72T51343L6BB
IDT71V67802S150BG	IDT72T1855L6-7BB	IDT72T36115L4-4BB	IDT72T40118L6-7BB	IDT72T51343L6BBI
IDT71V67802S150BGI	IDT72T1865L10BB	IDT72T36115L5BB	IDT72T40118L6-7BBI	IDT72T51346L5BB
IDT71V67802S166BG	IDT72T1865L4-4BB	IDT72T36115L5BBI	IDT72T4088L10BB	IDT72T51346L6BB

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IDT72T51346L6BBI	IDT72T55248L6-7BB	IDT72V3670L7-5BB	IDT72V51436L6BB	IDT72V73260BK
IDT72T51353L5BB	IDT72T55248L6-7BBI	IDT72V3670L7-5BBI	IDT72V51436L7-5BB	IDT72V73263BB
IDT72T51353L6BB	IDT72T55258L5BB	IDT72V3680L6BB	IDT72V51436L7-5BBI	IDT72V73273BB
IDT72T51353L6BBI	IDT72T55258L6-7BB	IDT72V3680L7-5BB	IDT72V51443L6BB	IDT79RC32V334-100BB
IDT72T51356L5BB	IDT72T55258L6-7BBI	IDT72V3680L7-5BBI	IDT72V51443L7-5BB	IDT79RC32V334-100BBI
IDT72T51356L6BB	IDT72T55268L5BB	IDT72V3690L6BB	IDT72V51443L7-5BBI	IDT79RC32V334-133BB
IDT72T51356L6BBI	IDT72T55268L6-7BB	IDT72V3690L7-5BB	IDT72V51446L6BB	IDT79RC32V334-133BBI
IDT72T51433L5BB	IDT72T55268L6-7BBI	IDT72V3690L7-5BBI	IDT72V51446L7-5BB	IDT79RC32V334-150BB
IDT72T51433L6BB	IDT72T72105L10BB	IDT72V51233L6BB	IDT72V51446L7-5BBI	IDT79RC32V334-150BBI
IDT72T51433L6BBI	IDT72T72105L4-4BB	IDT72V51233L7-5BB	IDT72V51453L6BB	IDT7MMV4101S10BG
IDT72T51436L5BB	IDT72T72105L5BB	IDT72V51233L7-5BBI	IDT72V51453L7-5BB	IDT7MMV4101S12BG
IDT72T51436L6BB	IDT72T72105L6-7BB	IDT72V51236L6BB	IDT72V51453L7-5BBI	IDT7MMV4101S15BG
IDT72T51436L6BBI	IDT72T72115L10BB	IDT72V51236L7-5BB	IDT72V51456L6BB	IDT7MMV4101SA15BG
IDT72T51443L5BB	IDT72T72115L4-4BB	IDT72V51236L7-5BBI	IDT72V51456L7-5BB	IDT7MMV4101SA15BGI
IDT72T51443L6BB	IDT72T72115L5BB	IDT72V51243L6BB	IDT72V51456L7-5BBI	IDT82P2284BB
IDT72T51443L6BBI	IDT72T72115L5BBI	IDT72V51243L7-5BB	IDT72V51543L6BB	IDT82P2288BB
IDT72T51446L5BB	IDT72T72115L6-7BB	IDT72V51243L7-5BBI	IDT72V51543L7-5BB	IDT82V2048BB
IDT72T51446L6BB	IDT72T7285L10BB	IDT72V51246L6BB	IDT72V51543L7-5BBI	IDT82V2058BB
IDT72T51446L6BBI	IDT72T7285L4-4BB	IDT72V51246L7-5BB	IDT72V51546L6BB	IDT82V2088BB
IDT72T51453L5BB	IDT72T7285L5BB	IDT72V51246L7-5BBI	IDT72V51546L7-5BB	IDT82V2108BB
IDT72T51453L6BB	IDT72T7285L6-7BB	IDT72V51253L6BB	IDT72V51546L7-5BBI	IDT82V2608BB
IDT72T51453L6BBI	IDT72T7295L10BB	IDT72V51253L7-5BB	IDT72V51553L6BB	IDT82V8313BB
IDT72T51456L5BB	IDT72T7295L4-4BB	IDT72V51253L7-5BBI	IDT72V51553L7-5BB	
IDT72T51456L6BB	IDT72T7295L5BB	IDT72V51256L6BB	IDT72V51553L7-5BBI	
IDT72T51456L6BBI	IDT72T7295L6-7BB	IDT72V51256L7-5BB	IDT72V51556L6BB	
IDT72T51543L5BB	IDT72V14320L10BBI	IDT72V51256L7-5BBI	IDT72V51556L7-5BB	
IDT72T51543L6BB	IDT72V15320L10BBI	IDT72V51333L6BB	IDT72V51556L7-5BBI	
IDT72T51543L6BBI	IDT72V16320L10BBI	IDT72V51333L7-5BB	IDT72V71650BB	
IDT72T51546L5BB	IDT72V17320L10BBI	IDT72V51333L7-5BBI	IDT72V71660BB	
IDT72T51546L6BB	IDT72V18320L10BBI	IDT72V51336L6BB	IDT72V72100L10BB	
IDT72T51546L6BBI	IDT72V19320L10BBI	IDT72V51336L7-5BB	IDT72V72100L15BB	
IDT72T51553L5BB	IDT72V36100L6BB	IDT72V51336L7-5BBI	IDT72V7230L10BB	
IDT72T51553L6BB	IDT72V36100L7-5BB	IDT72V51343L6BB	IDT72V7230L15BB	
IDT72T51553L6BBI	IDT72V36100L7-5BBI	IDT72V51343L7-5BB	IDT72V7240L10BB	
IDT72T51556L5BB	IDT72V36110L6BB	IDT72V51343L7-5BBI	IDT72V7240L15BB	
IDT72T51556L6BB	IDT72V36110L7-5BB	IDT72V51346L6BB	IDT72V7250L10BB	
IDT72T51556L6BBI	IDT72V36110L7-5BBI	IDT72V51346L7-5BB	IDT72V7250L15BB	
IDT72T54242L5BB	IDT72V3640L6BB	IDT72V51346L7-5BBI	IDT72V7260L10BB	
IDT72T54242L6-7BB	IDT72V3640L7-5BB	IDT72V51353L6BB	IDT72V7260L15BB	
IDT72T54242L6-7BBI	IDT72V3640L7-5BBI	IDT72V51353L7-5BB	IDT72V7270L10BB	
IDT72T54252L5BB	IDT72V3650L6BB	IDT72V51353L7-5BBI	IDT72V7270L15BB	
IDT72T54252L6-7BB	IDT72V3650L7-5BB	IDT72V51356L6BB	IDT72V7280L10BB	
IDT72T54252L6-7BBI	IDT72V3650L7-5BBI	IDT72V51356L7-5BB	IDT72V7280L15BB	
IDT72T54262L5BB	IDT72V3660L6BB	IDT72V51356L7-5BBI	IDT72V7290L10BB	
IDT72T54262L6-7BB	IDT72V3660L7-5BB	IDT72V51433L6BB	IDT72V7290L15BB	
IDT72T54262L6-7BBI	IDT72V3660L7-5BBI	IDT72V51433L7-5BB	IDT72V73250BB	
IDT72T55248L5BB	IDT72V3670L6BB	IDT72V51433L7-5BBI	IDT72V73260BB	

Note: For T & R (shipping method) "8" is added to the part number and for industrial grade, letter "I" is added to the part number.

# SUMITOMO BAKELITE SUMIKON<sup>®</sup>

EME-G770

MULTI-AROMATIC RESIN  
Br/Sb FREE  
FOR Pb FREE PKG  
LOW WARPAGE

## EME-G770

### TYPICAL PROPERTIES:

<u>ITEM</u>	<u>TEST METHOD</u>	<u>UNIT</u>	<u>VALUES</u>
SPIRAL FLOW	SB-U-03-003	cm	110
GEL TIME (at 175°C)	SB-U-03-005	sec	32
THERMAL EXPANSION $\alpha_1$	SB-U-02-002	X 10 <sup>-5</sup> 1/°C	0.8
THERMAL EXPANSION $\alpha_2$	SB-U-02-002	X 10 <sup>-5</sup> 1/°C	3.7
Tg	SB-U-02-002	°C	130
THERMAL CONDUCTIVITY	SB-U-02-004	W/m •°C	96x 10 <sup>-2</sup>
FLEXURAL STRENGTH	SB-U-01-001	N/ mm <sup>2</sup>	
(at 25°C)			170
(at 240°C)			17
FLEXURAL MODULUS	SB-U-01-002	X 10 <sup>2</sup> N/mm <sup>2</sup>	
(at 25°C)			260
(at 240°C)			6.0
SPECIFIC GRAVITY	SB-U-03-018	-----	2.01
VOLUME RESISTIVITY	SB-U-00-004	$\Omega$ - cm	1 x 10 <sup>12</sup>
(at 150°C)			
UL FLAME CLASS	SB-U-03-003	UL-94	V-0
WATER ABSORPTION	SB-U-03-002	% weight gain	0.15
(boiling, 24 h)			
EXTRACTED Na <sup>+</sup>	SB-U-04-043	ppm	1
EXTRACTED Cl <sup>-</sup>	SB-U-04-043	ppm	5

TYPICAL, NOT GUARANTEED PROPERTIES

### MOLDING AND POST MOLD CURE CONDITIONS:

	<u>STANDARD</u>	<u>RANGE</u>
TRANSFER PRESSURE	80 x10 <sup>5</sup> Pa	70-120 x10 <sup>5</sup> Pa
MOLD TEMPERATURE	180°C	175-185°C
CURE TIME (C or A)#	A/90 sec	70-120 sec
POST-MOLD CURE TEMP	175°C	170-180°C
POST-MOLD CURE TIME	6 h	4-8 h

#Conventional or Auto

rev.Feb. '03

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PILOT TECHNICAL DATA SHEET

# ABLEBOND® 2300

## ELECTRICALLY CONDUCTIVE ADHESIVE FOR PBGA

### DESCRIPTION

Ablebond® 2300 electrically conductive die attach adhesive is designed for Pb-free PBGA and Array BGA packaging. The proprietary hybrid chemistry used in Ablebond® 2300 adhesive has high hot / wet adhesion, low stress and ultra-low moisture absorption allowing packages to withstand the high reflow temperatures necessary

for Pb-free solders (260°C) . It is suitable for die sizes up to 12.7 x 12.7 mm.

Ablebond® 2300 adhesive has also been designed for ease of manufacture with excellent dispensing characteristics, fast cure capability and low bleed on solder mask surfaces.

### FEATURES

- Ultra-low moisture absorption
- High hot / wet adhesion
- Low stress
- Fast cure with no voids
- Minimal resin bleed

UNCURED PROPERTIES		TEST DESCRIPTION	TEST METHOD
Filler Type	Silver	Brookfield CP51 @ 5 rpm Viscosity @ 0.5/Viscosity @ 5 rpm 25% increase in viscosity @ RT	ATM-0018
Viscosity @ 25°C	9,000 cP		ATM-0089
Thixotropic Index	5.9		ATM-0087
Estimated Work Life @ 25°C	> 24 hours		ATM-0068
Estimated Storage Life @ -40°C	6 months		
CURE PROCESS DATA			
Weight loss on cure	1.2%	10 x 10 mm Si die on glass slide	ATM-0031
Recommended Cure Condition	15 minutes @ 175°C		

Typical properties are not intended for use as specification limits. If you need to write a specification, ask for our Standard Release Specification. This is a Pilot product that has been converted to high volume manufacturing and is being monitored for process stability. During this monitoring period, certain properties may be adjusted slightly.



PHYSIOCHEMICAL PROPERTIES- POST CURE			TEST DESCRIPTION	TEST METHOD
<b>Ionics</b>	<b>Chloride</b> <b>Sodium</b> <b>Potassium</b>	<b>2 ppm</b> <b>2 ppm</b> <b>&lt; 1 ppm</b>	<b>Teflon flask 5 gm sample / 20-40 mesh 50 gm DI water 100°C for 24 hours</b>	<b>ATM-0007</b>
<b>Weight Loss @ 300°C</b>		<b>1.22%</b>	<b>Thermogravimetric Analysis</b>	<b>ATM-0073</b>
<b>Coefficient of Thermal Expansion</b>	<b>Below Tg</b> <b>Above Tg</b>	<b>60 ppm/°C</b> <b>129 ppm/°C</b>	<b>TMA expansion mode</b>	<b>ATM-0055</b>
<b>Dynamic Tensile Modulus</b>	<b>@ 25°C</b> <b>@ 250°C</b>	<b>1800 MPa</b> <b>(260,400 psi)</b> <b>240 MPa</b> <b>(34,350 psi)</b>	<b>Dynamic mechanical thermal analysis using &lt; 0.5mm thick sample</b>	<b>ATM-0112</b>
<b>Moisture Absorption @ Saturation</b>		<b>0.22%</b>	<b>Dynamic vapor sorption after 85°C/85% RH exposure</b>	<b>ATM-0093</b>
<b>THERMAL/ELECTRICAL PROPERTIES - POST CURE</b>				
<b>Thermal Conductivity</b>	<b>0.6 W/mK</b>		<b>Laser Flash</b>	<b>ATM-0116</b>
<b>Volume Resistivity</b>	<b>0.5 ohm-cm</b>		<b>4-point probe</b>	<b>ATM-0020</b>

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# ABLEBOND® 2300

## ELECTRICALLY CONDUCTIVE ADHESIVE FOR PBGA

### APPLICATION GUIDELINES

#### *SHIPMENT*

This Ablestik product is packed and shipped in dry ice at -80°C. Inside every dry ice shipment of Ablestik's products is a small packet containing the ABLECUBE. This is a small blue cube which retains its shape at -40°C. If the ABLECUBE is exposed to temperatures higher than -40°C, the cube will melt.

Please check the state of the ABLECUBE to ensure the integrity of the shipment. If the ABLECUBE has melted upon Receiving Inspection, place the entire shipment in a -40°C freezer and contact your Ablestik Customer Service or Sales Representative.

#### *UNPACKING*

Transfer the syringes from the dry ice to a -40°C freezer without ANY delays. Freeze-thaw voids will form in the syringes if the syringes are repeatedly thawed and refrozen.

#### *STORAGE*

This Ablestik product must be stored at -40°C. The shelf life of the material is only valid when the material has been stored at the specified storage condition. Incorrect storage conditions will degrade the performance of the material in both handling (e.g. dispensing or screen printing) and final cured properties.

#### *THAWING*

Allow the container to reach room temperature before use. After removing from the freezer, set the syringes to stand vertically while thawing. Refer to Syringe Thaw Time chart on the next page for the thaw time recommendation.

**DO NOT** open the container before contents reach ambient temperature. Any moisture that collects on the thawed container should be removed prior to opening the container. **DO NOT** re-freeze. Once thawed to room temperature, the adhesive should not be re-frozen.

#### *ADHESIVE APPLICATION*

Thawed adhesive should be immediately placed on dispense equipment for use. If the adhesive is transferred to a final dispensing reservoir, care must be exercised to avoid entrapment of contaminants and/or air into the adhesive.

Apply enough adhesive to achieve a 25-50 µm (1-2 mil) wet bondline thickness, dispensed with approximately 25% - 50% filleting on all sides of the die. Alternate dispense amounts may be used depending on the application requirements. Star or cross shaped dispense patterns will yield fewer bondline voids than the matrix style of dispense pattern.

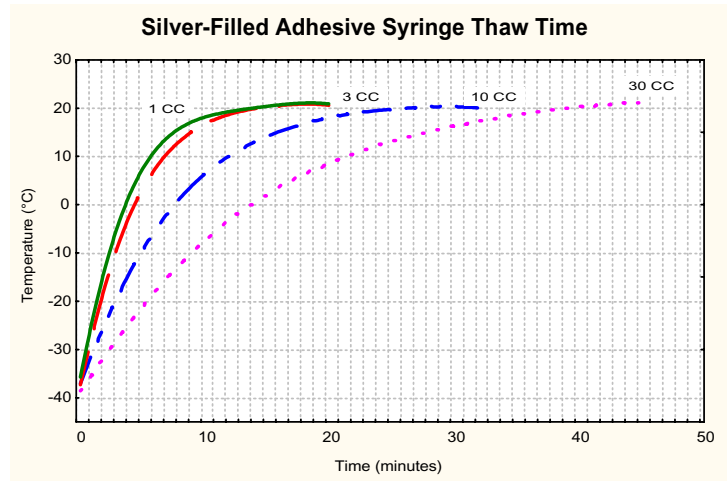
Contact Ablestik Technical Service Department for detailed recommendation on adhesive application, including dispensing.

**CURE**

Ablebond® 2300 adhesive can be cured in box ovens. See the cure process data on page 1.

**AVAILABILITY**

Ablebond adhesives are packaged in syringes or jars per customer specification. Available package sizes range from 1cc to 30cc and 1 ounce to 1 pound. For details, refer to the Ablestik Standard Package Data Set or contact your Customer Service Representative.



**CAUTION** This product may cause skin irritation in sensitive persons. Avoid skin contact. If contact does occur, wash area immediately with soap and water. Please refer to Material Safety Data Sheet (OSHA) for more details.

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