Technical Data Sheet

Soluboard®: The World's First Fully Biodegradable PCB Laminate

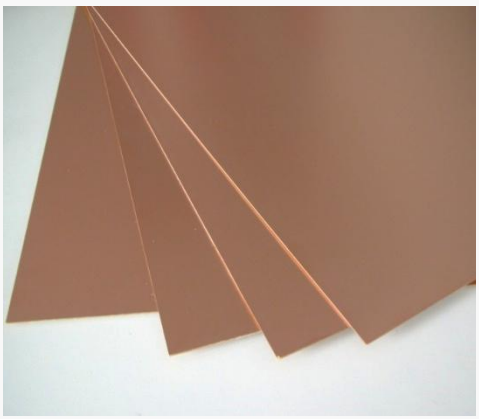
International Patent | WO 2018/234801

Overview

Soluboard® CCL is a unique thermoplastic laminate system created using natural fibres and a water-soluble polymer. It has a reduced carbon footprint compared to other incumbent substrates and can be recycled at end-of-life without the need for incineration.

Description

- Alternative to glass fibre - epoxy PCB laminates
- Optimised for 2-layer boards with PTH technology
- Compatible with standard PCB fabrication processes
- Supplied as un-clad or copper clad laminate
- Produced using biodegradable non-toxic natural fibres and a water-soluble polymer
- Environmentally friendly end-of-life solution through hydro-mechanical processing, avoiding incineration



Laminate Properties

Characteristic	Unit	Value
Laminate Thickness	mm	0.5 – 3.2 (+/- 15%)
Copper Thickness	Microns	9 - 140

Mechanical Properties

Characteristic	Unit	Value	Method
Tensile Strength	MPa	40.65	ASTM D638
Flexural Strength	MPa	84.22	ASTM D790
Peel Strength	N/mm	0.85	IPC-TM-650 5.2.1

Thermal Properties

Characteristic	Unit	Value	Method
Decomposition Temperature (Td)	°C	285	IPC 2.4.24.6
Glass Transition Temperature (Tg)	°C	85	IPC 2.4.25
CTE (Ambient to Tg)	ppm/°C	37	IPC 2.4.24
Thermal Conductivity	W/mk	0.25	ISO 8894-1:2010
Flammability (UL File Reference E539951 - Soluboard R1.0)	-	V-1	UL 94

Electrical Properties

Characteristic	Unit	Value	Method
Dielectric Constant (at 10 MHz)	-	3.5-4.1	ASTM D150-18
Dissipation Factor/tan δ (at 50 MHz)	-	0.094	ASTM D150-18

Please contact us for specific PCB Fabrication and Assembly Processing Guidelines.

 Implementation Date: Feb 2025 | Created by: J Herring | Approved by: S Driver
Document No. JQ-0019-03 | Review Date: Feb 2026 | Changes Made: Flammability results updated; electrical results added; UL result confirmed; reference on Peel strength test updated to reflect IPC-TM-650 Sec. 5.2.1

22 Aston Road, Waterlooville, Hampshire, PO7 7XJ, U.K. | contact@jivamaterials.com