

Test Sieve Aperture, Micron & Standards Quick Guide

Specify laboratory sieves by actual aperture, construction and the standard required by the test method.

Important: Use the actual aperture opening and the applicable standard as the primary specification. Generic mesh-number crosswalks can differ between designation systems.

Aperture to Micron Conversion

Aperture (mm)	Micron	Aperture (mm)	Micron
4.75	4750	0.425	425
3.35	3350	0.300	300
2.80	2800	0.250	250
2.36	2360	0.212	212
2.00	2000	0.180	180
1.70	1700	0.150	150
1.40	1400	0.125	125
1.18	1180	0.106	106
1.00	1000	0.090	90
0.850	850	0.075	75
0.710	710	0.063	63
0.600	600	0.053	53
0.500	500	0.045	45
		0.038	38

Direct metric conversions only: 1 mm = 1000 micrometres. This table does not assign mesh-number designations.

Standards & Ordering Checklist

Standards at a Glance

ASTM E11-24 - Covers woven-wire sieve cloth, sieve construction, frame sizes and inspection procedures. ASTM states nominal apertures from 125 mm to 20 micrometres.

ISO 3310-1:2016 - Technical requirements and test methods for metal-wire-cloth test sieves. ISO lists apertures from 125 mm to 20 micrometres.

IS 460:2020 - BIS records the fourth revision in three parts: Part 1 wire-cloth test sieves, Part 2 perforated-plate test sieves and Part 3 examination of sieve apertures.

How to Specify a Laboratory Sieve

Requirement	What to provide
Nominal aperture	Opening in mm or micron required by the method
Standard / method	IS 460, ASTM E11, ISO 3310, or the material-specific procedure
Frame diameter	Diameter compatible with the working stack or shaker
Construction	Frame material plus wire cloth or perforated plate
Documentation	Any inspection, verification or certificate requirement
Quantity / stack	Number of sieves plus lid/pan/shaker compatibility if relevant

Practical Rules

- Start from aperture and test method, not a generic mesh-number conversion.
- Use a frame diameter compatible with the shaker and working stack.
- Inspect sieve cloth and frames for damage, blockage or distortion.
- For formal compliance, consult the current purchased standard and the material-specific test method.

Official References

ASTM E11-24: <https://store.astm.org/e0011-24.html>

ISO 3310-1:2016: <https://www.iso.org/standard/62410.html>

Bureau of Indian Standards: IS 460:2020 Parts 1, 2 and 3

More technical resources:

<https://testsieves.in/test-sieve-mesh-size-micron-guide/>

<https://testsieves.in/is-460-test-sieves-guide/>

<https://testsieves.in/test-sieve-calibration-inspection-guide/>

<https://testsieves.in/sieve-analysis-procedure/>