

Recommendation & Guideline Values for drying for bare PCBs

(all Settings of parameters are subject to customized processing procedures)

Target:

- Drying to reduce humidity in laminates before soldering process
- Prevention of delaminating by thermal stress after moisture consumption

Methods:

- Drying by application of convection respective in vacuum drying ovens
- Parameters are depending on: type of laminates, soldering surface, layer count, time span up to start of soldering, Layout (areas of copper; size, amount, ...)

Recommendation for parameters:

- Drying in convection-, circulating air oven or in vacuum oven, drying not piled up
- Drying

Material	Parameters	Time span before soldering
FR4 (T _g 135°C)	120°C; ≥ 120 min	Max. 24 h
FR4 (T _g > 135°C)	130 – 150°C; ≥ 120 min	Max. 8 h
Rigid-Flex, Flex,	130 – 150°C; ≥ 120 min	Max. 8 h
rigid ML > 6 layers	130 – 150°C; ≥ 120 min	Max. 8 h
- Vacuum drying at 50 mbar permits decrease of temperature by 20 K and the reduction of time by 60 minutes
- Vacuum drying is highly recommended for sensitive surfaces (i.e. electroless tin)

(see also Recommendation & Guideline Values „drying before soldering “ for bare PCBs)