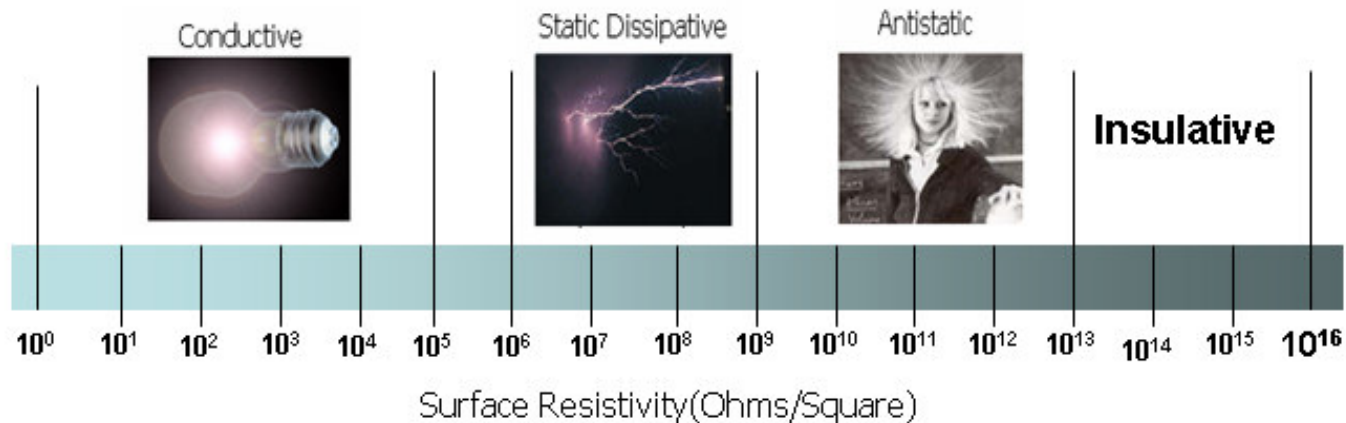




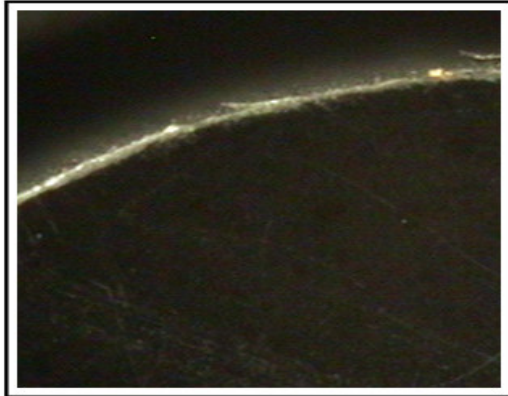
Conductive & Static Dissipative Polyimide

Conductivity Spectra

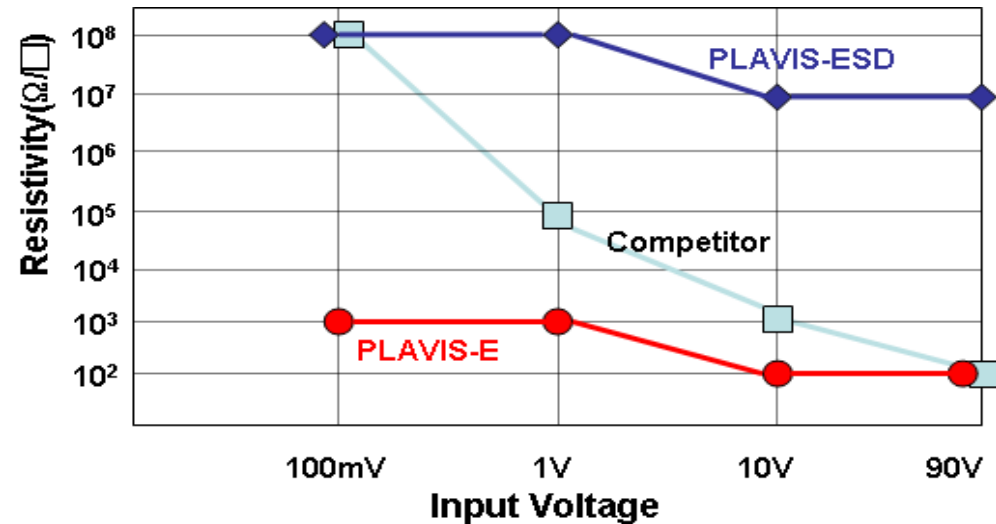


PLAVIS-E and ESD grade are the newly developed conductive and electrostatic dissipative polyimide designed for use where electrical discharge in operation is a problem .

Uniform surface resistivity of PLAVIS-E & ESD



PLAVIS-E & ESD



PLAVIS-E & ESD grades filled with unique conductive filler show a uniform electric resistance through the molded body.

Competitor = Vespel SP-202

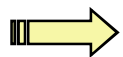
Characteristics

- PLAVIS-E is the conductive polyimide having surface resistivity **10²Ω/square**.
- PLAVIS-ESD is the electro-static dissipative polyimide having surface resistivity **in the range of 10⁶ Ω/square to 10⁹ Ω/square**
- PLAVIS-E and ESD grade prevents from static charge in the fabrication process and handling of flat panel glass, semiconductor wafers and other products handled in high-temperature, vacuum or reactive environments.

- *Excellent anti-static property*
 - *offers even surface resistivity through the molded body.*
- *Excellent machinability.*
- *Excellent mechanical strength.*
- *Excellent thermal resistance – the same as PLAVIS-N.*
- *Excellent wear resistance*
- *No damages for glass and wafer*

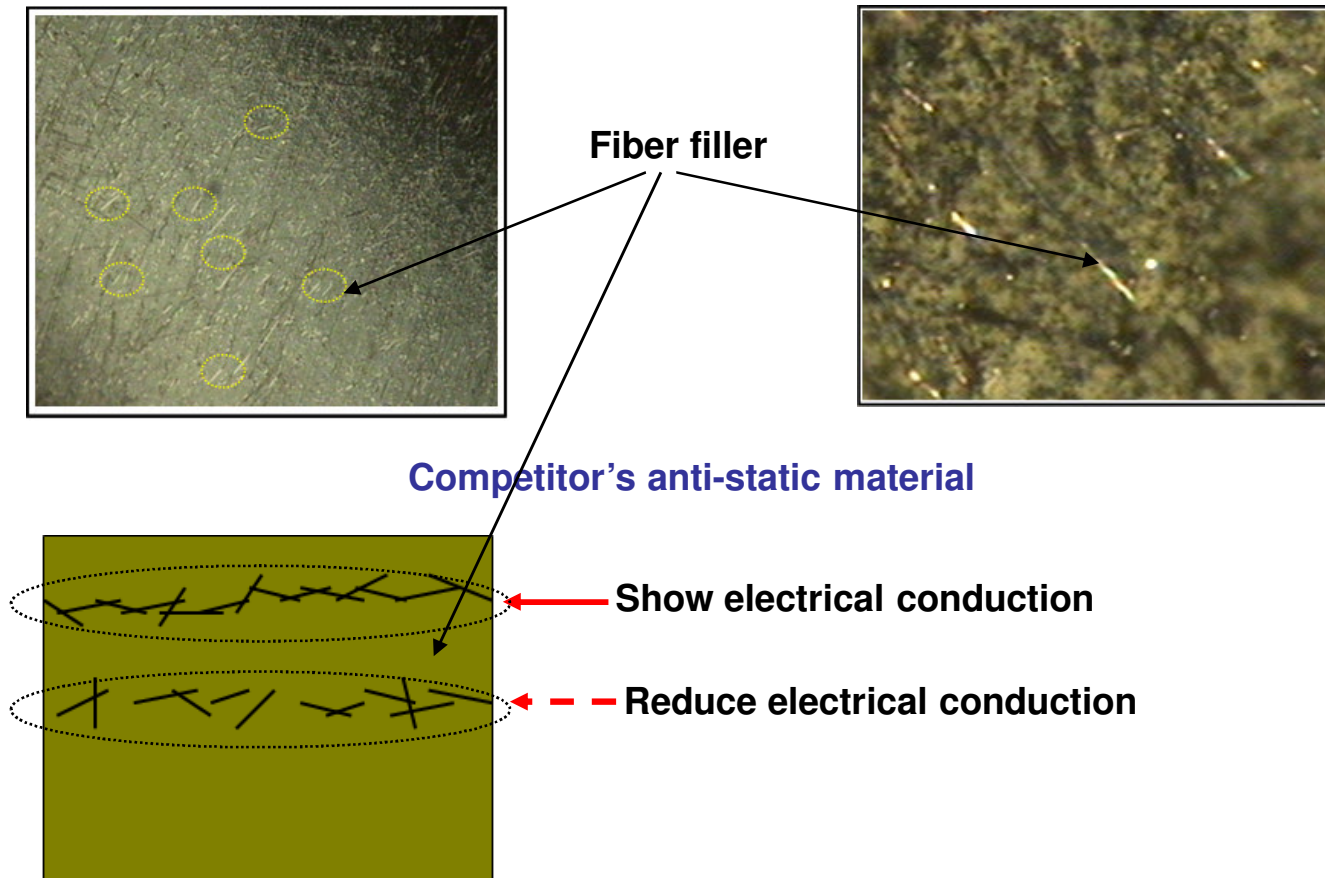
Comparison of Physical properties between Plavis E, ESD, and Competitor's grade.

Properties	Unit	Method	PLAVIS-E	PLAVIS-ESD	SP-202
Tensile strength	Kg/cm ²	ASTM D1708	910	915	745
Elongation	%	ASTM D1708	6.7	6.8	4.5
Hardness	HRE	ASTM D 785	58	58	59
Density	g/cm ³	ASTM D 792	1.47	1.47	1.49
Surface Resistivity	Ω/square	JIS K7194 @90V	10 ²	10 ^{6~9}	10 ²



Showned better physical properties.

Surface resistivity of carbon fiber filled materials



Surface resistivity of fiber filled materials are changed irregularly by direction of fiber type filler resulting in uneven surface resistivity against surface.

ICP-Mass Analysis

Unit ; ppm

	PLAVIS – E	Vespel SP-202
Total	25.5	314.3
Fe	4.9	151.9
Na	3.5	112.1
Ca	3.6	23.7
K	1.5	12.5
Al	2.9	4.5
Zn	6.9	3.2
Mg	0.9	1.6
Cr	0.1	1.8
Ni	0.2	1.4
V	0.9	-
Mn	0.1	1.6

PLAVIS-E & ESD contains extremely low metallic impurities