



## 60 Series - 3.6 Mil ESD/EMI/RFI Moisture Barrier Bag

The **All-Spec 60 Series Moisture Barrier Bag** is designed for dry packaging of electronic devices. The 60 Series bags are made from multiple layers of metalized polyester and dissipative polyethylene. These bags protect PCB's and SMD's from moisture and static damage. The flexible structure is easy to vacuum seal and they are lot coded for QC traceability. The bags are an opaque silver color with a yellow hot-stamp to identify that they are moisture and static safe for storage of sensitive items. Bags are Amine & Amide free.

### Applications

Surface Mount Devices (SMD's) absorb atmospheric moisture (relative humidity). This moisture becomes trapped inside the device case. When the device undergoes solder reflow, the moisture turns to steam and may crack ("popcorn") the case as it attempts to escape. By vacuum sealing SMD's inside a moisture barrier bag with desiccant and a humidity indicator card, the devices are protected from moisture and static. This packaging process is often called dry packaging. If a device is exposed to moisture longer than allowed by the supplier, the device will require baking at specific temperature parameters as designated by the supplier.

### Material Structure

Multiple layers of metalized polyester provide puncture resistance and moisture barrier for this economical dry package.

### Product Specifications

Electrical Properties	Test Method	Test Results
Surface Resistivity:	ASTM D-257 @15 RH	<10 <sup>12</sup> Ohms/SQ
	ANSI/ESD STM11.11	<10 <sup>11</sup> Ohms/SQ
Static Shielding:	EOS/ESD S11.31	<10 nJ
Electrostatic Decay:	FTMS 101 method 4046	.03 seconds
Capacitance Probe:	EIA-541	<20 Volts Difference
EMI Shielding:		>45DB between 1 & 10 Ghz

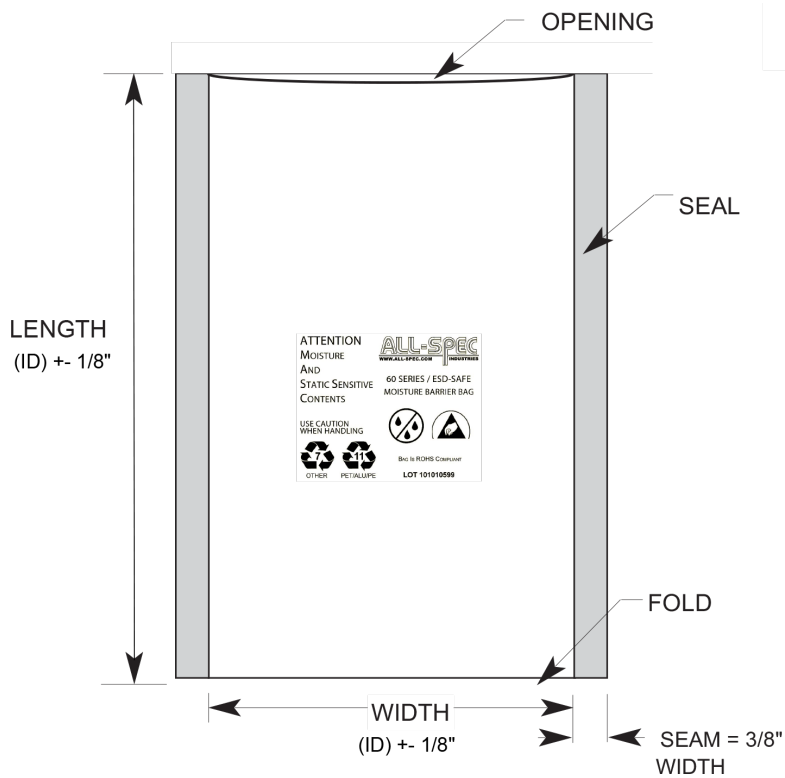
Physical Properties	Test Method	Test Results
Thickness:	Micrometer	3.6 mil
MVTR:	ASTM F-1249 @ 100F, 100 sq in/24 hrs	< .02 grams
Tensile Strength:	ASTM D-882	TD: 9,000 PSI & MD: 10,600 PSI
Puncture Resistance:	FTMS 101C method 2065	> 21lbs
Tear Initiation:	ASTM D-1004	> 4.5 lbs/mil
Mullen Burst:	ASTM D-774	110 PSI
Seam Strength:	ASTM D-882	> 12 lbs/in

*The values shown above were taken from random samples of material we believe to be typical for the product; however, actual values may vary somewhat from those listed above. All-Spec makes no warranty, expressed or implied, as to the suitability of these materials for any specific use. Customers should determine product suitability based upon their own initial criteria and testing.*

## Product Tolerances

Descriptions state the (ID) inside dimensions ("W"idth x "L"ength) of the bag.

- Overall tolerance is +/- 1/8" for (ID) and (OD)
- Seam width is 3/8"
- (OD) for width is 3/4" more than the width (ID)
- For open top bags, the length (OD) is the same as the length (ID)



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