CDM ESD 68910N

- **New generation material with higher performances in temperature at 300-350°C**
- **Excellent flux and chemical resistance**
- **Very good machinability especially on thin wall machining down to 0,5-0,7mm**
- **Excellent dimensional stability with very good mechanical characteristics**
- **Dissipative material**
- **Thin wall capability**

Description

CDM ESD 68910N is a composite material based on glass mat reinforcement in combination with dissipative, high temperature and high corrosion resistant resin system. CDM ESD 68910N is a new generation material taking into account the necessity of thin walls machining.

Electrostatic discharge damage electronic components and circuits every day. To use CDM will allow charges to move slowly out of the circuit and will ensure the quality of your production. CDM ESD product have guaranteed dissipative characteristics.
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 68910N minimizes delamination problems during machining or pallet use.
The relative low thermal conductivity in the CDM materials allows quick 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 with great advantages.

Flux resistance is depending on composition and pH level. CDM has been developed to have a better withstand towards chemicals. To preserve the stability of CDM material, a regular cleaning can still be made. 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.

Application

- Full process solder wave, SMT selective soldering process
- Components insertion
- Silk screen printing of solder paste in SMT
- SMT placement
- Reflow soldering
- Components protection
- Testing of PCBs

Availability

Standard thicknesses available: 3mm, 4mm, 5mm, 6 mm, 8 mm, 10mm, 12mm (other thicknesses available)
Standard sheet size for 3mm and 4mm: 1335 ±10mm x 1170 ±10mm
Standard sheet size for 5mm to 12mm: 2350 ±10mm x 1335 ±10mm
Thickness tolerance: ±0,10mm for 3mm to 10mm and ± 0,15mm for 12mm
Flatness (panel size 300x300mm): 0,2mm
Surface quality: sanded on both sides

Colour

Black

Technical recommandations

When in contact with aggressive chemicals, cleaning of pallets on a regular basis is recommended in order to maximize the effective life span of the CDM pallets.
Storage: on flat and plane pallet in sane and dry warehouse. Avoid contact of CDM material to atmospheric influences such as UV, rain, high humidity rates.
PVC packaging around the sheets and panels is preferable in case of humidity environment.

Physical Properties	Unit	Value	Test Method
Density	g/cm³	1,9 $^{\pm 0,1}$	ISO 1183 (Method A)
Water absorption (24h 23°C)	%	< 0,15	ISO 62 (Method 1)
Linear coefficient of thermal expansion, parallel	K^{-1}	10.10^{E-6}	TMA

Electrical Properties	Unit	Value	Test Method
Surface resistance (R_S)	Ω	$1x10^4 \leq R_S < 1x10^7$	IEC 61340-2-3 (*)
Volume resistance (R_V)	Ω	$1x10^4 \leq R_V < 1x10^8$	IEC 61340-2-3 (**)

Mechanical Properties	Unit	Value	Test Method
Flexural strength at 23°C, flatwise	MPa	380	ISO 178
Flexural strength at 150°C, flatwise	MPa	250	ISO 178
Flexural strength at 200°C, flatwise	MPa	120	ISO 178
Modulus of elasticity in flexure at 23°C, flatwise	MPa	18 000	ISO 178
Modulus of elasticity in flexure at 150°C, flatwise	MPa	13 000	ISO 178
Modulus of elasticity in flexure at 200°C, flatwise	MPa	8 000	ISO 178

(*) values also granted for ASTM D257 and STM 11.11
(**) values also granted for ASTM D257 and STM 11.12