



SCOPE OF ACCREDITATION

Electronics

Minco Products Inc
7300 Commerce Ln NE
Minneapolis, MN 55432-3177

This certificate expiration is updated based on periodic audits. The current expiration date and scope of accreditation are listed at: www.eAuditNet.com - Online QML (Qualified Manufacturer Listing).

In recognition of the successful completion of the PRI evaluation process, accreditation is granted to this facility to perform the following:

AC7119 Rev H - Nadcap Audit Criteria for Electronics Printed Boards (to be used on audits on/after 11 March 2018) (CANNOT BE COMBINED WITH AC7120 or AC7121)

- 03–Company Information (mandatory)
- 04–General Information (mandatory)
- 05–Process Control (mandatory)
- 06– Engineering Source File Processing (mandatory)
- 07.1– Material Control: General (mandatory)
- 07.2– Material Control: PrePreg
- 08.1– Imaging – Photoprocess (mandatory)
- 08.2.1– DES – Developing Photoimageable Resist (mandatory)
- 08.2.2– DES – Copper Etching of Inner Layers and Outer Layers (mandatory)
- 08.2.3– DES – Stripping of Resist Film and Etch–Resist Plating (mandatory)
- 08.2– Imaging – Develop–Etch–Strip (DES) and Strip–Etch–Strip (SES) (mandatory)
- 08.3– Etched Image Inspection (Manual or AOI) (mandatory)
- 09.1– Permanent Solder Mask: Solder Mask Application
- 09.2– Permanent Solder Mask: Solder Mask Exposing
- 09.3– Permanent Solder Mask: Solder Mask Develop and Cure
- 09– Permanent Solder Mask
- 10– Oxide Coating / Oxide Replacement Coating
- 11– Material Lay–Up and Lamination (mandatory)
- 12.1– Drilling: Mechanical Drilling
- 12.2– Drilling: Laser Drilling– In House
- 12.4– Drilling: Post–Drill Cleaning and Etchback
- 14.1– Cooper Plating: Electroless Copper/Direct Metallization (mandatory)

- 14.2– Copper Plating: Electroplated Copper (mandatory)
- 14– Copper Plating: Electroplated Copper
- 15.1– Final Finishes: Hot Air Solder Leveling (HASL)
- 15.2– Final Finishes: Fused Tin Lead
- 15.3a– Final Finishes: Electroless (Chemical)/Immersion Plating Final Finish – ENIG
- 15.3– Final Finishes: Electroless (Chemical)/Immersion Plating Final Finish
- 15.4a– Electroplated Final Finish: Electroplated Nickel–Gold
- 16– Legend and Marking
- 17– Routing and Machining
- 18– Electrical Test – Functional (mandatory)
- 19– X–Ray Fluorescence (XRF)
- 20– Microsection Sample Selection, Preparation, and Inspection (mandatory)
- 21– Structural Integrity (mandatory)
- 22– Materials Lab (mandatory)
- 23– Chemistry Lab (mandatory)
- 24– Monthly Quality Conformance Testing
- 25– Final Validation (mandatory)
- 26– Packaging (mandatory)

AC7119/2 Rev B - Nadcap Audit Criteria for Electronics Flexible and Rigid-Flexible Printed Boards (to be used on audits on/after 11 March 2018)

- 04– Handling
- 05– Material
- 06– Cover Material Application
- 07– Post–Drill Cleaning and Etchback
- 08– Stiffener Bonding
- 09– Strain Relief
- 10– Testing
- 11– Depanelization
- 12– Packaging
- 13– Final Validation