

# laminates

## CDM ESD 68940

- ▶ Good performances with lead free soldering process.
- ▶ Increased temperature resistance : good performances at temperatures higher than 300°C.
- ▶ Excellent flux resistance.
- ▶ Dissipative material. Surface resistivity 10E5 to 10E9 Ohm/Square.
- ▶ Optical sensitiveness : grey color enables an easy and improved detection by infra-red cells.
- ▶ Low deformation.
- ▶ Excellent dimensional stability.
- ▶ Improved machinability.

### General description

The CDM range of products exhibits higher mechanical and resistance properties as standard composite materials.

The random glass mat substrate present in the CDM ESD 68940 minimizes delaminations problems during machining or pallet use.

The relative low thermal conductivity in the CDM materials allows a rapid pallet turnaround eliminating most of the time both the necessity to provide a cooling station and the process heat sink effect experienced in the metallic pallets.

CDM materials can substitute metallic solder frames (or other materials) with great advantages.

Flux resistance is depending on composition and pH level. Highly acid as well as basic fluxes often require a regular cleaning of remaining powders in order to preserve the stability of CDM material.

Due to the high fiberglass content, machining is recommended with carbide or diamond toolings. Precise machining with very accurate tolerances can be achieved by experts in the conception and machining of pallets.

### RoHS Directive

Hazardous products listed in the EU-directive 2002/95/CE (ROHS-directive), §4 section 1, are

		Value	Test norm
<b>Mechanical properties</b>			
Flexural strength at 23°C, flatwise	MPa	350	ISO 178
Flexural strength at 150°C, flatwise	MPa	200	ISO 178
Modulus of elasticity in flexure at 23°C, flatwise	MPa	18000	ISO 178
Modulus of elasticity in flexure at 150°C, flatwise	MPa	12000	ISO 178
<b>Electrical properties</b>			
Surface resistivity	Ohm/square	10E5 to 10E9	IEC 60093
<b>Physical properties</b>			
Density	g/cm <sup>3</sup>	1.9 ±0.1	ISO 1183 (method A)
Water absorption 24h 23°C	%	<0.10	ISO 62 (method 1)
Linear coefficient of thermal expansion, parallel	K <sup>-1</sup>	10.10 <sup>-6</sup>	VSM 77110
<b>Thermal properties</b>			
Thermal conductivity	W/m.K	0.3	DIN 52612

not used as ingredients in this material.

### Application

Can be used in lead free process

Full process solder wave, SMT and selective soldering process

Components insertion

SMT placement

Reflow soldering

Components protection

Testing of PCBs

Cleaning of PCB boards

### Availability

Standard sheet size : 2350 +/-10mm x 1335 +/-10mm or 2000 x 1250 mm

Surface grinded (both sides)

Standard thicknesses available :

3mm, 4mm, 5mm, 6mm, 8mm, 10mm, 12mm

### Description

CDM ESD 68940 is a composite material made of glass mat, combined with a high mechanical resistance resin system.

Color : Grey

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