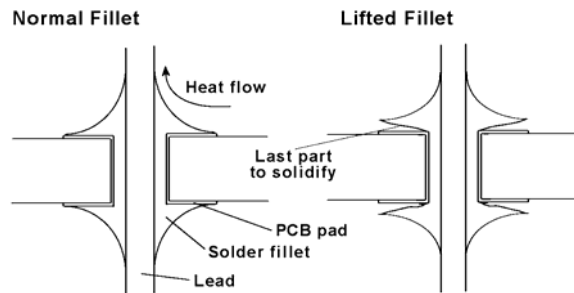


## **A Guide To Lead-Free Soldering for Assemblers & Sub-Contractors**

### **A CONCISE SOURCE FOR LEAD-FREE SOLDERING**

- How will the European Directive banning the use of lead in electronic and electrical equipment impact your business?
- Have you the knowledge and information you need to meet the regulations?
- Do you know how to go about it, when you need to be lead-free and when you need to start preparing?



***A Guide To Lead-Free Soldering for Assemblers & Sub-Contractors***, by Roger Bilham, a metallurgist with many years' experience developing and making solder products, is a concise source of the information you'll need to help you integrate lead-free systems!

#### **Topics covered in its 63 pages include!**

- Legal position in Europe, USA, Japan and elsewhere including patents
- Lead-free & ROHS compliance
- Lead-free alloy requirements – technical and economic
- Problems posed by lead-free solders
- Melting temperatures
- Oxidisation & corrosion
- Fillet lifting, cracking & tombstoning
- Tin whiskers & tin pest
- Fluxes
- Potential & practical lead-free alloys with their properties
- Use of nitrogen
- High temperature, high lead solder component internal connections, non-melting columns & balls, module assembly
- Lead-free process challenges – cost, temperature, process window, machine issues & flux residues
- Lead-free hot air solder levelling
- Components for lead-free soldering temperatures capabilities & terminations
- Mixed lead-free & lead containing solders & finishes
- Lead-free circuit board finishes
- Defects, inspection & quality
- Repair & rework
- Solder variety & standardisation
- Lead-free in the reflow process – temperature profile, machine implications
- Lead-free vapour phase soldering
- Environmental & cost disadvantages of lead-free solders
- Sources of further information

# Order Form

***A Guide To Lead-Free Soldering for Assemblers & Sub-Contractors*** is available as:

- a printable PDF file (2,257 Kb), e-mailed to you immediately
- or
- CD-Rom, sent to you by post  
Carriage charged at cost outside of mainland UK
  - **The price is only £35.00 complete!**

---

Please supply ***A Guide To Lead-Free Soldering for Assemblers & Sub-Contractors*** to:

Name \_\_\_\_\_

Position \_\_\_\_\_

Company \_\_\_\_\_

e-mail \_\_\_\_\_

Address \_\_\_\_\_

\_\_\_\_\_

Postcode \_\_\_\_\_

Telephone \_\_\_\_\_

E-mail me the PDF for £35.00  Post me a CD-Rom for £35.00

I enclose a cheque drawn on a UK bank for £35.00.

I wish to pay by credit/debit card (VISA, Mastercard, Diners, Switch):

Card number \_\_\_\_\_

Name on card \_\_\_\_\_ Expiry date \_\_\_\_\_

**Orders accepted by fax, e-mail and post. Please e-mail for carriage charges outside the UK if a CD-Rom is requested.**

---

**Dynamix Technology Ltd**  
**Unit 17 Station Field Industrial Estate, Kidlington, Oxfordshire, OX5 1JD.**  
**Tel: +44 (0)1865 842034**  
**Fax: +44 (0)1865 842172**  
**e-mail: [info@dynamixtechnology.com](mailto:info@dynamixtechnology.com)**  
**[www.dynamixtechnology.com](http://www.dynamixtechnology.com)**