

PRODUCT REFERENCE: E-TEC® PS 13680

DESCRIPTION: An electrically conductive compound based on a dispersion of a conductive carbon black in a modified polystyrene.

APPLICATIONS: *E-TEC® PS 13680* is suggested for the injection moulding and extrusion of rigid articles or sheet, requiring a degree of permanent electrical conductivity such as tote boxes, storage racks and other containers. The polystyrene base material gives this compound a good definition in moulded components and lower shrinkage than materials based on polyolefins. Such products find application in areas where the accumulation of static electrical charges on conventional polymers may cause problems, for example in the handling of static sensitive electronic devices or explosives. Compared with other polystyrene based products in the *E-TEC®* range, *E-TEC® PS 13680* offers higher impact performance.

ADDITION RATE: *E-TEC® PS 13680* is designed for use as a compound at 100% addition rate. In some very limited circumstances it may be possible to dilute this product with other polymers although this will invariably reduce the conductivity of the end article.

PROCESSING: Suggested moulding and extrusion temperatures are in line with those for conventional impact modified styrene polymers. Extruder temperature settings of 175/180/190/200/die190 °C are suggested as guidelines. When injection moulding, generously sized gates will minimise any reduction in conductivity arising from processing. Temperature settings of 205/215/235/nozzle 235 °C and a mould temperature of 30 °C have been used successfully. For some applications it may be found necessary to pre-dry this product using a temperature of up to 80 °C for 3 to 4 hours.

TYPICAL PROPERTIES:

Heat Distortion Temperature:	83 °C	(ISO 75 method B)
Surface Resistance:	3 x 10 ³ ohm	(DIN 53482)
Tensile strength:	13 MPa	(ISO 527)
Elongation at break:	25 %	(ISO 527)
Impact strength (Izod notched 23 °C)	12 kJ. m ⁻²	(ISO 180)
Melt Flow Rate:	30 g/10 min.	(ISO1133 – 200 C/21.6kg)

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Bulk Density: 650 kg.m⁻³ (ASTM D1895)

Mould shrinkage: 0.4 – 0.6%

Packaging: *E-TEC*[®] PS 13680 is normally packed in 25kg polyvalve bags. It should be stored in a clean dry area.

For Health and Safety information, please refer to the appropriate COLLOIDS Material Safety Data Sheet.

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