

Laminates For Lead-Free

WHY????????????????

Laminates For Lead-Free

EU DIRECTIVES

Directive 2002/95/EC

Restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)

Directive 2002/96/EC

Waste electrical and electronic equipment (WEEE)

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WEEE Directive - Purpose

“Prevention of Waste EEE

The reuse, recycling and other forms of recovery of such waste”

Covers

Household appliances - fridges, washing machines
toasters, kettles

Computers, Radios, TV's, Drills, Lawnmowers

Toys, video games,

Medical Devices

Excludes

Defence/War equipment

Medical Implants

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RoHS Directive - Purpose

Restrictions on the use of hazardous substances in EEE, and to contribute to the protection of human health and the environmentally sound recovery and disposal of waste EEE.

Exemptions

Medical devices

Monitoring and control instruments

No mention in the scope of the inclusion of military products

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Hazardous Substances

Lead

Mercury

Cadmium

Hexavalent Chromium

Polybrominated biphenyls (PBB)

Polybrominated diphenyl ethers

Laminates For Lead-Free

Copper clad laminates CEM1, CEM3, FR2, FR4 do not contain any of the restricted substances.

So what's the problem?

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PROBLEM

Tin/Lead 63/37 Cannot Be Used

Sn/Ag/Cu melting temp 217°C - 220°C

At the limits of “Standard” FR4

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PROBLEM

Number of Soldering Operations

Thermal Cycling in Service

Service Conditions

Board Design

