



How to Read an E 11-04 Centerline Report

Specification Data from ASTM E 11-04	Example 30 mesh Calibration report
Nominal Opening = the ideal opening size	600 μm
Opening Tolerance = The average opening (distance between parallel wires measured at the center of the opening), in the X and y directions measured separately shall conform to the nominal opening plus or minus the opening tolerance value.	$\pm 25 \mu\text{m}$
Intermediate Tolerance = Not more than 5% of the openings measured in each direction shall exceed the value of nominal plus the intermediate tolerance.	+60 μm
Maximum Tolerance = largest allowable opening size	695 μm
Wire Diameter = nominal wire diameter size expressed in millimeters	0.400 mm
Wire Diameter Tolerance = The average of all wire diameters measured shall lie within the range, nominal wire diameter size plus or minus 15% of the nominal wire diameter value.	0.340-0.460 mm

Summary Statistics

Mean (μm) = average of all openings measured in a particular direction	X = 601.72 μm Y = 602.13 μm
Standard Deviation (μm) = The distance a measured value is likely to lie from its average value.	X = 8.98 μm Y = 7.77 μm
Minimum Reading (μm) = lowest value measured	X = 585.69 μm Y = 584.47 μm
Maximum Reading (μm) = highest value measured	X = 622.30 μm Y = 621.26 μm
Range (μm) = difference between the highest and lowest values measured	X = 36.61 μm Y = 36.79 μm
Wire Diameter (mm) = average of all the wire diameters measured in a particular direction	X = 0.399 mm Y = 0.399 mm
X = measurements taken in the direction of right to left (east-west)	
Y = measurements taken in the direction of front to back (north-south)	

Pass / Fail Questions

- Does the average opening size pass the E 11-04 test?
Pass = The average (mean) opening size conforms to the nominal opening plus or minus the opening tolerance value.
- Does the sample pass the maximum opening size test for E 11-04?
Pass = None of the measured values exceeds the maximum tolerance value.
- Does the sample pass the E 11-04 intermediate tolerance test?
Pass = No more than 5% of the measured openings exceed nominal plus the intermediate tolerance.
- Does the sample pass the Advantech lower intermediate limit test*?
(*Range lies within nominal \pm intermediate tolerance value)
Pass = Range of opening size measurements lies within nominal plus or minus the intermediate tolerance value.
- Does the sample pass the wire diameter test? Pass = The average wire diameter lies within nominal plus or minus 15% of nominal.