

## Cypress Semiconductor Pb-Free FAQ

**Q: What is driving the move to Pb-Free products?**

**A: Cypress support of customer requirements and environmental regulations drive the change to Pb-Free.**

**Q: What is Cypress definition of Pb-Free?**

**A: Product must meet two requirements, zero lead (Pb) and high temperature reflow capability @ 260°C reference JEDEC Std 020C.**

**Q: Why do Pb-Free packages need to withstand higher reflow temperatures?**

**A: Pb-Free solder pastes melt at higher temperatures, compared to Pb based solder pastes.**

**Q: What are Cypress Pb-Free package finishes?**

**A: For leadframe based packages, nickel-palladium-gold (NiPdAu) and matte tin (Sn) are the primary options. NiPdAu is used on internally manufactured product and matte Sn is used on subcontract manufactured products. BGA packages use tin-silver-copper (SnAgCu) solder balls instead of tin-lead (SnPb).**

**Q: Why did Cypress choose NiPdAu as the finish material for internal manufacturing?**

**A: Factory automation, and cycle time reduction are two manufacturing drivers for NiPdAu. Many customers also prefer NiPdAu over matte tin and iNEMI prescribed NiPdAu as the most preferred termination finish.**

**Q: Can Customers use Pb-Free product in current Pb based production?**

**A: No. BGA packages are not backwards compatible. NiPdAu leadframe packages and Matte Sn leadframe packages are backwards compatible but knowledge of the overall product mass is required.**

**Q: How can customers order Pb-Free products?**

**A: Pb-Free products have different part numbers, to ensure segregation in customer inventory systems. Pb-Free part numbers have an "X" added after the package code on the standard part number.**

**Examples:**

**Non Pb-Free Part Number**

**CY7C199C-15VC**

**CY25023SC-1T**

**Standard Pb-Free Part Number**

**CY7C199C-15VXC**

**CY25023SXC-1T**

**Q: Is Pb-Free product marked differently?**

**A: Yes, the marketing part number, with the "X", is marked (except on 8 lead SOIC packages due to space limitations).**



**Q: Is Cypress standard product Pb-Free?**

**A: Yes, Cypress standard products are Pb-Free. As of Q207, more than 90% of products shipped are Pb-Free.**

**Q: Will Cypress continue to support non Pb-Free product?**

**A: Yes, Cypress will continue to support non Pb-Free products based on business conditions. Non Pb-Free products are selectively pruned where business conditions do not justify and advised by the PCN process**

**Q: What does Cypress do to reduce the chance of tin whiskers?**

**A: Cypress has qualified tin production flow with an annealing step and the tin plating thickness is also controlled.**

**Q: Since Cypress provides two different Pb-Free materials, NiPdAu and Sn, could the customer get both?**

**A: Yes, if more than one assembly site is qualified. Cypress identifies the material composition on the MSL labels on packing materials for every shipment to customers.**

**Q: Is Cypress products compliant to EU RoHS?**

**A: Yes, Cypress Pb-Free products are compliant to EU RoHS. The Pb-Free products are identified with distinct marketing part numbers to distinguish from non Pb-Free products. The products and packing materials are labeled accordingly.**

**Q: Is Cypress products compliant to China RoHS?**

**A: Yes, Cypress Pb-Free products are compliant to China RoHS. The Pb-Free products are identified with distinct marketing part numbers to distinguish from non compliant products and the products marked accordingly. In addition, the packing materials (moisture resistance bag, reel, cartons, etc...) are labeled with the required China RoHS logos and the material content per the China's Ministry of Information Industry (MII) format in Chinese is provided for each shipment to China. When the "catalog" product/s is defined by MII, Cypress will contract local certified labs in China to certify the material composition.**

**Q: Does the price change for Pb-Free product?**

**A: Market conditions determine price, please contact your sales representative for current quotes.**

**Q: What is Cypress contact for Pb-Free/Green/RoHS program?**

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