



Conversion to Green Material Set (Mold Compound & Die Attach Material)

PCN2003-11 (v1.1) December 6, 2004

Product/Process Change Notice

Overview

This notification is to inform you of a conversion to a green material set (mold compound & die-attach epoxy) for the following packages. The term “green” indicates more environmentally-friendly substances are used.

Description

This change is being initiated as part of a Xilinx’s roadmap towards offering green packaging solutions. Since this new green material set will also be used for future lead-free package offerings, Xilinx will be able to standardize our material set.

The new green material set has the following characteristics:

- Halogen-free (no bromine, chlorine, etc.)
- Meets Moisture Sensitivity (MSL) Level 3 per JEDEC standard J-STD-020B. Note some product in PC packages currently meet MSL 1 but will only meet MSL 3 as a result of this change.
- Meets UL94 V-0 flammability requirements

Products Affected

All Xilinx products offered in the following packages will convert to the new green material set.

| Package | Current Material Set | | New Green Material Set | |
|--------------|----------------------|-----------------|------------------------|---------------|
| | D/A Epoxy | Mold Compound | D/A Epoxy | Mold Compound |
| PC 20/44 | Ablestik 8361J | Nitto MP8000 | Sumitomo CRM1076E | Sumitomo G600 |
| PC 68/84 | Ablestik 8361J | Nitto MP8000 | Ablestik 8361J | Sumitomo G600 |
| TQ 100/144 | Ablestik 8361J | Sumitomo 7320CR | Ablestik 3230 | Sumitomo G700 |
| VQ 44/64/100 | Ablestik 8361J | Sumitomo 7320CR | Ablestik 3230 | Sumitomo G700 |

Qualification Data

| Test | Condition | Package | Sample Size | Results |
|--|---|---------|-------------|--------------------------------------|
| Preconditioning | J-STD-020B Moisture Sensitivity Level-3 | TQ144 | 304 | Passed per J-STD-020B Criteria |
| | | TQ100 | 76 | |
| | | VQ100 | 304 | |
| | | VQ64 | 152 | |
| | | PC84 | 152 | |
| Temperature Cycle | JESD22-A104-B Condition C, -65°C to 150°C | TQ144 | 152 | Zero failure after 500 cycles |
| | | TQ100 | 76 | |
| | | VQ100 | 152 | |
| | | VQ64 | 76 | |
| | | PC84 | 76 | |
| Temperature Humidity Test (Biased) | 85°C/85%RH | TQ144 | 76 | Zero failure after 1,000 hrs |
| | | VQ100 | 76 | |

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| Test | Condition | Package | Sample Size | Results |
|--------------------------------------|-------------|---------|-------------|------------------------------|
| Temperature Humidity Test (Unbiased) | 85°C/85%RH) | TQ144 | 76 | Zero failure after 1,000 hrs |
| | | TQ100 | 76 | |
| | | VQ100 | 152 | |
| | | VQ64 | 76 | |
| | | PC84 | 76 | |

Traceability

Product manufactured in the above listed packages on or after assembly date code 0449 (starting on November 27, 2004) will include the new material set. The date code can be found on the package topmark, see example of topmark below:

Example of a typical Xilinx package topmark:



Recommendation

No response is required to this PCN. For additional information or questions, please contact [Xilinx Technical Support](#).

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Revision History

The following table shows the revision history for this document.

| Date | Version | Revision |
|----------|---------|---|
| 12/17/03 | 1.0 | Initial release of document. |
| 12/6/04 | 1.1 | <ul style="list-style-type: none"> Revise implementation date code from 0413 to 0449. Reformat document to match with templates currently being used. |