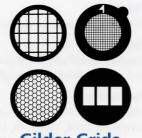
TEM Grids Overview



Comprehensive selection of easy handling, wide rim, sturdy grids. Mesh, Honeycomb, Slot and Hole

Page 203-207



Gilder Grids

Large selection of well defined thin bar grids up to 2000 Mesh. Mesh, Honeycomb, Slot and Hole

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FIB Grids

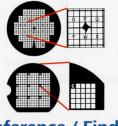
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StrataTek™ Grids

Affordable, sturdy, medium mesh grids. Mesh, Honeycomb, Slot and Hole

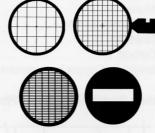
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Reference / Finder Grids

Wide selection of reference, locator and micron index grids.

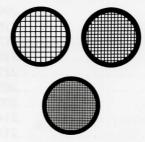
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Veco Grids

Selection of rigid grids. Mesh, Honeycomb and Slot

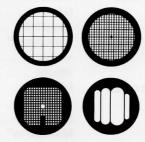
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Maxtaform Grids

Selection of Rh coated grids.

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Athene Grids

Selection of unique grids. Mesh, Honeycomb and Slot

Page 223-224

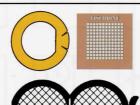




SynapTek™ Grids

Thicker, notch type, slotted grids. SynapTek™ GridStick™ for staining.

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Specialty Grids

Pyrolytic Carbon, Titanium Folding, Tomography and Chien Grids.

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Grid Boxes

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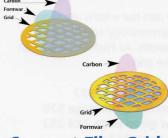






Quantifoil **Substrates**

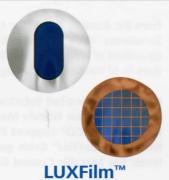
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Support Film Grids

Formvar Substrates, Carbon Support Films, NetMesh Grids, Lacey Support Films.

Page 229-232 Phone: 800-237-3526



TEM Supports

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Silicon Nitride / **Silicon Dioxide Support Films** Page 578-581



Substratek™ **TEM Substrate**

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TED PELLA, INC.

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dila illaex		
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General Grid Information

Thickness

PELCO® grids are usually thicker than similar mesh grids.

Finish

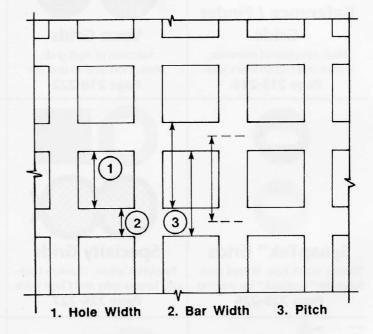
Copper, Nickel and Gold grids have a matt finish on one side and a shiny finish on the other side.

Packaging

100 grids per vial/tube, except for specials which are listed accordingly. Gold, Titanium, Molybdenum and Aluminum grids are packaged in 25's. All PELCO® Athene and Gilder grids are packaged in black antistatic vials.

Base Materials Code	
Copper, CuC	
Nickel, Ni	
Gold, Au	
Aluminum, Al	
Molybdenum, Mo	
Titanium, Ti	
Carbon, C	
Beryllium-Copper base material for SynapTek™ Grids	

Hole Width, Bar Width, Pitch



From the drawing above, the hole and bar widths are shown. Sometimes "Pitch" is used in this terminology and it is the equivalent of hole width plus bar width. As Pitch decreases, so does % of transmission through the grid.

Note: For Quantifoil Substrates go to page 577
Note: For Silicon Nitride Membranes go to page 578
Note: For PELCO® Support Films go to page 228-232

Note: For LuxFilm™ Grids go to page 233 Note: For Metallic Coated Grids go to page 234

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PELCO® Grids, packed in anti-static vials

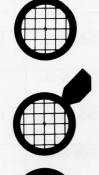
The PELCO® grids are usually somewhat thicker than similar TEM grids, but still maintain a good definition of the grid bars. The wide rim on the PELCO® grids provides additional stiffness and minimizes interfering with the sample when picking up and handling the grids with tweezers. The popular PELCO® grids were introduced over 40 years ago (1968) and have found a large international user base in all disciplines of TEM. The grids have a shiny (smooth) finish on one side and matt or dull finish on the other side. Comprehensive selection of different grid styles is offered with a standard diameter of 3.05mm. Available materials are Cu, Ni, Au, Al, Ti and Mo (for high temperature applications). Special grid coatings are a feature.

Packaging: Standard Cu grids are 100 grids/vial, except specials which are listed accordingly. Gold, Titanium, Molybdenum and Aluminum

Square Mesh	Pitch µm	Hole µm	Bar µm	% Transmission
50	508	425	83	70
75	339	284	55	70
100	254	204	50	65
150	169	125	44	60
200	127	90	37	50
300	85	54	31	40
400	64	38	26	35
500	51	28	23	30

are packaged 25 grids/vial. Special Grid Storage Boxes are available, even for the PELCO® Tabbed Grids with deeper wells.

■ PELCO® 50 Mesh Grids

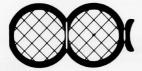


50 Mesh: Pitc	n 508μm; Hole Width 425μm; Bar Width 83μm; Transmission 70%	
1GC50	PELCO® Center-Marked Grids, 50 mesh, Copper	100/vial
1GN50	PELCO® Center-Marked Grids, 50 mesh, Nickel	100/vial
1GG50	PELCO® Center-Marked Grids, 50 mesh, Gold	25/vial





Slotted 50 x 20	00 Mesh	
1GC50/200	PELCO® Slotted 50 x 200 Mesh, Center-Marked Grids, Copper	100/vial



Folding 50 Me	sh	AA439 E
4GC50/50	PELCO® Folding 50/50 Mesh, Center-Marked Grids, Copper	100/vial

■ PELCO® 75 Mesh Grids



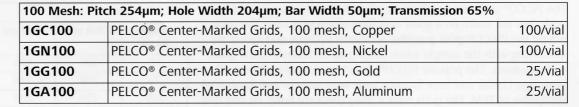
75 Mesh: Pitcl	n 339µm; Hole Width 284µm; Bar Width 55µm; Transmission 70%	
1GC75	PELCO® Center-Marked Grids, 75 mesh, Copper	100/vial
1GN75	PELCO® Center-Marked Grids, 75 mesh, Nickel	100/vial
1GG75	PELCO® Center-Marked Grids, 50 mesh, Gold	25/vial



Tabbed 75 Mesh: Pitch 339μm; Hole Width 284μm; Bar Width 55μm; Transmission 70%		
3HGC75	PELCO® Tabbed, Center-Marked Grids, 75 mesh, Copper	100/vial
3HGN75	PELCO® Tabbed, Center-Marked Grids, 75 mesh, Nickel	100/vial
3HGT75	PELCO® Tabbed, Center-Marked Grids, 75 mesh, Titanium	25/vial

■ PELCO® 100 Mesh Grids



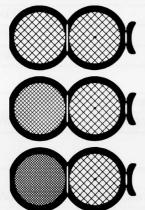




Tabbed 100 Mesh: Pitch 254μm; Hole Width 204μm; Bar Width 50μm; Transmission 65%			
3HGC100	PELCO® Tabbed Center-Marked Grids, 100 mesh, Copper	100/vial	
3HGN100	PELCO® Tabbed Center-Marked Grids, 100 mesh, Nickel	100/vial	



Slotted 100 x 4	400 Mesh	hand blok home
1GC100/400	PELCO® Slotted, 100 x 400 Mesh, Center Marked Grids, Copper	100/vial
1GN100/400	PELCO® Slotted, 100 x 400 Mesh, Center Marked Grids, Nickel	100/vial



Folding 100 Mesh		
4GC100/100	PELCO® Folding, 100/100 Mesh, Center Marked One Side Grids, Copper	100/vial
4GM100/100	PELCO® Folding, 100/100 Mesh, Center Marked One Side Grids, Molybdenum	25/vial
4GN100/100	PELCO® Folding, 100/100 Mesh, Center Marked One Side Grids, Nickel	100/vial
4GM100/200	PELCO® Folding, 100/200 Mesh, Center Marked One Side Grids, Molybdenum	25/vial
4GC100/300	PELCO® Folding, 100/300 Mesh, Center Marked One Side Grids, Copper	100/vial

■ PELCO® 150 Mesh Grids



150 Mesh: Pitch 169μm; Hole Width 125μm; Bar Width 44μm; Transmission 60%		
1GC150	PELCO® Center-Marked Grids, 150 mesh, Copper	100/vial
1GN150	PELCO® Center-Marked Grids, 150 mesh, Nickel	100/vial
1GG150	PELCO® Center-Marked Grids, 150 mesh, Gold	25/vial

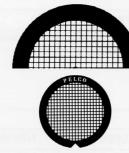


Tabbed 150 Mesh: Pitch 169μm; Hole Width 125μm; Bar Width 44μm; Transmission 60%		
3HGC150	PELCO® Tabbed Center-Marked Grids, 150 mesh, Copper	100/vial
3HGN150	PELCO® Tabbed Center-Marked Grids, 150 mesh, Nickel	100/vial

■ PELCO® 200 Mesh Grids







200 Mesh: Pitch 127μm; Hole Width 90μm; Bar Width 37μm; Transmission 50%		
1GC200	PELCO® Center-Marked Grids, 200 mesh, Copper	100/vial
1GN200	PELCO® Center-Marked Grids, 200 mesh, Nickel	100/vial
1GG200	PELCO® Center-Marked Grids, 200 mesh, Gold	25/vial
1GT200	PELCO® Center-Marked Grids, 200 mesh, Titanium	25/vial
1GA200	PELCO® Center-Marked Grids, 200 mesh, Aluminum	25/vial

Tabbed 200 Mesh: Pitch 127μm; Hole Width 90μm; Bar Width 37μm; Transmission 50%		
3HGC200	PELCO® Tabbed Center-Marked Grids, 200 mesh, Copper	100/vial
3HGN200	PELCO® Tabbed Center-Marked Grids, 200 mesh, Nickel	100/vial

Extra Open Ar	ea 200 Mesh	YELLILY SALA
4406	PELCO® Extra Open Area Grids, 200 mesh, 3.0mm O.D., Copper	25/vial

Notch Rim 200 Mesh		
1GC200NV	PELCO® Notchrim Grids, 200 mesh, 3.0mm O.D., Copper	100/vial

■ PELCO® 300 Mesh Grids

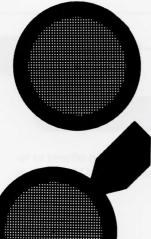


300 Mesh: P	itch 85µm; Hole Width 54µm; Bar Width 31µm; Transmission 40%	Maria Cole
1GC300	PELCO® Center-Marked Grids, 300 mesh, Copper	100/vial
1GN300	PELCO® Center-Marked Grids, 300 mesh, Nickel	100/vial
1GG300	PELCO® Center-Marked Grids, 300 mesh, Gold	25/vial
1GT300	PELCO® Center-Marked Grids, 300 mesh, Titanium	25/vial
1GM300	PELCO® Center-Marked Grids, 300 mesh, Molybdenum	25/vial



Tabbed 300 Mesh: Pitch 85µm; Hole Width 54µm; Bar Width 31µm; Transmission 40%		
3HGC300	PELCO® Tabbed Center-Marked Grids, 300 mesh, Copper	100/vial
3HGN300	PELCO® Tabbed Center-Marked Grids, 300 mesh, Nickel	100/vial
3HGT300	PELCO® Tabbed Center-Marked Grids, 300 mesh, Titanium	25/vial

■ PELCO® 400 Mesh Grids



400 Mesh: Pite	ch 64µm; Hole Width 38µm; Bar Width 26µm; Transmission 35%	
1GC400	PELCO® Center-Marked Grids, 400 mesh, Copper	100/vial
1GN400	PELCO® Center-Marked Grids, 400 mesh, Nickel	100/vial
1GG400	PELCO® Center-Marked Grids, 400 mesh, Gold	25/vial
1GM400	PELCO® Center-Marked Grids, 400 mesh, Molybdenum	25/vial

Tabbed 400 Mesh: Pitch 64μm; Hole Width 38μm; Bar Width 26μm; Transmission 35%		
3HGC400	PELCO® Tabbed Center-Marked Grids, 300 mesh, Copper	100/vial

■ PELCO® 400 Mesh Grids Continued



Extra Ope	n Area 400 Mesh	
4408	PELCO® Extra Open Area, Center-Marked Grids, 400 mesh, Copper	25/vial

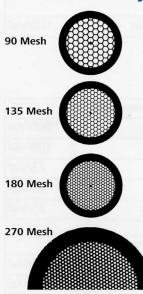
■ PELCO® 500 Mesh Grids



500 Mesh: Pitch 51μm; Hole Width 28μm; Bar Width 23μm; Transmission 30%		
1GC500	PELCO® Center-Marked Grids, 500 mesh, Copper	100/vial

Tabbed 500 Mesh: Pitch 51μm; Hole Width 28μm; Bar Width 23μm; Transmission 30%		
3HGC500	PELCO® Tabbed Center-Marked Grids, 500 mesh, Copper	100/vial

■ PELCO® Honeycomb Grids



360 Mesh

Honeycomb Grids 90, 135, 180, 270, 360 Mesh		
8GC90	PELCO® Honeycomb Center-Marked Grids, 90 mesh, Copper	100/vial
8GN90	PELCO® Honeycomb Center-Marked Grids, 90 mesh, Nickel	100/vial
8GC135	PELCO® Honeycomb Center-Marked Grids, 135 mesh, Copper	100/vial
8GC180	PELCO® Honeycomb Center-Marked Grids, 180 mesh, Copper	100/vial
8GN180	PELCO® Honeycomb Center-Marked Grids, 180 mesh, Nickel	100/vial
8GC270	PELCO® Honeycomb Center-Marked Grids, 270 mesh, Copper	100/vial
8GC360	PELCO® Honeycomb Center-Marked Grids, 360 mesh, Copper	100/vial

Tabbed Honeycomb Grids 90, 135, 270 Mesh		
8HGC90	PELCO® Tabbed Honeycomb Center-Marked Grids, 90 mesh, Copper	100/vial
8HGC135	PELCO® Tabbed Honeycomb Center-Marked Grids, 135 mesh, Copper	100/vial
8HGC270	PELCO® Tabbed Honeycomb Center-Marked Grids, 270 mesh, Copper	100/vial



■ Precision Carbon	1
Steel Wire-Cutting	Tweezer
(Tab-Nipper)	



Cuts tabs from handle grids; very fine cutting in tight places. Gold plating offered to reduce contamination and oxidation. High Precision Carbon Steel. Length: 115mm; blade width x thickness is 10.5 x 4.25mm; Style 15a.

Tab-Nipper each **511-A** Tab-Nipper, Gold Plated each

■ PELCO® Slot Grids



Slot Grids, ex	Slot Grids, extra thick (50µm) Slot 1x2mm (after F. Sjöstrand)		
Slot 1x2mm (
1GC12H	PELCO® Slot Grids, 1 x 2mm, Copper	100/vial	
1GN12H	PELCO® Slot Grids, 1 x 2mm, Nickel	100/vial	
1GM12H	PELCO® Slot Grids, 1 x 2mm, Molybdenum	25/vial	
1GG12H	PELCO® Slot Grids, 1 x 2mm, Gold	25/vial	
Slot 0.4x2mm	(after R.F. Bils)	Packaging: Standard Cu.	
1GC42S	PELCO® Slot Grids, 0.4 x 2mm, Copper	100/vial	
1GN42S	PELCO® Slot Grids, 0.4 x 2mm, Nickel	100/vial	
1GG42S	PELCO® Slot Grids, 0.4 x 2mm, Gold	25/vial	

Tabbed Slot Grids, 1x2mm, extra thick (50μm)		
3HGC12H	Cohen-PELCO® Tabbed Slot Grids, 1 x 2mm, Copper	100/vial
3HGN12H	Cohen-PELCO® Tabbed Slot Grids, 1 x 2mm, Nickel	100/vial

■ PELCO® Hole Grids



Hole Grids, extra thick (50μm)		
1GC6H	PELCO® Hole Grids, 0.6mm, Copper	100/vial
1GN6H	PELCO® Hole Grids, 0.6mm, Nickel	100/vial
1GC8H	PELCO® Hole Grids, 0.8mm, Copper	100/vial
1GC10H	PELCO® Hole Grids, 1.0mm, Copper	100/vial
1GM10H	PELCO® Hole Grids, 1.0mm, Molybdenum	25/vial
1GG10H	PELCO® Hole Grids, 1.0mm, Gold	25/vial
1GT10H	PELCO® Hole Grids, 1.0mm, Titanium	25/vial

Tabbed Hole Grid, 1.0mm, extra thick (50μm)		
3HGC10H	PELCO® Tabbed Hole Grids, 1.0mm, Copper	100/vial



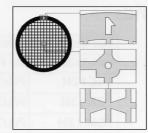
Gilder Grids

The Gilder grids are available in 50 to an unrivalled 2000 mesh. The Gilder grids feature well defined grid bars, shiny (smooth) and matt side difference and are packaged in custom anti-static vials. They are made with precision electroplating technologies. An additional feature of the Gilder grids are the rim and center marks to aid in the orientation on the grid and identification of each side. Most Gilder grids have a rim mark and many grids also have center marks. Wide selection of grid styles to support virtually every application with standard diameter of 3.05mm. Available materials are Cu, Ni, Au, Mo and Cu/Pd.

Packaging: Standard Cu or Ni 100 grids/vial, except special configurations which are listed accordingly with packaging of 25 or 50 grids/vial.

Thickness of Nickel grids is 35 microns ±5 microns.

Molybdenum is used principally in applications where its hardness, expansion coefficient, high temperature and corrosive resistance characteristics are considered important. Mo typical purity 99.9%, melting point 2617° C (4742.6°F).



Standard Mesh Grids with marks: An asymmetrical mark in the rim, shown top. Center mark for quadrant location or older style, "reverse arrow", bottom.



Fine Mesh Grids with marks: An asymmetrical mark in the rim, shown top. Center mark divides grid into 6 areas, bot-

■ Gilder 50 Mesh Grids



50 Mesh: Pitch 500μm; Hole Width 420μm; Bar Width 80μm; Transmission 70%			
G50	Gilder Grids, 50 mesh, Copper	100/vial	
G50N	Gilder Grids, 50 mesh, Nickel	100/vial	

■ Gilder 75 Mesh Grids



75 Mesh: Pitch 340μm; Hole Width 285μm; Bar Width 55μm; Transmission 66%		
G75	Gilder Grids, 75 mesh, Copper, Center & Rim Mark	100/vial

■ Gilder 100 Mesh Grids



100 Mesh: Pitch 250μm; Hole Width 205μm; Bar Width 45μm; Transmission 67%		
G100	Gilder Grids, 100 mesh, Copper, Center & Rim Mark	100/vial
G100N	Gilder Grids, 75 mesh, Nickel	100/vial



100 Mesh Molybdenum grid overall thickness: 25μm, Pitch: 250μm, Bar Width: 25μm, Hole Width: 205μm		
G100M	Gilder Grids, 100 mesh, Molybdenum, Center & Rim Mark	25/vial

■ Gilder 150 Mesh Grids



150 Mesh: Pitch 165μm; Hole Width 125μm; Bar Width 40μm; Transmission 45%		
G150	Gilder Grids, 150 mesh, Copper, Center & Rim Mark	100/vial
G150N	Gilder Grids, 150 mesh, Nickel, Center & Rim Mark	100/vial

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■ Gilder 200 Mesh Grids



200 Mesh: Pitcl	200 Mesh: Pitch 125μm; Hole Width 90μm; Bar Width 35μm; Transmission 52%		
G200	Gilder Grids, 200 mesh, Copper, Center & Rim Mark	100/vial	
G200N	Gilder Grids, 200 mesh, Nickel, Center & Rim Mark	100/vial	



200 Mesh Fine Bar: Pitch 125μm; Hole Width 113μm; Bar Width 12μm; Transmission 82%		
G200HS	Gilder Fine Bar Grids, 200 mesh, Copper, Rim Mark	100/vial
G200HSN	Gilder Fine Bar Grids, 200 mesh, Nickel, Rim Mark	100/vial
G200HSG	Gilder Fine Bar Grids, 200 mesh, Gold, Rim Mark	50/vial



200 Mesh Mol Width: 90µm	ybdenum grid overall thickness: 25µm, Pitch: 125µm, Bar Width: 35	μm, Hole
G200M	Gilder Grids, 200 mesh, Molybdenum, Center & Rim Mark	25/vial

■ Gilder 300 Mesh Grids



300 Mesh: Pitch	n 83µm; Hole Width 58µm; Bar Width 25µm; Transmission 49%	
G300	Gilder Grids, 300 mesh, Copper, Center & Rim Mark	100/vial
G300N	Gilder Grids, 300 mesh, Nickel, Center & Rim Mark	100/vial



300 Mesh Fine Bar: Pitch 83µm; Hole Width 73µm; Bar Width 10µm; Transmission 77%		
G300HS	Gilder Fine Bar Grids, 300 mesh, Copper, Rim Mark	100/vial
G300HSN	Gilder Fine Bar Grids, 300 mesh, Nickel, Rim Mark	100/vial

■ Gilder 400 Mesh Grids



400 Mesh: Pitch 62μm; Hole Width 37μm; Bar Width 25μm; Transmission 37%		
G400	Gilder Grids, 400 mesh, Copper, Center & Rim Mark	100/vial
G400G	Gilder Grids, 400 mesh, Gold, Center & Rim Mark	50/vial
G400N	Gilder Grids, 400 mesh, Nickel, Center & Rim Mark	100/vial



400 Mesh Fine Bar: Pitch 62μm; Hole Width 54μm; Bar Width 8μm; Transmission 76%		
G400HS	Gilder Fine Bar Grids, 400 mesh, Copper, Rim Mark	100/vial

■ Gilder 400 Lines Grids

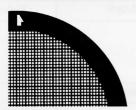


400 Line Parallel Bar: Pitch 62μm; Space Width 40μm; Bar Width 22μm; Transmission 65%		
G400P	Gilder Parallel Bar Grids, 400 lines, Copper, Rim Mark	50/vial

■ Gilder 600 Mesh Grids

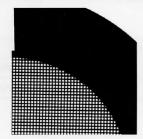


600 Mesh Fine Bar: Pitch 42μm; Hole Width 37μm; Bar Width 5μm; Transmission 78%		
G600HS	Gilder Fine Bar Grids, 600 mesh, Copper, Rim Mark	100/vial



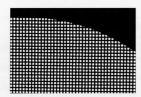
600 Mesh Thick-Thin: Hole Size 30μm; Bar Width 10/16μm; Transmission 65%		
G600TT	Gilder Thick-Thin Bar Grids, 600 mesh, Copper, Rim Mark	100/vial

■ Gilder 1000 Mesh Grids



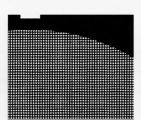
1000 Mesh Fine Bar: Pitch 25μm; Hole Width 19μm; Bar Width 6μm; Transmission 57%		
G1000HS	Gilder Fine Bar Grids, 1000 mesh, Copper, Rim Mark	25/vial
G1000HSG	Gilder Fine Bar Grids, 1000 mesh, Gold, Rim Mark	25/vial

■ Gilder 1500 Mesh Grids



1500 Mesh Fine Bar: Pitch 16.5μm; Hole Width 11.5μm; Bar Width 5μm; Transmission 49%		
G1500HS	Gilder Fine Bar Grids, 1500 mesh, Copper, Center Mark	15/vial

■ Gilder 2000 Mesh Grids



2000 Mesh Fine Bar: Pitch 12.5μm; Hole Width 7.5μm; Bar Width 5μm; Transmission 36%		
G2000HS	Gilder Fine Bar Grids, 2000 mesh, Copper, Rim Mark	15/vial

■ Gilder 100 Mesh Hexagonal, Standard Grids



100 Hexagonal Mesh: Pitch 250μm; Hole Width 220μm; Bar Width 30μm; Transmission 77%				
G100HEX Gilder Hexagonal Grids, 100 mesh, Copper 100				
G100HEX-N	Gilder Hexagonal Grids, 100 mesh, Nickel	100/vial		

■ Gilder 150 Mesh Hexagonal, Standard Grids



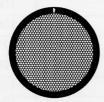
150 Hexagonal Mesh: Pitch 165μm; Hole Width 105μm; Bar Width 35μm; Transmission		
G150HEX	Gilder Hexagonal Grids, 150 mesh, Copper, Rim Mark	100/vial

■ Gilder 200 Mesh Hexagonal, Standard Grids



200 Hexagonal Mesh: Pitch 125μm; Hole Width 90μm; Bar Width 20μm; Transmission 70%				
G200HEX Gilder Hexagonal Grids, 200 mesh, Copper				
G200HEX-N	Gilder Hexagonal Grids, 200 mesh, Nickel	100/vial		

■ Gilder 300 Mesh Hexagonal, Standard Grids



300 Hexagonal Mesh: Pitch 83μm; Hole Width 58μm; Bar Width 25μm; Transmission 4		
G300HEX	Gilder Hexagonal Grids, 300 mesh, Copper, Rim Mark	100/vial

■ Gilder 200 Mesh Hexagonal, Fine Bar Grids



200 Hexagonal Transmission 82	Mesh, Fine Bar: Pitch 125μm; Hole Width 113μm; Bar Width 12μπ 2%	ı;
G200HH	Gilder Fine Bar Hexagonal Grids, 200 mesh, Copper, Rim Mark	100/vial
G200HHN	Gilder Fine Bar Hexagonal Grids, 200 mesh, Nickel, Rim Mark	100/vial

■ Gilder 300 Mesh Hexagonal, Fine Bar Grids



300 Hexagonal Mesh, Fine Bar: Pitch 83µm; Hole Width 73µm; Bar Width 10µm; Transmission 77%		
G300HH	Gilder Fine Bar Hexagonal Grids, 300 mesh, Copper, Rim Mark	100/vial
G300HHN	Gilder Fine Bar Hexagonal Grids, 300 mesh, Nickel, Rim Mark	100/vial

■ Gilder 400 Mesh Hexagonal, Fine Bar Grids



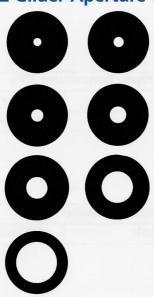
400 Hexagon Transmission	al Mesh, Fine Bar: Pitch 57µm; Hole Width 49µm; Bar Width 8µm; 74%	
G400HH	Gilder Fine Bar Hexagonal Grids, 400 mesh, Copper, Center & Rim Mark	100/vial
G400HHN	Gilder Fine Bar Hexagonal Grids, 400 mesh, Nickel, Center & Rim Mark	100/vial

■ Gilder 600 Mesh Hexagonal, Fine Bar and Finest Bar Grids



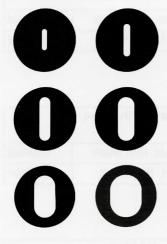
600 Hexagor Transmission	nal Mesh, Fine Bar: Pitch 37μm; Hole Width 29μm; Bar Width 8μm; 61%	
G600HH	Gilder Fine Bar Hexagonal Grids, 600 mesh, Copper, Center & Rim Mark	100/vial
600 Hexagor Transmission	nal Mesh, Finest Bar: Pitch 42µm; Hole Width 37µm; Bar Width 5µm; 78%	unfelië li
G600HHS	Gilder Finest Bar Hexagonal Grids, 600 mesh, Copper, Center Mark	100/vial

■ Gilder Aperture Grids



GN400 Gilder Aperture Grids, 0.4mm hole, Nickel 100/ GA500 Gilder Aperture Grids, 0.5mm hole, Copper 100/ GN500 Gilder Aperture Grids, 0.5mm hole, Nickel 100/ GA600 Gilder Aperture Grids, 0.6mm hole, Copper 100/ GN600 Gilder Aperture Grids, 0.6mm hole, Nickel 100/ GA800 Gilder Aperture Grids, 0.8mm hole, Copper 100/ GN800 Gilder Aperture Grids, 0.8mm hole, Nickel 100/ GA1000 Gilder Aperture Grids, 1mm hole, Nickel 100/ GN1000 Gilder Aperture Grids, 1mm hole, Nickel 100/ GN1000 Gilder Aperture Grids, 1mm hole, Nickel 100/ GA1000M Gilder Aperture Grids, 1mm hole, Nolybdenum 25/ GA1500 Gilder Aperture Grids, 1.5mm hole, Copper 100/ GN1500 Gilder Aperture Grids, 1.5mm hole, Nickel 100/ GN1500 Gilder Aperture Grids, 1.5mm hole, Nickel 100/ GN2000 Gilder Aperture Grids, 2.0mm hole, Copper 100/ GN2000 Gilder Aperture Grids, 2.0mm hole, Copper 100/	1100		
GA500 Gilder Aperture Grids, 0.5mm hole, Copper 100/GN500 Gilder Aperture Grids, 0.5mm hole, Nickel 100/GA600 Gilder Aperture Grids, 0.6mm hole, Copper 100/GN600 Gilder Aperture Grids, 0.6mm hole, Nickel 100/GA800 Gilder Aperture Grids, 0.8mm hole, Copper 100/GN800 Gilder Aperture Grids, 0.8mm hole, Nickel 100/GA1000 Gilder Aperture Grids, 1mm hole, Copper 100/GN1000 Gilder Aperture Grids, 1mm hole, Nickel 100/GA1000M Gilder Aperture Grids, 1mm hole, Nickel 100/GA1000M Gilder Aperture Grids, 1.5mm hole, Copper 100/GN1500 Gilder Aperture Grids, 1.5mm hole, Copper 100/GN1500 Gilder Aperture Grids, 1.5mm hole, Nickel 100/GN1500 Gilder Aperture Grids, 1.5mm hole, Nickel 100/GN1500 Gilder Aperture Grids, 2.0mm hole, Copper 100/GN2000 GILDer Aperture Grids, 2.0mm hole,	GA400	Gilder Aperture Grids, 0.4mm hole, Copper	100/vial
GN500 Gilder Aperture Grids, 0.5mm hole, Nickel 100/GA600 Gilder Aperture Grids, 0.6mm hole, Copper 100/GN600 Gilder Aperture Grids, 0.6mm hole, Nickel 100/GA800 Gilder Aperture Grids, 0.8mm hole, Copper 100/GN800 Gilder Aperture Grids, 0.8mm hole, Nickel 100/GA1000 Gilder Aperture Grids, 1mm hole, Copper 100/GN1000 Gilder Aperture Grids, 1mm hole, Nickel 100/GA1000M Gilder Aperture Grids, 1mm hole, Nickel 100/GA1000M Gilder Aperture Grids, 1.5mm hole, Molybdenum 25/GN1500 Gilder Aperture Grids, 1.5mm hole, Copper 100/GN1500 Gilder Aperture Grids, 1.5mm hole, Nickel 100/GA2000 Gilder Aperture Grids, 2.0mm hole, Copper 100/GN1500 Gilder Aperture Grids, 2.0mm hole, Copper 100/GN2000 Gilder Aperture Grids, 2.0mm ho	GN400	Gilder Aperture Grids, 0.4mm hole, Nickel	100/vial
GA600 Gilder Aperture Grids, 0.6mm hole, Copper 100/ GN600 Gilder Aperture Grids, 0.6mm hole, Nickel 100/ GA800 Gilder Aperture Grids, 0.8mm hole, Copper 100/ GN800 Gilder Aperture Grids, 0.8mm hole, Nickel 100/ GA1000 Gilder Aperture Grids, 1mm hole, Copper 100/ GN1000 Gilder Aperture Grids, 1mm hole, Nickel 100/ GA1000M Gilder Aperture Grids, 1mm hole, Molybdenum 25/ GA1500 Gilder Aperture Grids, 1.5mm hole, Copper 100/ GN1500 Gilder Aperture Grids, 1.5mm hole, Nickel 100/ GN1500 Gilder Aperture Grids, 1.5mm hole, Nickel 100/ GA2000 Gilder Aperture Grids, 2.0mm hole, Copper 100/	GA500	Gilder Aperture Grids, 0.5mm hole, Copper	100/vial
GN600 Gilder Aperture Grids, 0.6mm hole, Nickel 100/ GA800 Gilder Aperture Grids, 0.8mm hole, Copper 100/ GN800 Gilder Aperture Grids, 0.8mm hole, Nickel 100/ GA1000 Gilder Aperture Grids, 1mm hole, Copper 100/ GN1000 Gilder Aperture Grids, 1mm hole, Nickel 100/ GA1000M Gilder Aperture Grids, 1mm hole, Nickel 100/ GA1500 Gilder Aperture Grids, 1.5mm hole, Copper 100/ GN1500 Gilder Aperture Grids, 1.5mm hole, Nickel 100/ GA2000 Gilder Aperture Grids, 2.0mm hole, Copper 100/	GN500	Gilder Aperture Grids, 0.5mm hole, Nickel	100/vial
GA800 Gilder Aperture Grids, 0.8mm hole, Copper 100/ GN800 Gilder Aperture Grids, 0.8mm hole, Nickel 100/ GA1000 Gilder Aperture Grids, 1mm hole, Copper 100/ GN1000 Gilder Aperture Grids, 1mm hole, Nickel 100/ GA1000M Gilder Aperture Grids, 1mm hole, Molybdenum 25/ GA1500 Gilder Aperture Grids, 1.5mm hole, Copper 100/ GN1500 Gilder Aperture Grids, 1.5mm hole, Nickel 100/ GA2000 Gilder Aperture Grids, 2.0mm hole, Copper 100/	GA600	Gilder Aperture Grids, 0.6mm hole, Copper	100/vial
GN800 Gilder Aperture Grids, 0.8mm hole, Nickel 100/ GA1000 Gilder Aperture Grids, 1mm hole, Copper 100/ GN1000 Gilder Aperture Grids, 1mm hole, Nickel 100/ GA1000M Gilder Aperture Grids, 1mm hole, Molybdenum 25/ GA1500 Gilder Aperture Grids, 1.5mm hole, Copper 100/ GN1500 Gilder Aperture Grids, 1.5mm hole, Nickel 100/ GA2000 Gilder Aperture Grids, 2.0mm hole, Copper 100/	GN600	Gilder Aperture Grids, 0.6mm hole, Nickel	100/vial
GA1000Gilder Aperture Grids, 1mm hole, Copper100/GN1000Gilder Aperture Grids, 1mm hole, Nickel100/GA1000MGilder Aperture Grids, 1mm hole, Molybdenum25/GA1500Gilder Aperture Grids, 1.5mm hole, Copper100/GN1500Gilder Aperture Grids, 1.5mm hole, Nickel100/GA2000Gilder Aperture Grids, 2.0mm hole, Copper100/	GA800	Gilder Aperture Grids, 0.8mm hole, Copper	100/vial
GN1000Gilder Aperture Grids, 1mm hole, Nickel100/GA1000MGilder Aperture Grids, 1mm hole, Molybdenum25/GA1500Gilder Aperture Grids, 1.5mm hole, Copper100/GN1500Gilder Aperture Grids, 1.5mm hole, Nickel100/GA2000Gilder Aperture Grids, 2.0mm hole, Copper100/	GN800	Gilder Aperture Grids, 0.8mm hole, Nickel	100/vial
GA1000MGilder Aperture Grids, 1mm hole, Molybdenum25/GA1500Gilder Aperture Grids, 1.5mm hole, Copper100/GN1500Gilder Aperture Grids, 1.5mm hole, Nickel100/GA2000Gilder Aperture Grids, 2.0mm hole, Copper100/	GA1000	Gilder Aperture Grids, 1mm hole, Copper	100/vial
GA1500Gilder Aperture Grids, 1.5mm hole, Copper100/GN1500Gilder Aperture Grids, 1.5mm hole, Nickel100/GA2000Gilder Aperture Grids, 2.0mm hole, Copper100/	GN1000	Gilder Aperture Grids, 1mm hole, Nickel	100/vial
GN1500Gilder Aperture Grids, 1.5mm hole, Nickel100/GA2000Gilder Aperture Grids, 2.0mm hole, Copper100/	GA1000M	Gilder Aperture Grids, 1mm hole, Molybdenum	25/vial
GA2000 Gilder Aperture Grids, 2.0mm hole, Copper 100/	GA1500	Gilder Aperture Grids, 1.5mm hole, Copper	100/vial
	GN1500	Gilder Aperture Grids, 1.5mm hole, Nickel	100/vial
GN2000 Gilder Aperture Grids 2 0mm hale Nickel 1000	GA2000	Gilder Aperture Grids, 2.0mm hole, Copper	100/vial
Gilder Aperture Gilds, 2.0min hole, Nickei	GN2000	Gilder Aperture Grids, 2.0mm hole, Nickel	100/vial

■ Gilder Slot Grids



G1X0.2CU	Gilder Slot Grids, 1 x 0.2mm, Copper	100/vial
G1X0.2N	Gilder Slot Grids, 1 x 0.2mm, Nickel	100/vial
G1.5X0.3CU	Gilder Slot Grids, 1.5 x 0.3mm, Copper	100/vial
G1.5X0.3N	Gilder Slot Grids, 1.5 x 0.3mm, Nickel	100/vial
G2X0.5CU	Gilder Slot Grids, 2 x 0.5mm, Copper	100/vial
G2X0.5N	Gilder Slot Grids, 2 x 0.5mm, Nickel	100/vial
G2X0.75CU	Gilder Slot Grids, 2 x 0.75mm, Copper	100/vial
G2X0.75N	Gilder Slot Grids, 2 x 0.75mm, Nickel	100/vial
G1X2CU	Gilder Slot Grids, 2 x 1mm, Copper	100/vial
G1X2N	Gilder Slot Grids, 2 x 1mm, Nickel	100/vial
G1X2CU/PD	Gilder Slot Grids, 2 x 1mm, Copper/Palladium	100/vial
GS1X2M	Gilder Slot Grids, 2 x 1mm, Molybdenum	25/vial
G2X1.5CU	Gilder Slot Grids, 2 x 1.5mm, Copper	100/vial
G2X1.5N	Gilder Slot Grids, 2 x 1.5mm, Nickel	_ 100/vial

■ Gilder Triple Slot Grid



Three .54mm x .95mm slots in a 3.05mm copper grid. Extra bars provide better support over a large area. If a supporting film is ruptured in one area it may not effect the other 2 areas. This is an advantage compared to one-slot grids.

1GC3X1Gilder Triple Slot Grids, Copper100/vial

Gilder Grid Size Specifications

Square Mesh	Square Mesh	Pitch µm	Hole Width µm	m Bar Width µm	% Transmission	Ma	rk
					Center	Rim	
G50	500	420	80	70	un-aracel	_	
G75	340	285	55	66	•	•	
G100	250	205	45	67	The second second	•	
G100HEX	250	220	30	77			
G150	165	125	40	45	•	•	
G150HEX	165	130	35	62		•	
G200	125	90	35	52	•	•	
G200HEX	125	105	20	70	_		
G200HH	125	113	12	82	-	•	
G200HS	125	113	12	82		•	
G300	83	58	25	49	•	•	
G300HS	83	73	10	77		•	
G300HEX	83	58	25	49		•	
G300HH	83	73	10	77		•	
G400	62	37	25	37	•	•	
G400HS	62	54	8	76		•	
G400HEX	62	37	25	36			
G400HH	57	49	8	74	· Health	•	
G400P	62	40	22	65		•	
G600TT	-	30	10/16	Did - Paj <u>a</u> BibU()	OUT SHALL	4	
G600HH	37	29	8	61	Tra-ern-cell	• 4	
G600HHS	42	37	5	78	_	•	
G600HSS	42	37	5	78	- U.E.E.E.R.F.I	•	
G1000HS	25	19	6	57	Uni-Afface (•	
G1500HS	16.5	11.5	5	49	-	•	
G2000HS	12.5	7.5	5	36	HATELENS !		

■ The Three Most Popular Biology Tweezers for TEM Grids



Prod #	Description	Style	Length	Metal	Points Width x Thickness	Unit
503	DUMONT Biology	3	120mm	SS	0.08 x 0.04mm	each
503-NM	DUMONT Biology	3	120mm	NM-SS	0.08 x 0.04mm	each



505	DUMONT Biology	5	110mm	SS polished	0.06 x 0.02mm	each
505-NM	DUMONT Biology	5	110mm	NM-SS polished	0.06 x 0.02mm	each

0	J NOC MOX	PELCOEMX

510	PELCO® Biology by DUMONT	EMX	105mm	SS	0.08 x 0.04mm	each
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Note: For the complete listing of all Tweezers go to pages 628-660.

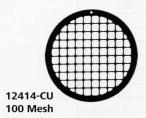
Phone: 800-237-3526 www.tedpella.com

StrataTek™ TEM Grids

The StrataTek™ TEM grids for Transmission Electron Microscopy have a thickness of 25um and are manufactured using a micron-precision etching process of thin foils. This method produces sturdy and rigid TEM grids. Both sides have the same surface characterization. StrataTek™ grids have a slightly higher density than grids made by electroplating. Corners where bars meet tend to be rounded.

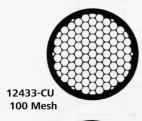
Available in coarser mesh sizes only, with configurations in square and hexagonal mesh, slot, hole and folding grids. Grids have standard diameter of 3.05mm.

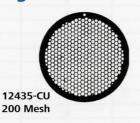
■ StrataTek™ Square Mesh Grids

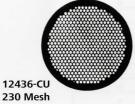


12410-CU	StrataTek™ Square Mesh Grids, 50 mesh, Copper	100/vial
12412-CU	StrataTek™ Square Mesh Grids, 75 mesh, Copper	100/vial
12414-CU	StrataTek™ Square Mesh Grids, 100 mesh, Copper	100/vial
12416-CU	StrataTek™ Square Mesh Grids, 150 mesh, Copper	100/vial

StrataTek™ Hexagonal Grids







12431-CU	StrataTek™ Hexagonal Grids, 50 mesh, Copper	100/vial
12432-CU	StrataTek™ Hexagonal Grids, 75 mesh, Copper	100/vial
12433-CU	StrataTek™ Hexagonal Grids, 100 mesh, Copper	100/vial
12434-CU	StrataTek™ Hexagonal Grids, 150 mesh, Copper	100/vial
12435-CU	StrataTek™ Hexagonal Grids, 200 mesh, Copper	100/vial
12436-CU	StrataTek™ Hexagonal Grids, 230 mesh, Copper	100/vial

StrataTek™ Slotted Grids



12461-CU	StrataTek™ Slotted Grids, 2 x 1.5mm, Copper	100/vial
12463-CU	StrataTek™ Slotted Grids, 2 x 0.75mm, Copper	100/vial
12465-CU	StrataTek™ Slotted Grids, 1.5 x 0.3mm, Copper	100/vial
12467-CU	StrataTek™ Slotted Grids, 1 x 0.2mm, Copper	100/vial
12468-CU	StrataTek™ Slotted Grids, 0.5 x 0.2mm, Copper	100/vial

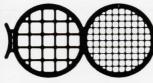
■ StrataTek[™] Rectangular Mesh Grids with Middle Bar



12475-CU	StrataTek™ Rectangular Mesh Grids with Middle Bar, 50 mesh,	100/vial
THE NAME OF	Copper	M01-505
12476-CU	StrataTek™ Rectangular Mesh Grids with Middle Bar, 75 mesh, Copper	100/vial
12477-CU	StrataTek™ Rectangular Mesh Grids with Middle Bar, 100 mesh, Copper	100/vial

StrataTek™ TEM Grids continued

■ StrataTek™ Double Folding Mesh Grids



12480-CU	StrataTek™ Double Folding Grids, 50/50 mesh, Copper	100/vial
12481-CU	StrataTek™ Double Folding Grids, 50/100 mesh, Copper	100/vial
12483-CU	StrataTek™ Double Folding Grids, 100/200 mesh, Copper	100/vial

12481-CU 50/100 Mesh

■ StrataTek[™] Double Folding Hole Grids



12490-CU	StrataTek™ Double Folding Hole Grids, 1/1mm, Copper	100/vial
12491-CU	StrataTek™ Double Folding Hole Grids, 1.5/1mm, Copper	100/vial
12492-CU	StrataTek™ Double Folding Hole Grids, 1.5/1.5mm, Copper	100/vial
12493-CU	StrataTek™ Double Folding Hole Grids, 1.4/1.8mm, Copper	100/vial
12494-CU	StrataTek™ Double Folding Hole Grids, 2.0/1.8mm, Copper	100/vial

StrataTek™ Grid Size Specifications

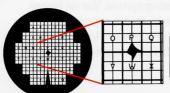
Square Mesh	Pitch µm	Hole Width µm	Bar Width µm	% Transmission
50	530	450	80	72
75	350	300	50	73.5
100	260	230	30	78
150	180	140	40	60
Hex Mesh				
50	530	450	80	72
75	359	300	50	73.5
100	260	230	30	78
150	180	140	40	60
200	130	100	30	59
230	110	85	25	60

Reference Finder Grids

Relocating a particular grid square or area by a logical alphabetical or numeric (or both) arrangement can reduce the time spent for specimen analysis. Exact grid square definition may even be a requirement in forensic and asbestos analysis. Certainly there can be greatly increased confidence by the electron microscopist that a precise grid square can be found where a feature is of interest while moving about the other parts of the specimen on the grid.

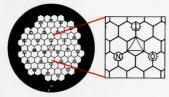
Your need or wish can most likely be filled with one or more reference grid styles listed below.

■ Maxtaform[™] Style H2 Grids



79750	Maxtaform™ Reference Finder Grids, Style H2, 200 mesh, Copper	100/vial
79751	Maxtaform™ Reference Finder Grids, Style H2, 200 mesh, Nickel	100/vial

■ Maxtaform[™] Style H6 Grids

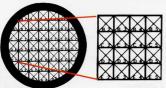


79755	Maxtaform™ Reference Finder Grids, Style H6, 235 pitch*, Cop-	100/vial
79756	Maxtaform™ Reference Finder Grids, StyleH6, 235 pitch*, Nickel	100/vial

^{*}pitch is the complete width of one space plus one bar in µm

Reference Finder

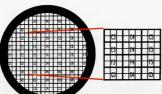
Micron Index | Grids



squares divided into triangles, alphanumeric

1			
1	79021C	Micron Index 1 Grids, 100 mesh, Copper	each

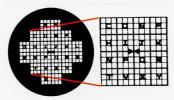
■ Micron, Asbestos Reference Index Grids



thick-thin bar, alphanumeric, notched

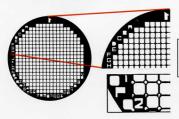
79015	Micron, Asbestos Reference Grids, 200 mesh, Copper	each
7 7 90 13	Microff, Asbestos Reference diffus, 200 mesh, copper	Cacii

■ Gilder Reference Locater Grids



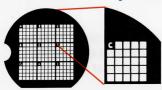
2 Styles

G200F2	Gilder Reference Locater Grids, 24 blocks of 9 cells	25/vial
	ID by letter in center, Copper	



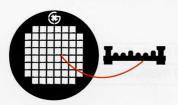
G200HF3	Gilder Reference Locater Grids, 332 cells unique by alphanumeric	25/vial
	code, Copper	

■ PELCO® Pinpointer Grids



7GC200	PELCO® Pinpointer Grids, 3.0mm O.D., 200 mesh, Copper	100/vial
7HGN100	PELCO® Pinpointer Grids, 3.0mm O.D., 200 mesh, Nickel	100/vial

■ Gilder Finder Grids



Each of the 60 square grids is identified using a base two binary numbering system. the six binary number symbols appear on the bottom grid bars along the horizontal axis. Zero is represented by a short pillar and one by a longer pillar. The enlarged section shown is of grid square No. 9 - a long pillar at the extreme right represents decimal 1 and a long pillar fourth from the right represents decimal 8.

Pitch= 250μ; Bar width vertical axis= 40μ;

Hole width, vertical axis= 210µ.

Gilder Finder Grids, 3.05mm O.D., 100 mesh

G100F1	Gilder Finder Grids, 100 mesh, Copper	100/vial
GIOOFI	alidei Tilidei dilas, 100 mesti, coppei	TOO/VIGIT

Maxtaform™ Grids

Maxtaform™ introduced "flashed" (plated one side with Rhodium) grids to give positive identification to one surface of the grid. These "High Grade" grids also eliminate tarnishing of the Cu grids with the Rhodium flashing. Maxtaform™ also manufactures a range of precise indicator/reference grids.

■ Maxtaform[™] 100 Mesh Grids



100 Mesh: Rhodium Coated Copper		
100/vial		

■ Maxtaform[™] 150 Mesh Grids



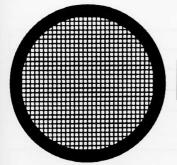
150 Mesh: Rhodium Coated Copper		
79705	Maxtaform™ Grid, 150 mesh, Rh Flashed Copper	100/vial

■ Maxtaform[™] 200 Mesh Grids



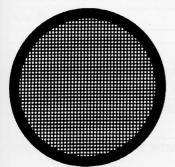
200 Mesh: Rhodium Coated Copper		
79709	Maxtaform™ Grid, 200 mesh, Rh Flashed Copper	100/vial

■ Maxtaform[™] 300 Mesh Grids



300 Mesh: Rhodium Coated Copper		
79710	Maxtaform™ Grid, 300 mesh, Rh Flashed Copper	100/vial

■ Maxtaform[™] 400 Mesh Grids



400 Mesh: Rhodium Coated Copper		
79712	Maxtaform™ Grid, 400 mesh, Rh Flashed Copper	100/vial

Veco Center Reference

Veco Grids

The VECO grids are the most rigid of all mesh grids and offer superior strength while handling. These 3.05mm (0.12")-OD grids are manufactured by a precision electroplating process and have a thickness of 20 μ m. These grids have a shiny and matt side. VECO grids are available in different styles with square, thin/thick bar and hexagonal, mesh, holes and slots. Materials are Cu, Ni and Au. Packaging for the Cu and Ni grids is 100/vial and for Au grids 25/vial.

Square Mesh	Pitch µm	Hole Width µm	Bar Width µm
50	500	450	50
75	333	283	50
100	250	200	50
150	167	117	50
200	125	85	40
300	83	45	38
400	63	30	33

■ Veco 50 Mesh Center Reference Grids



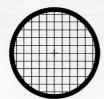
50 Mesh: Pitch 500μm; Hole Width 450μm; Bar Width 50μm		
12551-CU	Veco Center Reference Grids, 50 mesh, Copper	100/vial
12552-NI	Veco Center Reference Grids, 50 mesh, Nickel	100/vial
12553-AU	Veco Center Reference Grids, 50 mesh, Gold	25/vial

■ Veco 75 Mesh Grids



75 Mesh: Pitch 333μm; Hole Width 283μm; Bar Width 50μm		
12555-CU	Veco Center Reference Grids, 75 mesh, Copper	100/vial
12556-NI	Veco Center Reference Grids, 75 mesh, Nickel	100/vial
12557-AU	Veco Center Reference Grids, 75 mesh, Gold	25/vial

■ Veco 100 Mesh Center Reference Grids



100 Mesh: Pitch 250μm; Hole Width 200μm; Bar Width 50μm		
12559-CU	Veco Center Reference Grids, 100 mesh, Copper	100/vial
12560-NI	Veco Center Reference Grids, 100 mesh, Nickel	100/vial
12562-AU	Veco Center Reference Grids, 100 mesh, Gold	25/vial

■ Veco 150 Mesh Center Reference Grids

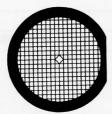


150 Mesh: Pitch 167μm; Hole Width 117μm; Bar Width 50μm		
12563-CU	Veco Center Reference Grids, 150 mesh, Copper	100/vial
12564-NI	Veco Center Reference Grids, 150 mesh, Nickel	100/vial
12566-AU	Veco Center Reference Grids, 150 mesh, Gold	25/vial

■ Veco 200 Mesh Center Reference Grids



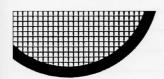
200 Mesh: Pitch 125μm; Hole Width 85μm; Bar Width 40μm		
12567-CU	Veco Center Reference Grids, 200 mesh, Copper	100/vial
12568-NI	Veco Center Reference Grids, 200 mesh, Nickel	100/vial
12569-AU	Veco Center Reference Grids, 200 mesh, Gold	25/vial



200 Mesh: with Cut Off and Center Box		
12579-CU	Veco Center Reference Grids with Cut Off and Center Box, 200 mesh, Copper	100/vial
12580-NI	Veco Center Reference Grids with Cut Off and Center Box, 200 mesh, Nickel	100/vial
12581-AU	Veco Center Reference Grids with Cut Off and Center Box, 200 mesh, Gold	25/vial

Veco Center Reference Grids Continued

■ Veco 300 Mesh Center Reference Grids



300 Mesh: Pitch 83μm; Hole Width 45μm; Bar Width 38μm		
12571-CU	Veco Center Reference Grids, 300 mesh, Copper	100/vial
12572-NI	Veco Center Reference Grids, 300 mesh, Nickel	100/vial
12573-AU	Veco Center Reference Grids, 300 mesh, Gold	25/vial

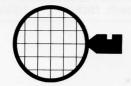
■ Veco 400 Mesh Center Reference Grids



400 Mesh: Pitch 63μm; Hole Width 30μm; Bar Width 33μm		
12575-CU	Veco Center Reference Grids, 400 mesh, Copper	100/vial
12576-NI	Veco Center Reference Grids, 400 mesh, Nickel	100/vial
12577-AU	Veco Center Reference Grids, 400 mesh, Gold	25/vial

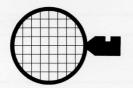
Veco Handle Grids

■ Veco 50 Mesh Handle Grids



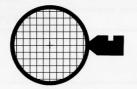
50 Mesh Handle: Pitch 500μm; Hole Width 450μm; Bar Width 50μm			
12583-CU	Veco Handle Grids, 50 mesh, Copper	100/vial	
12584-NI	Veco Handle Grids, 50 mesh, Nickel	100/vial	

■ Veco 75 Mesh Handle Grids



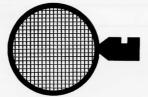
75 Mesh Handle: Pitch 333µm; Hole Width 283µm; Bar Width 50µm			
12586-CU	Veco Handle Grids, 75 mesh, Copper	100/vial	
12587-NI	Veco Handle Grids, 75 mesh, Nickel	100/vial	

■ Veco 100 Mesh Handle Grids



100 Mesh Handle: Pitch 250μm; Hole Width 200μm; Bar Width 50μm			
12589-CU	Veco Handle Grids, 100 mesh, Copper	100/vial	
12590-NI	Veco Handle Grids, 100 mesh, Nickel	100/vial	

■ Veco 200 Mesh Handle Grids



200 Mesh Handle: Pitch 125μm; Hole Width 85μm; Bar Width 40μm			
12592-CU	Veco Handle Grids, 200 mesh, Copper	100/vial	
12593-NI	Veco Handle Grids, 200 mesh, Nickel	100/vial	

■ Veco 300 Mesh Handle Grids



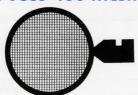
300 Mesh Handle: Pitch 83µm; Hole Width 45µm; Bar Width 38µm		
12595-CU	Veco Handle Grids, 300 mesh, Copper	100/vial
12596-NI	Veco Handle Grids, 300 mesh, Nickel	100/vial

TED PELLA, INC.

Veco Handle, Thick-Thin, Slotted Pattern, Single Slot

Veco Handle Grids Continued

■ Veco 400 Mesh Handle Grids



400 Mesh Handle: Pitch 63μm; Hole Width 30μm; Bar Width 33μm			
12598-CU	Veco Handle Grids, 400 mesh, Copper	100/vial	
12599-NI	Veco Handle Grids, 400 mesh, Nickel	100/vial	

■ Veco Thick-Thin Bar Grids

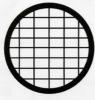


400 Mesh Thick-Thin Grids		
12604-CU	Veco Thick-Thin Grids, 100 mesh, Copper	100/vial
12605-NI	Veco Thick-Thin Grids, 100 mesh, Nickel	100/vial



400 Mesh Thick-Thin Grids with Center Reference			
12607-CU	Veco Thick-Thin Grids with Center Reference, 100 mesh, Copper	100/vial	
12608-NI	Veco Thick-Thin Grids with Center Reference, 100 mesh, Nickel	100/vial	

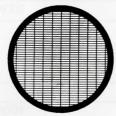
■ Veco Slotted Pattern Grids



50/75 Mesh Slotted Pattern Grids		
12610-CU	Veco Slotted Pattern Grids, 50/75 mesh, Copper	100/vial



75/300 Mesh Slotted Pattern Grids			
12613-CU	Veco Slotted Pattern Grids, 75/300 mesh, Copper	100/vial	
12614-N	Veco Slotted Pattern Grids, 75/300 mesh, Nickel	100/vial	



100/400 Mesh Slotted Pattern Grids			
12616-CU	Veco Slotted Pattern Grids, 100/400 mesh, Copper	100/vial	
12614-NI	Veco Slotted Pattern Grids, 100/400 mesh, Nickel	100/vial	

■ Veco Single Slot Grids



Single Slot Grids, 2 x 0.6mm			
12667-CU	Veco Single Slot Grids, 2 x 0.6mm, Copper	100/vial	
12668-NI	Veco Single Slot Grids, 2 x 0.6mm, Nickel	100/via	

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■ Veco Single Slot Grids Continued



Single Slot Grids, 1 x 0.2mm		
12670-CU	Veco Single Slot Grids, 1 x 0.2mm, Copper	100/vial

Veco Grid Size Specifications

Square Mesh	Pitch µm	Hole µm	Bar µm
50	500	450	50
75	333	283	50
100	250	200	50
150	167	117	50
200	125	85	40
300	83	45	38
400	63	30	33
Slotted Pattern Mesh			1
50/75	50/333	450/283	50/50
75/300	333/83	283/43	40/40
100/400	250/63	212/25	38/38
Hexagonal Mesh			STREET,
75	333	283	50
100	250	200	50
200	125	85	40
300	83	45	38
400	63	30	33

Veco Hexagonal Grids

■ Veco 75 Mesh Hexagonal Grids



75 Mesh, Hexagonal Grids		
12630-CU	Veco Hexagonal, 75 mesh, Copper	100/vial
12631-NI	Veco Hexagonal, 75 mesh, Nickel	100/vial

■ Veco 100 Mesh Hexagonal Grids



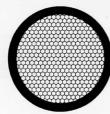
100 Mesh, Hexagonal Grids		
12633-CU	Veco Hexagonal, 100 mesh, Copper	100/vial
12634-NI	Veco Hexagonal, 100 mesh, Nickel	100/vial

■ Veco 200 Mesh Hexagonal Grids



200 Mesh, Hexagonal Grids		
12636-CU	Veco Hexagonal, 200 mesh, Copper	100/vial
12637-NI	Veco Hexagonal, 200 mesh, Nickel	100/vial

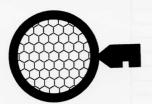
■ Veco 300 Mesh Hexagonal Grids



300 Mesh, Hexagonal Grids		
12639-CU	Veco Hexagonal, 300 mesh, Copper	100/vial
12640-NI	Veco Hexagonal, 300 mesh, Nickel	100/vial

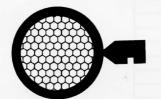
Veco Hexagonal Handle Grids

■ Veco 75 Mesh Hexagonal Handle Grids



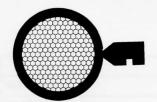
75 Mesh, Hexagonal Handle Grids		
12642-CU	Veco Hexagonal Handle Grids, 75 mesh, Copper	100/vial
12643-NI	Veco Hexagonal Handle Grids, 75 mesh, Nickel	100/vial

■ Veco 100 Mesh Hexagonal Handle Grids



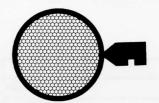
100 Mesh, Hexagonal Handle Grids		
12646-CU	Veco Hexagonal Handle Grids, 100 mesh, Copper	100/vial
12647-NI	Veco Hexagonal Handle Grids, 100 mesh, Nickel	100/vial

■ Veco 200 Mesh Hexagonal Handle Grids



200 Mesh, Hexagonal Handle Grids		
12649-CU	Veco Hexagonal Handle Grids, 200 mesh, Copper	100/vial
12650-NI	Veco Hexagonal Handle Grids, 200 mesh, Nickel	100/vial

■ Veco 300 Mesh Hexagonal Handle Grids



300 Mesh, Hexagonal Handle Grids		
12652-CU	Veco Hexagonal Handle Grids, 300 mesh, Copper	100/vial
12653-NI	Veco Hexagonal Handle Grids, 300 mesh, Nickel	100/vial

■ Veco 400 Mesh Hexagonal Handle Grids

400 Mesh, Hexagonal Handle Grids		
12655-CU	Veco Hexagonal Handle Grids, 300 mesh, Copper	100/vial
12656-NI	Veco Hexagonal Handle Grids, 300 mesh, Nickel	100/vial

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Athene Grids

Athene grids production started over 60 years ago, about 1948, and still retain the qualities which made the pioneer electron microscopists appreciative: sharp burr-free bars and corners, and close quality inspection. Different styles have been added over the years. Styles available are square mesh, honeycomb and slots. Standard diameter is 3.05mm and materials are in Cu, Ni and Au.

■ Athene 50 Mesh Grids



50 Mesh, Holes 450μm square		
G209	Athene Grids, 50 mesh, Copper	100/vial

■ Athene 150 Mesh Grids



150 Mesh, Holes 150μm square		
G201	Athene Grids, 150 mesh, Copper	100/vial

■ Athene 200 Mesh Grids



200 Mesh, Holes 100μm square		
G202	Athene Grids, 200 mesh, Copper	100/vial
G202N	Athene Grids, 200 mesh, Nickel	100/vial



200 Mesh, Thin-Bar, 10µm bar width, center marked		
G2002	Athene Thin-Bar Grids, 200 mesh, Copper	100/vial
G2002N	Athene Thin-Bar Grids, 200 mesh, Nickel	100/vial



200 Mesh, Thick-Thin Bar, 105µm square holes, center marked		
G206	Athene Thick-Thin Bar Grids, 200 mesh, Copper	100/vial



200 Mesh, SIRA, open central square		
G216	Athene SIRA Grids, 200 mesh, Copper	100/vial



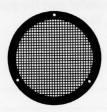
200 Mesh, center marked		
G2220C	Athene Center Marked Grids, 200 mesh, Copper	100/vial
G2220A	Athene Center Marked Grids, 200 mesh, Gold	50/vial

GRIDS

Athene Mesh; Honeycomb; Polyslot

Athene Grids continued

■ Athene 300 Mesh Grids



300 Mesh, Holes 70μm square		
G203	Athene Grids, 300 mesh, Copper	100/vial
G203N	Athene Grids, 300 mesh, Nickel	100/vial



300 Mesh, Thin-Bar, 10μm bar width, center marked		
G2003	Athene Thin-Bar Grids, 300 mesh, Copper	100/vial
G2003N	Athene Thin-Bar Grids, 300 mesh, Nickel	100/vial

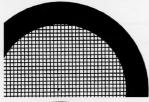


300 Mesh, Thick-Thin Bar, 75µm square holes, center marked		
G207	Athene Thick-Thin Bar Grids, 300 mesh, Copper	100/vial

■ Athene 400 Mesh Grids



400 Mesh, Holes 45μm square		
G204	Athene Grids, 400 mesh, Copper	100/vial
G2400A	Athene Grids, 400 mesh, Gold	50/vial



400 Mesh, Thin-Bar, 10μm bar width, center marked		
G2004	Athene Thin-Bar Grids, 400 mesh, Copper	100/vial



400 Line, Parallel Bar		
G2016A	Athene Parallel Bar Grids, 400 mesh, Copper	100/vial

■ Athene Honeycomb Mesh Grids



100 Mesh Honeycomb, 240µm across opening		
G214	Athene Hexagon Grids,100 mesh, Copper	100/vial
G214N	Athene Hexagon Grids, 100 mesh, Nickel	100/vial

400 Mesh Honeycomb		
G2440C	Athene Grids, 400 mesh, Copper	100/vial

■ Athene Polyslot Grids



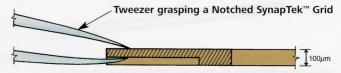
4 Slots		
G227	Athene Polyslot Grids, 350 to 700µm, Copper	100/vial

PELCO® SynapTek™ Grids

■ SynapTek™ Grids

The SynapTek™ grids are made of a special alloy (beryllium copper) which makes these grids extremely sturdy and gives perfect stability for coating with a support film. These grids are easy to clean, contamination free and reusable after cleaning. The thickness of the SynapTek™ grids is 100µm (4 mil), diameter is 3.05mm. Standard oval slot size is 1x2mm. The DOT type is also available with a slot size of 0.5x2mm. The gold plated SynapTek™ grid (GILDED) has been developed for special applica-

special identity marking, easy to grasp with your tweezers



Notched SynapTek™ Grids permit easier grasping by tweezers.

tions such as immunology research. This innovative design may increase your confidence with grid handling.

DOT: One side of the grid is marked with 2 dots for clear identification, visible to the naked eye.

NUM: A number stamped on the grid for identification. Numbers are in random order and may be duplicated.

NOTCH: An indentation is stamped on one side of the grid to enable easy grasping by tweezers.

mm slot)	
SynapTek™ DOT Grids, 1 x 2mm slot, Beryllium-Copper	100/vial
2mm slot)	
SynapTek™ DOT Grids, 0.5 x 2mm slot, Beryllium-Copper	100/vial
CALLY VIOLENCE TO THE COLUMN TWO IS NOT THE WAY OF THE PARTY WAY OF THE PARTY WAY.	
c 2mm slot)	inde
	SynapTek™ DOT Grids, 1 x 2mm slot, Beryllium-Copper 2mm slot) SynapTek™ DOT Grids, 0.5 x 2mm slot, Beryllium-Copper 2mm slot) SynapTek™ NUM Grids, 1 x 2mm slot, Beryllium-Copper

NOTCH-NU
4518

NOTCH-NUM (1 x 2mm slot)			
4518	SynapTek™ NOTCH-NUM Grids, 1 x 2mm slot, Beryllium-Copper	100/vial	

24	GILDED NO	OTCH-NUM (1 x 2mm slot)	THE PERSON NAMED IN COLUMN
	4506	SynapTek™ GUILDED NOTCH-NUM Grids, 1 x 2mm slot, Beryllium-Copper, Gold Plated	100

0/vial

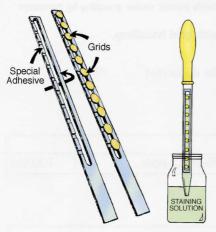
PELCO® SynapTek GridStick™; Tomography; Titanium Folding; Pyrolytic Carbon

■ PELCO® SynapTek GridStick™

staining and storage for EM



An inexpensive device to reduce or eliminate precipitate and dirt from your electron microscopy grids during staining.



Full loaded SynapTek™ GridStick™ with 1 x 2mm Synaptek™ Grids

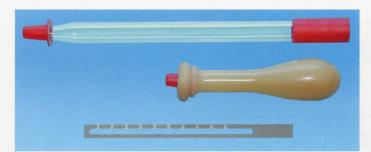
The SynapTek GridStick™ is manufactured from a thin but rigid alloy that does not react with commonly used organic solvents and stains. The stick is 4mm wide by 75mm long and has a slot along its center with small undercut notches on one side to make grid removal simple.

A small area on top of each stick is reserved for identification (use a fine point permanent ink pen).

The PELCO® SynapTek GridStick™ is coated with a specially formulated pressure-sensitive adhesive. This adhesive holds the grids in place during staining, emulsion coating, carbon coating, shadow casting and serial section collection.

The PELCO® SynapTek GridStick™ will fit into conventional Pasteur pipettes. The grids lie in the same plane as the solution flow, minimizing chances of breaking Formvar films and collecting surface debris.

The PELCO® SynapTek GridStick™ was developed in conjunction with PELCO® SynapTek™ Grids. Other grids may be used provided they have sufficient thickness to avoid bending when being removed from the adhesive on the PELCO® SynapTek GridStick™. PELCO® SynapTek™ Grids are 100µm thick.



Complete PELCO® SynapTek GridStick™ Kit:

5 coated GridSticks, 10 Staining Pipettes, 2 flow-limiting Plugs and Bulbs plus Instructions.

Note: Staining Pipettes are fire polished, heat annealed, acid cleaned, blow dried with filtered compressed air and capped.

PELCO® SynapTek GridStick™ Kiteach

SynapTek™ Replacement Components

155-5 PELCO® SynapTek GridSticks™ Uncoated pkg/10

155-7 Staining Pipettes with

2 flow limiting plugspkg/20



■ GridStick™ Adhesive

For adhering grids to the GridStick[™], includes instructions and coats about 200 GridSticks.

155-9 GridStick[™] Adhesive, 5ml each

Grid Coating Pen



A light touch with this pen will provide a

thin layer of adhesive on the grid. Layer will dry in 1-2 minutes at room temperature and is then ready to receive the sections. Pen may also be used as pretreatment before coating grids with formvar or other thin films. M (MSDS on web site)

1556 Grid Coating Pen each

■ Tomography Grids



1.5mm square coper grid, 300 mesh.

5GC300 Tomography Grids, 300 mesh, Cu pkg/50

Tomography Grids with Support Films Applied

5GC300-16650 Lacey Carbon on Tomography Grids, 300 mesh, Cu pkg/50

5GC300-16625 Lacey Carbon on Tomography Grids,

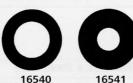
300 mesh, Cu pkg/25

5GC300-16050 Carbon Film on Tomography Grids,

5GC300-16025 Carbon Film on Tomography Grids,

300 mesh, Cu pkg/25

■ PELCO® Pyrolytic Carbon Grids



PELCO® Pyrolytic carbon grids are offered having two hole sizes. The grids are 3mm O.D. (standard) and can be handled like any ordinary grid.

16540 PELCO® Pyrolytic Carbon Grid,

16541 PELCO® Pyrolytic Carbon Grid,

Chien Grid

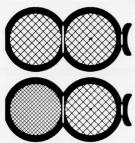
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DODDDD

Tabbed Grid

Sections & Water

■ Titanium Folding Grids



Titanium Grids, etched from high grade titanium sheets. Useful for high temperature, low temperature cryogenic and *in situ* applications.

Titanium Folding 100/100 and 100/200 Mesh			
G2466TI Folding, 100/100 Mesh, Titanium			
G2467TI	Folding, 100/200 Mesh, Titanium	25/vial	

1.525mm

0.85mm

Chien Grids

- 1. Used to pick up many individual sections or ribbons and to transfer them onto another grid
- 2. It can also be formvar coated as a receiving grid for examination of a large number of sections.
- 3. When formvar coated, it will support 2 or even 3 parallel ribbons of serial sections, with no obscuring grid bars.
- 4. Hole size 50% greater than the largest slot grid.
- 5. There are two slits in the rim area which allow it to be easily bent with forceps to make a tab, while keeping the remainder of the grid surface flat prior to picking up ribbons.

References: Chien K, Van de Velde R, Heusser R, 1985. Simultaneous ultramicrotomy of multiple areas and examination of ribbons on one new grid. Proc 43rd Annual Meeting, Elec Micr Soc Amer, G W Bailey, ed, San Francisco Press, 460.

Galey FR, Nilsson SEG, 1966. A new method for transferring sections from the liquid surface of the trough through staining solutions to the supporting film of a grid. J Ultrastruct Res, 14, 405-410.

9GC20H	Chien One-Hole Grids, 2.375mm, 3.0mm O.D., Copper	100/vial
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■ PELCO® FIB Half Grid

Half grid Lift-Out TEM sample holder, made of copper/beryllium, is approximately 100µm thick, slot is 2mm wide x 0.5mm deep. The sturdy holders offer easy handling and good protection for the TEM sample.



4510-HALF	PELCO® Sample Holder for FIB Applications	25/vial
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■ Omniprobe Lift-Out Grids

The Omniprobe Lift-Out grids are specifically designed to accept the TEM lamella's milled out by FIB or SEM/FIB systems. Typical thickness of the grids is 25-30µm. The posts are designed for optimum access and provide a secure area for attaching (welding) the lamella(s). The Omniprobe grids fit standard TEM holders and provide a non-obscured view of the thin sections attached to the posts.



460-203	460-203 Omniprobe Lift-Out Grids, Cu with 3 posts		
460-223	Omniprobe Lift-Out Grids, Mo with 3 posts	pkg/25	



460-204	Omniprobe Lift-Out Grids, Cu with 4 posts	pkg/100
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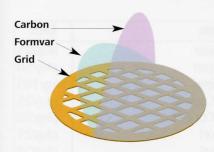


460-205	Omniprobe Lift-Out Grids, Cu with 5 posts	pkg/100

Substrate Support Film Grids

F	Cuitle			
Formvar Coated		,		
01700-F	75 mesh	Cu	Formvar	pkg/50
01706	0.4x2mm	Cu	Formvar	pkg/25
Formvar Stabiliz				
01802-F	75 mesh	Cu	Formvar/Carbon	pkg/50
01800	200 mesh	Cu	Formvar/Carbon	pkg/25
01800-F	200 mesh	Cu	Formvar/Carbon	pkg/50
01801	200 mesh	Cu	Formvar/Carbon	pkg/100
01803	200 m TH	Cu	Formvar/Carbon	pkg/25
01803-F	200 m TH	Cu	Formvar/Carbon	pkg/50
01800N	200 mesh	Ni	Formvar/Carbon	pkg/25
01800N-F	200 mesh	Ni	Formvar/Carbon	pkg/50
01 7 53-F	300 mesh	Cu	Formvar/Carbon	pkg/50
01754-F	400 mesh	Cu	Formvar/Carbon	pkg/50
01806	0.4x2mm	Cu	Formvar/Carbon	pkg/25
Carbon Type B			Sety 150 June 150 millions	
	heavier layer of Carbo	on		
01810	200 mesh	Cu	Carbon Type B	pkg/25
01811	200 mesh	Cu	Carbon Type B	pkg/100
01813	300 mesh	Cu	Carbon Type B	pkg/25
01813-F	300 mesh	Cu	Carbon Type B	pkg/50
01810G-F	300 mesh	Au	Carbon Type B	pkg/50
01814-F	400 mesh	Cu	Carbon Type B	pkg/50
(a) Carbon Type-	A FA Carbon Film of	15-25nm Thi	ckness	
01820	300 mesh	Cu	Carbon Type A	pkg/25
01821	300 mesh	Cu	Carbon Type A	pkg/100
(b) Illtrathin Car	bon Type-A Film on H	Joley Carbon		1 3
01824	400 mesh	Cu	Ultrathin Carbon	pkg/25
			Oldatiiii Carboii	pkg/25
(a) Formvar Stab 01830	pilized with Silicon Mo 200 mesh	Cu	Silicon Monoxide Type-A	pkg/525
			Silicon Monoxide Type-A	pkg/323
	xide with removable		a Litt-Out Gride- iv.	date illin
01829	300 mesh	Cu	Silicon Monoxide w/removable Formvar	pkg/25
01829-F	300 mesh	Cu	Silicon Monoxide w/removable Formvar	pkg/50
	ar Stabilized with Car	bon		
01881	200 mesh	Cu	Formvar/Carbon	pkg/25
01881-F	200 mesh	Cu	Formvar/Carbon	pkg/50
01883	300 mesh	Cu	Formvar/Carbon	pkg/25
01883-F	300 mesh	Cu	Formvar/Carbon	pkg/50
(b) Lacey Carbon	Type A with Remova	able Formvar		
01890	300 mesh	Cu	Lacey Carbon Type-A	pkg/25
01890-F	300 mesh	Cu	Lacey Carbon Type-A	pkg/50
(c) Lacey Silicon	Monoxide on Formva	ar		
01887-F	300 mesh	Cu	Lacey Silicon Monoxide on Formvar	pkg/50
4 - 2 7				1-11-31-0

PELCO® Formvar and Carbon Support Film Grids

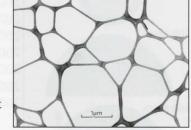


PELCO® Support Films of Formvar, Carbon and Silicon Monoxide are available on the following 3.05mm O.D. grids: 0.4 x 2mm single slot Cu, 75 mesh Cu, 200 mesh Cu or Ni, 300 mesh Cu or Au and 400 mesh Cu.

Support films on the finer mesh grids can withstand considerable handling during specimen preparation. Those on slot and 75 mesh grids require more gentle handling and are ideal for those applications requiring large viewing areas without grid bar interference.

Our popular line of NetMesh™ Grids (our trademarked lacey films) are available on 200 and 300 mesh grids. These robust

films allow for viewing of specimens without interference from underlying support film material. •



The complete PELCO® line of support films meets the requirements of most applications in all fields of electron microscopy. Consult "Applications Guide" following ordering information for suggestions on support film choice.

We Offer Six Types of Support Films

- 1. Formvar Layer
- 2. Formvar, stabilized with a thin layer of carbon
- 3. Carbon Type-B:

Formvar film with a "heavier" layer of carbon

- 4. Carbon Type-A:
 - a) Carbon support film on removable Formvar
 - b) Ultra thin Carbon on removable Formvar
 - c) Ultra thin Carbon on Holey Carbon Support Film
- 5. Carbon Type-A:
 - a) Formvar stabilized with a thin layer of Silicon Monoxide
 - b) Type-A Silicon Monoxide on a removable Formvar Backing
- 6. Netmesh™ Lacey Support Films:
 - a) Lacey Formvar Stabilized with Carbon
 - b) Type-A Lacey carbon with removable Formvar backing
 - c) Lacey Formvar film stabilized with Silicon Monoxide

Thickness of Support Films

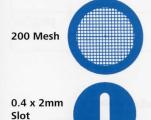
The following is a guide to the relative thickness of the support films. The actual thickness varies depending on a number of factors during the deposition process.

 Formvar Layer, measured with a Tencor Alpha-Step 200 profilometer:

All Formvar Films - 30 to 60 nm.

- 2. Carbon Layer, measured with a Film Thickness Monitor during evaporation:
 - On Formvar Stabilized with Carbon 5 to 10nm
 - On Carbon Type-A 15 to 25nm
 - On Carbon Type-B 15 to 25nm
 - On Ultrathin Carbon Type-A 3 to 4nm
 - On **Ultrathin Carbon Film over Holey Carbon Film** under 3nm

1. Formvar: A film of pure Formvar, with no stabilizing coating. These films are useful for your customized coating of stabilizing material or for the support of thin sections.



Mesh	Prod. No	Description	Unit
200 M	01700-F	Formvar, 200 mesh, copper	pkg/50
0.4 x 2mm	01706	Formvar, 0.4 x 2mm, copper	pkg/25

2. Formvar, Stabilized with Carbon: A Formvar film covered with a "light" layer of carbon. The heat and electrical conducting properties of carbon help to stabilize the Formvar films when exposed to the electron beam. This is a resilient, all-purpose specimen support film, ideal for mounting thin sections and for applications using lower ranges of magnification. The 200M-TH grids (Prod. No. 01803 and 01803-F) are thicker and more rigid than normal and useful for many applications - particularly where frequent grid handling is involved.

75 Mesh



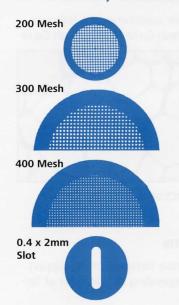
Mesh	Prod. No	Description	Unit
75 M	01802-F	Formvar/Carbon 75 mesh, Copper approx. grid hole size: 292µm	pkg/50

1 = Tech Note on web page

Phone: 800-237-3526

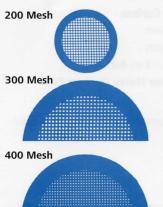
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2. Formvar, Stabilized with Carbon: continued



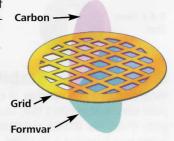
Mesh	Prod. No	Description	Unit
200 M	01800	Formvar/Carbon 200 mesh, Copper	pkg/25
200 M	01800-F	Formvar/Carbon 200 mesh, Copper	pkg/50
200 M	01801	Formvar/Carbon 200 mesh, Copper	pkg/100
200 M-TH	01803	Formvar/Carbon 200 mesh TH, Copper	pkg/25
200 M-TH	01803-F	Formvar/Carbon 200 mesh TH, Copper	pkg/50
200 M	01800N	Formvar/Carbon 200 mesh, Nickel	pkg/25
200 M	01800N-F	Formvar/Carbon 200 mesh, Nickel approx. grid hole size: 97µm	pkg/50
300 M	01753-F	Formvar/Carbon 300 mesh, Copper approx. grid hole size: 63µm	pkg/50
400 M	01754-F	Formvar/Carbon 400 mesh, Copper approx. grid hole size: 42µm	pkg/50
0.4 x 2mm	01806	Formvar/Carbon 0.4 x 2mm Slot, Copper	pkg/25

3. Carbon Type-B: A Formvar film coated with a "heavier" layer of carbon. This is the strongest and most versatile support film we produce. It is stable in the EM under all operating conditions including high magnification with high beam intensity. The films can withstand vigorous specimen preparation techniques. If the carbon surface is hydrophobic, specimen suspensions can be applied to the Formvar surface.



Mesh	Prod. No	Description	Unit
200 M 200 M	01810 01811	Carbon Type-B, 200 mesh, Copper Carbon Type-B, 200 mesh, Copper approx. grid hole size: 97µm	pkg/25 pkg/100
300 M 300 M 300 M	01813 01813-F 01813G-F	Carbon Type-B, 300 mesh, Copper Carbon Type-B, 300 mesh, Copper Carbon Type-B, 300 mesh, Gold approx. grid hole size: 63µm	pkg/25 pkg/50 pkg/50
400 M	01814-F	Carbon Type-B, 400 mesh, Copper approx. grid hole size: 42µm	pkg/50

4. Carbon Type-A: Carbon support films with a removable Formvar on the opposite side of the grid. When the Formvar is removed, by dipping in solvent, a pure carbon film remains. (Note: The Ultrathin Carbon Film on a Holey Carbon Support Film, Prod. No. 01824, has no Formvar backing. These films are stable under all EM operating conditions and are for use where the presence of a Formvar layer cannot be tolerated. Pure carbon films tend to be more delicate than those with a Formvar backing and require more delicate handling during specimen preparation than most other support films.



(a) Carbon Type-A: Carbon support film of 15 to 25nm thickness. •



Mesh	Prod. No	Description	Unit
300 M	01820	Carbon Type-A, 300 mesh, Copper	pkg/25
300 M	01821	Carbon Type-A, 300 mesh, Copper approx. grid hole size: 63µm	pkg/50

1 = Tech Note on web page

continued on next page

Carbon Type-A: continued

(b) Ultrathin Carbon Type-A: Carbon support film of approximately 3nm thickness. •



Mesh	Prod. No	Description	Unit
400 M	01822	Ultrathin Carbon Type-A, 400 mesh, Copper	pkg/25
400 M	01822-F	Ultrathin Carbon Type-A, 400 mesh, Copper	pkg/50
400 M	01822G-F	Ultrathin Carbon Type-A, 400 mesh, Gold approx. grid hole size: 42µm	pkg/50

(c) Ultrathin Carbon Film on a Holey Carbon Support Film: Pure carbon support films with no Formvar backing. This product has an even thinner carbon film which is mounted on a carbon holey film. The carbon support layer lying over the holes is less than 3nm in thickness and is the thinnest support film available. It is particularly useful for high resolution microscopy of low contrast particles and is also ideal for use with the Energy Filtering TEM. 0



Mesh	Prod. No	Description	Unit
400 M	01824	Ultrathin Carbon Film on Holey Carbon Support Film, 400 mesh, Copper approx. grid hole size: 42µm	pkg/25

5. Silicon Monoxide: Silicon monoxide produces a highly resilient support film which can withstand vigorous specimen preparation techniques. It has low background contrast, is stable under the electron beam and is less hydrophobic than carbon. We offer two types of silicon monoxide support films:

(a) Formvar Stabilized with Silicon Monoxide: A Formvar film coated with a "light" layer of silicon monoxide.

200 Mesh

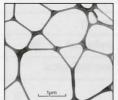
Mesh	Prod. No	Description	Unit
200 M	01830	Silicon Monoxide/Formvar, 200 mesh, Copper approx. grid hole size: 97μm	pkg/25

(b) Silicon Monoxide Type-A: Silicon monoxide with a removable Formvar backing on the opposite side of the grid. When the Formvar is removed, by dipping in solvent, a pure Silicon Monoxide film remains. These films are stable under all EM operating conditions and for use where the presence of Formvar cannot be tolerated. Pure Silicon Monoxide is more delicate than those with Formvar backing and require more careful handling during specimen preparation. •

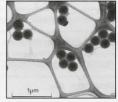


Mesh	Prod. No	Description	Unit
300 M	01829	Silicon Monoxide Type-A, Removable Formvar, 300 mesh, Copper	pkg/25
300 M	01829-F	Silicon Monoxide Type-A, Removable Formvar, 300 mesh, Copper approx. grid hole size: 63µm	pkg/50

■ 6. Lacey Support Films - NetMesh[™] Grids: Lacey Support Film A lacey network support film. The holes in the lacey support film vary in size from less than a quarter micron to more than 10 microns making them ideal for any type of specimen. Lacey support films are strong and withstand vigorous specimen preparation treatment. The specimen material is supported by the film network but lies across or protrudes into the holes of the mesh. This allows high definition imaging without the effects of underlying support material. Lacey films can be used for specimens ranging from large crystals and other particulate material to virus particles. Smaller particles, such as viruses or bacteria, tend to adhere around the inner edges of the holes, an ideal situation for high resolution microscopy. Lacey films are also ideal for selected area electron diffraction imaging. We offer three types of lacey film:



Lacey Support Film



0.26µm dia. Latex on a Lacey Support Film, example of application

(a) Lacey Formvar Stabilized with Carbon: A Lacey Formvar film coated with a

Molybdenum Trioxide Crystal on a Lacey Support Film, example of application

"heavy" layer of carbon. 200 Mesh



Mesh	Prod. No	Description	Unit
200 M	01881	Lacey Formvar/Carbon, 200 mesh, Copper	pkg/25
200 M	01881-F	Lacey Formvar/Carbon, 200 mesh, Copper	pkg/50
		approx. grid hole size: 97μm continued on next page	

Substrates, Support Film Grids

(a) Lacey Formvar Stabilized with Carbon: A Lacey Formvar film coated with a "heavy" layer of carbon. continued



Mesh	Prod. No	Description	Unit
300 M	01883	Lacey Formvar/Carbon, 300 mesh, Copper	pkg/25
300 M	01883-F	Lacey Formvar/Carbon, 300 mesh, Copper approx. grid hole size: 63µm	pkg/50

(b) Lacey Carbon Type-A: A lacey carbon film with a removable Formvar backing. •



Mesh	Prod. No	Description	Unit
300 M	01890	Lacey Carbon Type-A, 300 mesh, Copper	pkg/25
300 M	01890-F	Lacey Carbon Type-A, 300 mesh, Copper approx. grid hole size: 63µm	pkg/50

(c) Lacey Silicon Monoxide on Formvar: A lacey Formvar film stabilized with Silicon Monoxide.



Mesh	Prod. No	Description	Unit
300 M	01887-F	Lacey Silicon Monoxide on formvar, 300 mesh, Copper approx. grid hole size: 63µm	pkg/50

Support Film Grids, Substrate Application Guide

This Support Film Application Guide will help you determine what support film to use for your particular transmission electron microscopy project. Once you have decided which substrate best suits your needs, you can go back up on the page for a listing of available Support Films.

B= Best G= Good Alternative - = Not Suitable Substrate Application	Formvar Only Carbon	Formvar Stab. with Carbon	Silicon Monoxide on Formvar	Silicon Monoxide on Type-A	Carbon Type-A	Carbon Type-B	Is Lacey Film suitable for this application?
Applications requiring pure Formvar	В	ar in the	Acids and turn				No
Bacterial Suspensions	_	G	В	В	В	В	Yes
Cell fragment suspensions	12020	В	В	В	В	В	Yes
Diffraction studies	-		G	G	В	В	Yes
EDS (energy dispersive spectrometry)	1. A	G	(2) - H-85	810 - 1	В	В	Yes
High resolution microscopy	40 -	TURKED IT	G	В	В	В	Yes (Type A)
High temperature techniques/ heating stage	-		and the stand	G	G		No
Low magnification microscopy	G	В	В	G	G	В	No
Particulate suspension, biological	<u>_</u>	G	В	В	В	В	Yes
Particulate suspension, non-biological	-	G	В	В	В	В	Yes
Powders, dry	- <u> </u>	G	В	G	G	В	No
Replicas & low temperature techniques	G	В			G	В	Yes (Type A)
Thin sections	G	В	G	В	G	В	Yes
Viral suspensions	- Landan	moraniu i	G	В	В	В	Yes



For Quantifoil Substrates go to Support Films page 577



For Silicon Nitride Membranes and Aperture Frames go to page 578-581

LUXFilm™ TEM Supports Large Area TEM Support Frames

LUXFilm™ TEM supports are strong thin films that can span large open areas within the standard 3mm TEM grid diameter. They are available as unobstructed areas up to 2mm diameter or with a few support bars still delivering open areas of 0.3 to 0.5mm. The support films have excellent beam stability and are robust to cryogenic temperatures. The LUXFilm™ TEM Support films have excellent beam stability and are robust to cryogenic temperatures.

Styles in Copper and Nickel

Slot

2 mm

Open

1.5 mm

Hex Grid

0.5 mm

Mesh Grid

0.35 mm

Bar Grid

port films have excellent beam stability and are robust to cryogenic temperatures. The LUXFilm™ TEM Supports improve efficiency and throughput of TEM work by allowing the researcher to view the entire specimen. Important for imaging large structures, tracing features, searching for special details and tomography. The support films are available in 50 and 30nm thickness and with copper and nickel support frames.

Features and benefits of LUXFilm™ TEM Supports:

Strong - LUXFilm™ is about 5x stronger than formvar. The films are compatible with a variety of common stains and ethanol based solutions (not for use with ammonium molybdate stains).

Large unobstructed viewing area - LUXFilm™ TEM Supports enable imaging of the entire specimen without interference from grid bars.

Flat - The films are stretched on a copper or nickel supporting frame, exhibiting superior flatness. Used for particle counting or screening applications, meniscus effects are eliminated: particles spread more evenly and do not collect next to grid bars.

Excellent beam stability - The films exhibit very little drift or charging effects in the TEM compared with formvar/carbon. Suitable for electron beam energies from 80 - 300kV.

Wettability - LUXFilm[™] has a favorably inherent surface energy for epoxy-embedded sections. Serial ribbons lay down flat and tend to "stick" to the film. Surface treatment can be performed to prepare the supports for negative stains and acrylic-embedded specimens.

No autofluorescence - LUXFilm™ TEM Supports exhibit no autofluorescence and no unspecific labeling with antibody stains. This will make the films an ideal choice for correlative microscopy and immunocytochemistry in the EM. The large viewing area will assure that all labeled features are visible.

Applications areas for the LUXFilm™ TEM Support films are in demanding and routine TEM imaging with electron beam energies preferably in the 80-300kV range

for:

- large sections
- tomography
- thick materials
- pathology
- Immunocytochemistry
- particle count and screening.

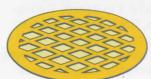


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Substratek™ TEM Substrates

■ Substratek[™] TEM Metallic Substrates

innovative experimental nanotech TEM supports



Substratek™ TEM substrates are ultrathin metallic support films on standard 3mm TEM grids. These metallic films are specially manufactured with a patented process (US Patent #7348570 B2, March 25,

2008) as experimental platforms and are electron transparent to allow for imaging using a TEM. The ultrathin Substratek™ TEM Substrates enable nano- and micro-fabrication directly on the substrates subsequent and imaging with a TEM without the need for extensive sample preparation. Direct nanoscale imaging without extensive TEM preparation does not require expensive thinning tools, it also saves time and it avoids introduction of preparation artifacts. Compared to the widely used carbon support films, ultrathin and electron transparent metallic films have a high surface energy and therefore more suitable for fabrication processes.

Important properties of the ultrathin Substratek[™] metallic support films are:

Feature Size (nm)

4

C

TiOx

Pd

Substrate Material

Pt

- Electron transparent with a 2-3nm thickness
- Small features sizes do not obscure sample features
- Chemically stable (can be used for electroplating)
- Robust enough to act as substrates
- · High surface energy.

They are ideally suited for use as integrated research platforms for applications as diverse as:

- Nanofabrication
- Electron-beam lithography
- Micro-contact printing
- Electrochemistry or electroplating
- · Nano-crystal growth
- · Carbon nano tubes
- X-ray analysis of carbon containing materials
- Surface and interface science

The Substratek™ TEM Substrates are metallic ultrathin films on a standard 3mm TEM grid. Available substrate materials are Au, Pt, Pd (2-3nm thickness) and TiOx (10-20nm thickness) on 300 and 400 mesh TEM grids. The Au, Pt and Pd substrates are deposited on gold TEM grids, the TiOx substrate is deposited on copper TEM grids; these materials have proven to be stable substrates with a small feature sizes in the support film. The TiOx substrate is more bio-compatible and can also be used for life-science applications. They are supplied in a PELCO® 160 TEM grid box in quantities of 10 and 25.



1. Allred DB, Zin MT, Hong MA, Sarikaya M, Baneyx F, Jen AKY, Schwartz DT, 2007. "Direct nanofrabrication and transmission electron microscopy on a suite of easy-to-prepare ultrathin film

substrates", Thin Solid Films, 515(13):5341-5347.

- 2. Allred DB, Cheng A, Sarikaya M, Baneyx F, Schwarz DT, 2008. "Three-dimensional architecture of inorganic nanoarrys electrode-posited though a surface-layer protein mask", Nano Letters, 8(5):1434-1438.
- 3. Ominami Y, Ngo Q, Suzuki M, Austin AJ, Yang CY, Cassell AM, Li J, 2006. "Interface characteristics of vertically aligned carbon nanofibers for interconnect applications", Applied Physics Letters, 89:263114(1-3).

TEM substrates on 400 mesh TEM grids

G400: Pitch 62 μ m; Hole Width 37 μ m; Bar Width 25 μ m; Transmission 37%

21410-10	Substratek [™] , 2-3nm Pt on 400 mesh
	Au TEM Gridpkg/10
21410-25	Substratek™, 2-3nm Pt on 400 mesh
	Au TEM Gridpkg/25
21420-10	Substratek™, 2-3nm Au on 400 mesh
	Au TEM Gridpkg/10
21420-25	Substratek™, 2-3nm Au on 400 mesh
	Au TEM Gridpkg/25
21430-10	Substratek™, 2-3 Pd on 400 mesh
	Au TEM Gridpkg/10
21430-25	Substratek™, 2-3nm Pd on 400 mesh
	Au TEM Gridpkg/25
21440-10	Substratek™, 10-20nm TiOx on 400 mesh
	Cu TEM Gridpkg/10
21440-25	Substratek™, 10-20nm TiOx on 400 mesh
	Cu TEM Gridpkg/25

TEM substrates on 300 mesh TEM grids

G300: Pitch 83μm; Hole Width 58μm; Bar Width 25μm; Transmission 49%

21310-10	Substratek™, 2-3 Pt on 300 mesh	
	Au TEM Gridpkg/10	
21310-25	Substratek™, 2-3 Pt on 300 mesh	
	Au TEM Gridpkg/25	
21320-10	Substratek™, 2-3 Au on 300 mesh	
	Au TEM Gridpkg/10	
21320-25	Substratek™, 2-3 Au on 300 mesh	
	Au TEM Gridpkg/25	
21330-10	Substratek™, 2-3 Pd on 300 mesh	
	Au TEM Gridpkg/10	
21330-25	Substratek™, 2-3 Pd on 300 mesh	
	Au TEM Gridpkg/25	
21340-10	Substratek™, 10-20 TiOx on 300 mesh	
	Cu TEM Gridpkg/10	
21340-25	Substratek™, 10-20 TiOx on 300 mesh	
	Cu TEM Grid nkg/25	

FAX: 530-243-3761