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Electrostatic Answers
near Rochester NY
Eliminating injury and waste
from static electricity

CERTIFICATE OF COMPLIANCE

Ford General Specification: Approval and Use of Static Dissipating Plastic Coverings for Paint Booths, Robots, Walls and Floors

Electrical Surface Resistivity and Static Dissipation Times of R.J. Hanlon Autoflex

Spec Limits are as follows:

1. Surface Resistivity should range between 1E+11 Ohm/sq (l00 GOhm/sq) and not exceed 4E+11 Ohm/sq (400 GOhm/sq).
2. Static Dissipation Time should not exceed 0.5 sec (500 mS).

TABLE 1: Data Summary for R. J. Hanlon Autoflex

	Average	Standard Deviation	95% Confidence Interval	**Ford General Specification**
Electrical Resistivity (Ohm/sq) 6 measurements	2.92E+11	0.53E+11	2.36E+11 – 3.48E+11	1E+11 – 4E+11
Static Dissipation Time (sec) 18 measurements	0.213	0.089	0.209 – 0.218	< 0.50

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TABLE 2: Summary of Test Conditions per ASTM D-257

Material	R. J. Hanlon Autoflex (transparent)
Test Specimen	3 - 3 inch × 3 inch samples cut from random locations on material provided
Type and dimensions of electrodes	Keithley Model 8009 Resistivity Test Fixture with a 2 inch diameter circular electrode and a 2.25 inch inner diameter annular electrode The gap between the electrodes is 0.125 inches.
Sample Conditioning	Condition 25/70/50—Condition 25 h at 70°F and 50 % relative humidity
Test Conditions	T-70/50—Test at 70°F and 50 % relative humidity.
Applied voltage	±100 V using the Keithley alternating polarity measurement method
Measurement electrification time	Voltage is switched every 15 seconds.
Measured values	The current waveform is recorded and used to estimate the steady state current by fitting an empirical model to the data. The resistivity is computed using the estimated steady state current. The reported values are “steady state resistivity.”

TABLE 3: Summary of Test Conditions per MIL-STD-3010A – Method 4046 (revised)

Material	R. J. Hanlon AutoFlex (transparent)
Test Specimen	3 - 3 inch × 6 inch samples cut from random locations on material provided
Type and dimensions of electrodes	5 inch x 0.5 inch electrodes spaced 4 inch apart per Method 4046 Spaced 2 inches from grounded plate (revised from 4 inches as specified in M4046.1)
Sample Conditioning	Condition 25/70/50—Condition 25 h at 70°F and 50 % relative humidity
Test Conditions	T-70/50—Test at 70°F and 50 % relative humidity.
Applied voltage	2,000 V (revised from 5,000 V specified in Method 4046)
Measurement electrification time	Voltage is applied for 60 seconds, or until the voltage at the center of the sample reaches a steady state voltage of 2,000 volts. The voltage is then set to zero to initiate the static decay (as specified in M4046)
Measured values	Surface potential at the center of the sample under test (revised from induce change on circular disk as specified in M4046)