



Description

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

Grey colour enables an **easy and improved detection by infrared cells**. 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 delamination 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 tooling. Precise machining with very accurate tolerances can be achieved by experts in the conception and machining of pallets.

Highlights

- Good performances with lead free soldering process
- Temperature resistance: higher than 300°C
- Excellent flux resistance
- Dissipative properties
- Improved optical sensitiveness with grey color
- Excellent dimensional stability and low deformation
- Improved machinability

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

Material

Color	grey	
Surface quality	sanded on both sides	
Available forms	sheets, cut-to-size parts, solder masks, SMD assembly carriers	
Available thicknesses*	3 mm, 4 mm, 5 mm, 6 mm, 8 mm, 10 mm, 12 mm, 14 mm, 16 mm, 18 mm, 20 mm	
Standard format	3 mm – 4 mm: 1335 x 1170 mm ±10 mm	5 mm – 20 mm: 2350 x 1335 mm ±10 mm
Thickness tolerance	3 mm – 10 mm: ±0,10 mm	12 mm – 20 mm: ±0,15 mm

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

Density	1,9 ^{±0,1} g/cm ³	ISO 1183 (Method A)	
Water absorption (24 h 23°C)	< 0,1 %	ISO 62 (Method 1)	
Linear coefficient of thermal expansion	10.10 ^{E-6} K ⁻¹	parallel	TMA

Electrical Properties

Surface resistance (R _s)	1×10 ⁵ ≤ R _s < 1×10 ⁸ Ω	IEC 61340-2-3 (values also granted for ASTM D257 and STM 11.11)	
Volume resistance (R _v)	1×10 ⁵ ≤ R _v < 1×10 ⁹ Ω	IEC 61340-2-3 (values also granted for ASTM D257 and STM 11.12)	

Mechanical Properties

Flexural strength at 23°C	300 MPa	flatwise	ISO 178
Flexural strength at 150°C	220 MPa	flatwise	ISO 178
Flexural strength at 200°C	120 MPa	flatwise	ISO 178
Modulus of elasticity in flexure at 23°C	15 000 MPa	flatwise	ISO 178
Modulus of elasticity in flexure at 150°C	12 000 MPa	flatwise	ISO 178
Modulus of elasticity in flexure at 200°C	8 000 MPa	flatwise	ISO 178

The product properties set forth in this data sheet are based on the results of testing of typical material produced by the supplier. Some variation in product properties is typical. Comments or suggestions relating to any subject other than product properties are offered only to call the end-user's or other person's attention to considerations which may be relevant in the independent determination of the use and/or manner of use of product. The supplier does not claim or warrant that the use of its product will have the results described in this data sheet or that the information provided is complete, accurate or useful. The user should test the product to determine its properties and its suitability for the intended use. The supplier expressly disclaims any liability for any damage, harm, injury, cost or expense to any person resulting directly or indirectly from that person's reliance on any information contained in this data sheet. Nothing contained in this data sheet constitutes representation or warranty as to any matter whatsoever. The supplier makes no warranties whatsoever in this data sheet, expressed or implied, including any implied warranty or fitness for a particular use or purpose. The supplier shall in no event be liable for incidental, exemplary, punitive or consequential damages.