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ADVANCED CHEMICAL ETCHING

a process of innovation

Advanced Chemical Etching Technical Capability





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Material Class	Thickness	Profile Tolerance	Hole & Aperture Size	Min External Radii	Min Internal Radii	Convex Etch Cusp Size
A	0.025mm / (0.001")	$\pm 0.025\text{mm} / 0.001"$	0.125mm / 0.005"	0.075mm / 0.003"	0.08mm / 0.003"	0.025mm / 0.001"
A	0.05mm / (0.002")	$\pm 0.025\text{mm} / 0.001"$	0.125mm / 0.005"	0.075mm / 0.003"	0.08mm / 0.003"	0.025mm / 0.001"
A	0.075mm / (0.003")	$\pm 0.025\text{mm} / 0.001"$	0.125mm / 0.005"	0.1mm / 0.004"	0.08mm / 0.003"	0.05mm / 0.002"
A	0.1mm / (0.004")	$\pm 0.025\text{mm} / 0.001"$	0.15mm / 0.006"	0.125mm / 0.005"	0.1mm / 0.004"	0.05mm / 0.002"
A	0.125mm / (0.005")	$\pm 0.025\text{mm} / 0.001"$	0.15mm / 0.006"	0.125mm / 0.005"	0.1mm / 0.004"	0.05mm / 0.002"
A	0.15mm / (0.006")	$\pm 0.025\text{mm} / 0.001"$	0.15mm / 0.006"	0.15mm / 0.006"	0.13mm / 0.0005"	0.05mm / 0.002"
A	0.2mm / (0.008")	$\pm 0.025\text{mm} / 0.001"$	0.2mm / 0.008"	0.2mm / 0.008"	0.15mm / 0.006"	0.05mm / 0.002"
A	0.25mm / (0.010")	$\pm 0.025\text{mm} / 0.001"$	0.25mm / 0.010"	0.25mm / 0.010"	0.19mm / 0.007"	0.05mm / 0.002"
A	0.3mm / (0.012")	$\pm 0.03\text{mm} / 0.012"$	0.3mm / 0.012"	0.3mm / 0.012"	0.23mm / 0.009"	0.06mm / 0.0024"
A	0.38mm / (0.015")	$\pm 0.04\text{mm} / 0.0015"$	0.38mm / 0.015"	0.38mm / 0.015"	0.29mm / 0.011"	0.08mm / 0.003"
A	0.4mm / (0.016")	$\pm 0.04\text{mm} / 0.0015"$	0.4mm / 0.016"	0.4mm / 0.016"	0.3mm / 0.012"	0.08mm / 0.003"
A	0.45mm / (0.018")	$\pm 0.05\text{mm} / 0.002"$	0.45mm / 0.018"	0.45mm / 0.018"	0.34mm / 0.013"	0.09mm / 0.0035"
A	0.5mm / (0.020")	$\pm 0.05\text{mm} / 0.002"$	0.5mm / 0.020"	0.5mm / 0.020"	0.38mm / 0.015"	0.1mm / 0.004"
A	0.6mm / (0.024")	$\pm 0.065\text{mm} / 0.0025"$	0.6mm / 0.024"	0.6mm / 0.024"	0.45mm / 0.018"	0.12mm / 0.005"
A	0.7mm / (0.028")	$\pm 0.075\text{mm} / 0.003"$	0.7mm / 0.028"	0.7mm / 0.028"	0.53mm / 0.021"	0.14mm / 0.006"
A	0.8mm / (0.032")	$\pm 0.09\text{mm} / 0.0035"$	0.8mm / 0.032"	0.8mm / 0.032"	0.6mm / 0.024"	0.16mm / 0.006"
A	0.9mm / (0.036")	$\pm 0.1\text{mm} / 0.004"$	0.9mm / 0.036"	0.9mm / 0.036"	0.68mm / 0.027"	0.18mm / 0.007"
A	1.0mm / (0.040")	$\pm 0.12\text{mm} / 0.0047"$	1.00mm / 0.040"	1.0mm / 0.040"	0.75mm / 0.030"	0.2mm / 0.008"
A	1.2mm / (0.048")	$\pm 0.15\text{mm} / 0.006"$	1.25mm / 0.049"	1.2mm / 0.048"	0.9mm / 0.036"	0.24mm / 0.009"
A	1.5mm / (0.059")	$\pm 0.2\text{mm} / 0.008"$	1.5mm / 0.059"	1.5mm / 0.059"	1.25mm / 0.049"	0.3mm / 0.012"
B	0.05mm / (0.002")	$\pm 0.05\text{mm} / 0.002"$	0.15mm / 0.006"	0.1mm / 0.004"	0.1mm / 0.004"	0.05mm / 0.002"
B	0.1mm / (0.004")	$\pm 0.05\text{mm} / 0.002"$	0.15mm / 0.006"	0.13mm / 0.005"	0.1mm / 0.004"	0.05mm / 0.002"
B	0.15mm / (0.006")	$\pm 0.05\text{mm} / 0.002"$	0.18mm / 0.007"	0.18mm / 0.007"	0.13mm / 0.005"	0.075mm / 0.003"
B	0.25mm / (0.010")	$\pm 0.04\text{mm} / 0.0015"$	0.28mm / 0.011"	0.28mm / 0.011"	0.23mm / 0.009"	0.09mm / 0.0035"
B	0.5mm / (0.020")	$\pm 0.07\text{mm} / 0.0027"$	0.58mm / 0.023"	0.55mm / 0.022"	0.45mm / 0.018"	0.17mm / 0.007"
B	0.7mm / (0.028")	$\pm 0.09\text{mm} / 0.0035"$	0.79mm / 0.031"	0.77mm / 0.030"	0.64mm / 0.025"	0.24mm / 0.009"
B	0.9mm / (0.036")	$\pm 0.1\text{mm} / 0.004"$	1.00mm / 0.040"	0.99mm / 0.039"	0.81mm / 0.031"	0.3mm / 0.012"
B	1.00mm / (0.040")	$\pm 0.12\text{mm} / 0.0047"$	1.12mm / 0.048"	1.1mm / 0.043"	0.9mm / 0.036"	0.33mm / 0.013"
B	1.2mm / (0.048")	$\pm 0.14\text{mm} / 0.0055"$	1.34mm / 0.053"	1.32mm / 0.052"	1.08mm / 0.043"	0.4mm / 0.016"

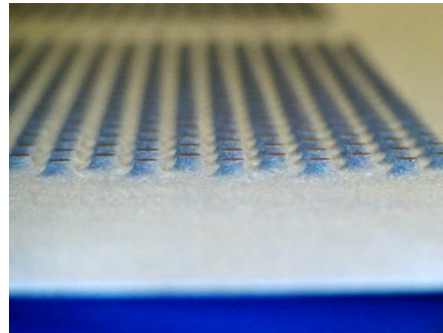
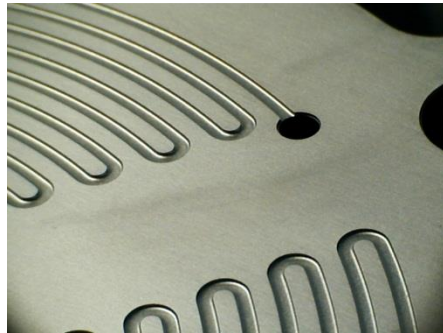
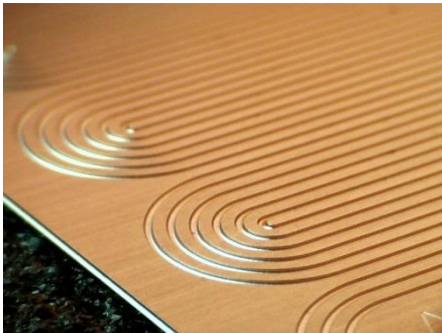


Material Description (Plain Condition no coating)	Class	Standard Sheet Size (If available from stockist)	Standard Lead-Time Etched only	Standard Lead-Time Etched & Plated	Standard Lead-Time Etched & Formed	Standard Lead-time Etched, Formed & Plated
Aluminium	A	450mm X 305mm / 17.72" X 12"	5-7 Working Days	7-10 Working Days	10 Working days	15-20 Working Days
Beryllium Copper	A	450mm X 300mm / 17.72" X 11.81"	5-7 Working Days	7-10 Working Days	10 Working days	15-20 Working Days
Brass	A	450mm X 305mm / 17.72" X 12"	5-7 Working Days	7-10 Working Days	10 Working days	15-20 Working Days
Copper	A	450mm X 305mm / 17.72" X 12"	5-7 Working Days	7-10 Working Days	10 Working days	15-20 Working Days
Mild Steel	A	450mm X 305mm / 17.72" X 12"	5-7 Working Days	7-10 Working Days	10 Working days	15-20 Working Days
Mu Metal	A	450mm X 150mm / 17.72" X 5.30"	7-10 Working Days	10-12 Working Days	12 Working Days	18 Working Days
Nickel Irons	A	450mm X 305mm / 17.72" X 12"	7-10 Working Days	10-12 Working Days	12 Working Days	18 Working Days
Nickel Silver	A	450mm X 305mm / 17.72" X 12"	5-7 Working Days	7-10 Working Days	10 Working days	15-20 Working Days
Phosphor Bronze	A	450mm X 300mm / 17.72" X 11.81"	5-7 Working Days	7-10 Working Days	10 Working days	15-20 Working Days
Sandvik	A	450mm X 305mm / 18.11" X 12"	5-7 Working Days	7-10 Working Days	10 Working days	15-20 Working Days
Cobalt Nickle irons	A	450mm X 305mm / 18.11" X 12"	5-7 Working Days	7-10 Working Days	10 Working days	15-20 Working Days
Silicon iron (uncoated)	A	450mm X 305mm / 18.11" X 12"	5-7 Working Days	Not Available	Not Available	Not Available
Spring Steel	A	450mm X 150mm / 18.11" X 6.30"	5-7 Working Days	7-10 Working Days	10 Working days	15-20 Working Days
Stainless Steel	A	450mm X 305mm / 18.11" X 12"	5-7 Working Days	7-10 Working Days	10 Working days	15-20 Working Days
Nickel	A	450mm X 150mm / 18.11" X 6.30"	7-10 Working Days	10-12 Working Days	12 Working Days	18 Working Days
Silver (supplied by customer)	B	450mm X 305mm / 18.11" X 12"	10 Working Days	12-15 Working Days	15 Working Days	20 Working Days
Molybenum	B	450mm X 300mm / 18.11" X 11.81"	10-15 Working days	Not Available	Not Available	Not Available
Inconel	B	450mm X 305mm / 18.11" X 12"	10-15 Working days	15-17 Working Days	Not Available	Not Available
Titanium	B	500mm X 300mm / 19.69" X 11.81"	10-15 Working days	Not Available	Not Available	Not Available

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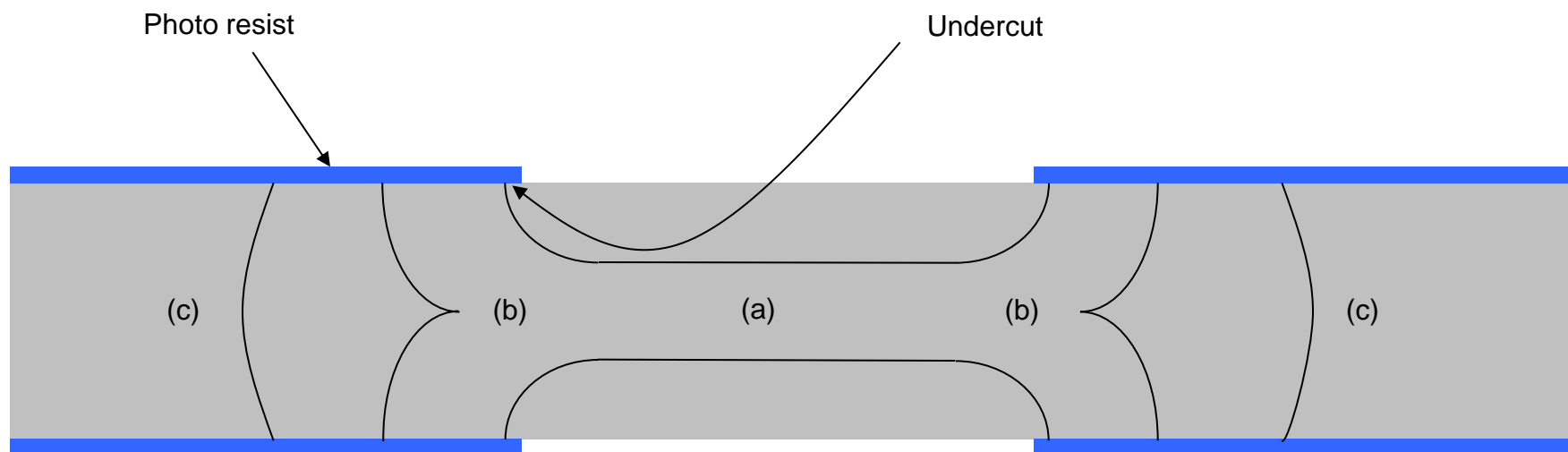
Surface Finishes	
Bright Tin Plating	Sub-Contracted
Matt Tin Plating	Sub-Contracted
Sulphamate Nickel plating	Sub-Contracted
Electroless Nickel plating	Sub-Contracted
Silver Plating	Sub-Contracted
Gold Plating	Sub-Contracted
Electro Polished	Sub-Contracted
Passivate	In-House
Anodising	Sub-Contracted
Tin Lead 60/40	Sub-Contracted
Tin lead 90/10	Sub-Contracted





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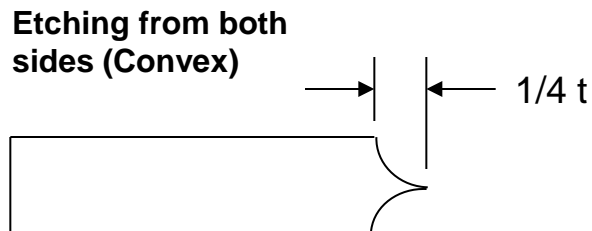
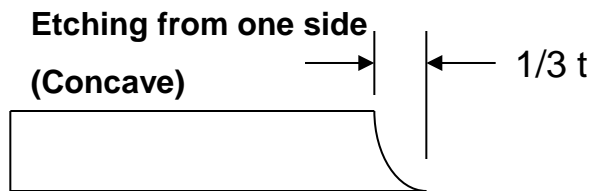
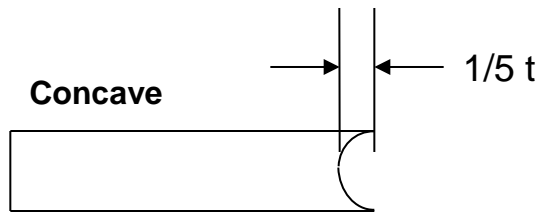


(a) Profile etching, (b) Convex, (c) Concave

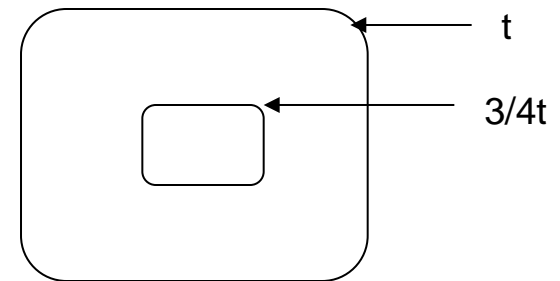
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Tolerance: 10% of material thickness
Bend allowance typically 1.5 t



Minimum radii



Smallest hole & aperture sizes

