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**MEMORANDUM**

**SUBJECT: RoHS Compliant Printed Circuit Boards**

We see a variety of solutions for this requirement. For Printed Circuit Boards, 2 elements need attention: Laminate Material and Surface Finish. Both of these are determined by customer requirements (typically noted in the Fab Drawing or similar document for each part number) and based on assembly / soldering process and end user requirements.

For laminate material, many customers are considering and using FR406 (or equivalent) for its higher temperature capability (170 vs. 130C FR-4). We suggest utilizing the web site of a leading laminate supplier, Isola Global Laminates, with the following link:

<http://www.isola-group.com/>

For surface finish of the P C Boards, we have customers specifying the following finishes: (Listed in order of ascending cost!)

1. OSP Anti-Oxidant – Lacquer like finish. Entek is one popular brand ([www.enthone.com](http://www.enthone.com))
2. Immersion Tin Plating – in use for years, especially for flat SMD pads ([www.floridacirtech.com](http://www.floridacirtech.com))
3. Lead Free HASL Coating – similar to the traditional solder coat, but with no lead content.
4. Immersion Silver Plating
5. Immersion Nickel / Gold Plating

Web sites for industry publications that offer additional insight are:

[www.pcdandm.com](http://www.pcdandm.com)  
[www.circuitree.com](http://www.circuitree.com)