



# CORROSION INTERCEPT



By Appointment  
to Her Majesty Queen Elizabeth II  
Suppliers of Conservation Storage,  
Equipment and Display Products  
Conservation By Design Limited Bedford

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Technical Bulletin 35 Static Intercept Clean Room Effectiveness

**Developed by Lucent Bell Labs to fight the dual problem of Corrosion and Static Electricity  
Designed to meet the stringent requirements of clean room processing**

Static Intercept is a revolutionary technology which uses semi-conductor technology to transform standard plastics into semi-conductor devices capable of protecting even the most sensitive electronic device from both ESD and Corrosion damage. Static Intercept is the 'State of the Art' technology for the protection of static and corrosion sensitive materials. Intercept was developed by Lucent Technologies Bell Labs to solve the problems the electronics industry was experiencing with static and corrosion damage. Intercept is unique in its effective combination of protection.

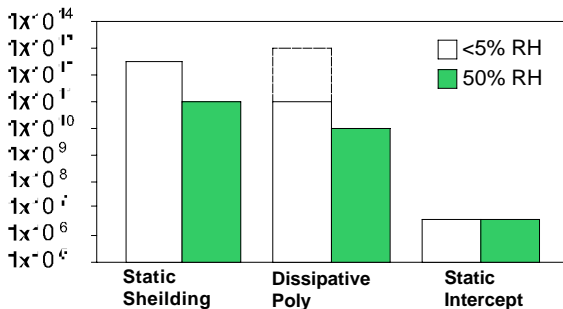
Intercept is inherently clean, with little ionic contamination. Below is some standard release test data that was done on Intercept as well as on some other products used in wafer handling.

Chromatography Test Results Data in Parts Per Billion (ppb)					
Ions	Limit (ppb)	Static Intercept	Anti-Static Foam	Lint Free Paper	HDPE (Tyvek)
Flouride (F)	36	0.4768	< 160	8,020	< 160
Chloride (Cl)	36	1.3256	19,250	< 530	< 330
Bromide (Br)	36	0.0000	< 30	< 20	< 30
Potassium (K)	109	0.0000	3,700	211,200	1
Sulphate (SO4)	72	0.8216	< 320	< 400	< 330
Nitrate (NO3)	72	0.0000			
Phosphate (PO4)	145	0.0000			

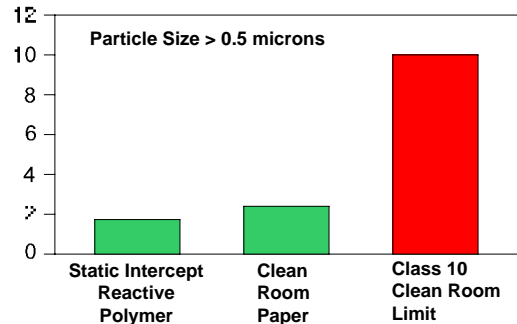
In addition, Intercept has extremely low particulates.

## Particle Shedding Helmke Drum Test

### Comparison of Surface Resistivity High and Low Relative Humidity



Particles /Sq. In./Cu. FL



Existing Technologies rely on atmospheric moisture to function, but Static Intercept's surface resistivity is unaffected by high or low relative humidity

The particle counts of Static Intercept are substantially below those limits set for Class 10 clean rooms

All of these properties are combined with permanent ESD protection in the ideal ESD range of 10<sup>6</sup> to 10<sup>9</sup> Ohms/Sq. Intercept is humidity independent, passes NASA outgassing specifications, has low tribo-charging and provides long term protection against oxidation and corrosion.

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