

C O R E X



COREX 'ESD' SHEET

Corex Australia's ESD (Electro Static Discharge) sheet is a twin walled fluted sheet manufactured from polypropylene impact copolymer. This ESD sheet is unique due to the incorporation of a special grade of carbon black in the polymer matrix during production. This significantly changes the electrical characteristics of the sheet.

Corex ESD sheet is used widely in the packaging, storage and transportation of electrical and electronic components. Corex ESD sheet can be readily formed and fabricated into customer designed containers which will protect delicate and fragile components, especially where protection is required from electrostatic damage.

Corex ESD containers are strong yet lightweight and can be designed as a stackable or nestable box to suit a range of materials handling conditions.



COREX

PACKAGING

SOLUTIONS

Consider the advantages:

Electrical Properties:

Generally, polypropylene is considered to be an excellent electrical insulator. However, during manufacture of the ESD sheet, a special carbon black masterbatch is added to the polypropylene formulation which alters the surface resistivity of the polypropylene to produce a conductive sheet. The surface resistivity of the sheet reducing from $>10^{11}$ to a level $<10^9$ (ohms/cm²). Since the special carbon black is an integral part of the sheet, the conductivity of the sheet is maintained throughout its life and is unaffected by temperature extremes, moisture and solvents.

Chemical Resistance:

Polypropylene exhibits outstanding chemical resistance and is generally considered to be chemically inert and stain resistant. Polypropylene is extremely resistant to organic and inorganic chemicals but is liable to attack by oxidising agents such as chlorosulphonic acid, fuming nitric and sulphuric acids and the halogens. A superior substrate for long term use with no out-gassing. It is resistant to water, oils and most common solvents at room temperature.

Thermal Stability:

At elevated temperatures, carbon black can act as an oxidation catalyst in polypropylene. Grades containing 2% carbon black may offer a considerably reduced service life when compared to "natural" grades at 100°C - particularly if continued contact with water is involved. Particular care must therefore be taken in considering the specific requirements of any such application.

Stability to Ultraviolet (UV) Light:

Unless specified or requested, Corex ESD sheet is free from ultraviolet stabilisers. Excessive UV exposure of unstabilised polypropylene will degrade and cause brittleness with a resultant deterioration in mechanical properties. UV stabilisers can be added on request.

Printability:

The very conductive nature of Corex ESD sheet prevents Corona treatment during production. Consequently, caution must be exercised when printing with screen or flexographic processes to ensure adequate adhesion is experienced. Test process is essential.

Reuse / Recyclability:

Corex ESD sheet and containers can be reused many times over and the product is well suited to closed loop vendor supply applications. Even then, at the end of their working life, polypropylene containers and sheet may then be recycled to satisfy the need for protecting the environment and minimising landfill waste.

Sheet Properties - Conductive ESD Sheet:

The general specifications are as follows:

Resin Type	Polypropylene
Board Type	Hollow Profile
Board Weight	700gsm to 900gsm
Gauge Thickness	4.0mm to 5.0mm
Colour	Black
Surface Resistivity	$<10^9$ ohms/cm ²
Compression Strength	4.4 kgf/cm ²
Impact Absorbance	84%

*The information contained herein is to the best of our knowledge true and correct. However, as many factors outside our knowledge and control can effect the use of products, no warranty can be given or is to be implied in respect of such information and no information should be construed as a warranty in relation to the product or it's use.

For specific information, consult our Sales department for Data Sheets:

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Sizes Made to Order



Secure Shelving



Easy Load Compartments



Stamped Warning Signs



Stackable

