

# ANTI-STATIC COMPOUNDS

Styrenic Polymer Systems From RTP Company

## Quick Information

- ▶ Improve Reliability With Embedded Anti-Static Properties
- ▶ Fully Colorable For Easy Identification
- ▶ Avoid Fragile Surfactant Coatings Or Blooming Antistats
- ▶ Save Time By Eliminating Additional Finishing Steps
- ▶ Keep Costs Consistent With Traditional Coated Or Blooming Systems

Imagine a thermoplastic compound that permanently protects against damaging static events. One that eliminates fragile, often short-lived surfactant coatings on chip trays and other applications. At RTP Company, we not only imagined it, we made it a reality.

### *Solutions for the Chip Tray Market*

Anti-Static Compounds (ASC's) solve a long-term problem in the chip tray market. Traditionally, glass-filled ABS and polystyrene chip trays have been dip-coated to impart conductivity. These coatings easily wear or abrade away due to contact with electronic components and general handling. They are also dependent on environmental moisture for optimum performance.

ASC's provide permanent anti-static protection in the post molded material. They are col-

orable for easy identification, non-sloughing, perform independent of environmental humidity, and are bakeable at 65°C for 24 hours.

Standard ABS or polystyrene Anti-Static Compounds have 15% to 20% glass loadings with surface resistivity of  $10^{10}$  to  $10^{11}$  ohm/sq and volume resistivity of  $10^9$  to  $10^{11}$  ohm-cm.

### *Olefinic Solutions for ESD Applications*

*In addition to ABS and polystyrene, RTP Company has developed Anti-Static Compounds in polypropylene and polyethylene for applications like cleanroom tool grips, totes and boxes for electronic component transport, and general ESD applications.*

Anti-Static Compounds from RTP Company...another innovation from the leader in specialty compounding.



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**The Leader in Specialty Compounding**

### Manufacturing Facilities:



Winona, MN  
South Boston, VA  
Beaune, France  
Fort Worth, TX  
Indianapolis, IN  
Singapore

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## Property Comparison of Standard Styrenic Anti-Static Compounds

	Polystyrene - 400 Series (glass content 15%)		ABS - 600 Series (glass content 15%)	
	English	SI Metric	English	SI Metric
<b>Electrical</b>				
Volume Resistivity	10 <sup>10</sup> ohm-cm	10 <sup>10</sup> ohm-cm	10 <sup>10</sup> ohm-cm	10 <sup>10</sup> ohm-cm
Surface Resistivity	10 <sup>11</sup> ohm/sq	10 <sup>11</sup> ohm/sq	10 <sup>11</sup> ohm/sq	10 <sup>11</sup> ohm/sq
<b>Thermal</b>				
Deflection Temperature	200 °F @ 66 psi	93 °C @ 455 kPa	210 °F @ 264 psi	99 °C @1820 kPa
<b>Mechanical</b>				
Impact Strength, IZOD - unnotched 1/8" (3.175mm)	4.0 ft lbs/in	214 J/m	6.0 ft lbs/in	320 J/m
Tensile Strength	5500 psi	38 MPa	9000 psi	62 MPa
Tensile Modulus	0.70 psi x 10 <sup>6</sup>	4823 MPa	0.60 psi x 10 <sup>6</sup>	4134 MPa
Flexural Strength	9000 psi	62 MPa	16000 psi	110 MPa
Flexural Modulus	0.58 psi x 10 <sup>6</sup>	3996 MPa	0.62 psi x 10 <sup>6</sup>	4272 MPa

## Compare the Benefits

	 Anti-Static Compounds	Surfactant Coating	Blooming Antistats
Surface Resistivity	10 <sup>10</sup> - 10 <sup>11</sup> ohm/sq	<10 <sup>13</sup> ohm/sq	<10 <sup>13</sup> ohm/sq
Volume Resistivity	10 <sup>9</sup> - 10 <sup>11</sup> ohm-cm Anti-Static	>10 <sup>15</sup> ohm-cm Insulative	>10 <sup>15</sup> ohm-cm Insulative
Permanent Protection	Yes	No	No
Washable	Yes	No	No
Electrical Properties Independent of Moisture	Yes	No	No
Out-of-Mold Performance	Yes	No	No
Reusable	Yes	No	No
Colorable	Yes	Yes	Yes

RTP COMPANY Anti-Static COMPOUNDS OFFER GREATER BENEFITS AT NO EXTRA COST.



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