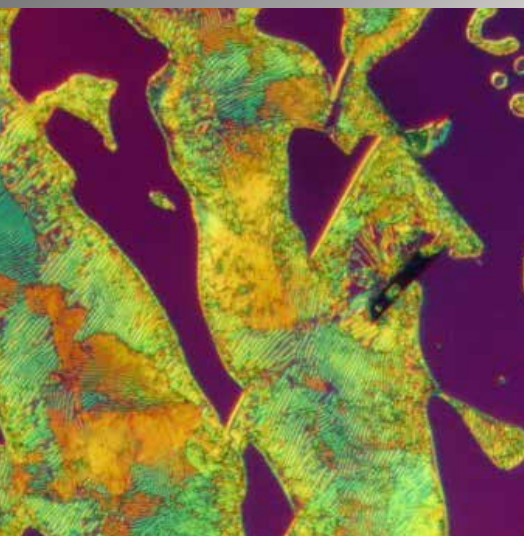
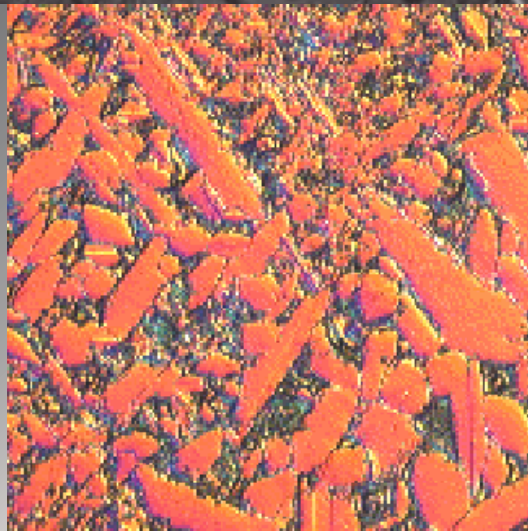


2021 PRODUCT CATALOG GUIDE

Metallographic Consumables



Metallographic Consumables

Abrasive & Precision Cutting | Compression & Castable Mounting | Grinding & Polishing
Hardness Testing | Microscopes | Image Analysis | Lab Furniture

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TABLE OF CONTENTS

ABRASIVE CUTTING	4
PRECISION SECTIONING CONSUMABLES	9
COMPRESSION MOUNTING CONSUMABLES	12
ACRYLIC MOUNTING CONSUMABLES	16
EPOXY MOUNTING CONSUMABLES	18
POLYESTER MOUNTING CONSUMABLES	20
CASTABLE MOLDS & ACCESSORIES	21
ABRASIVE BELTS, POWDERS & ROLLS	22
GRINDING CONSUMABLES	24
SILICON CARBIDE ABRASIVE PAPER	25
SILICON CARBIDE FOIL SYSTEM	32
DIAMOND GRINDING ABRASIVES	34
COMPETITIVE STYLE GRINDING DISKS	39
ABRASIVE LAPPING FILMS	40
SPECIALTY ABRASIVE GRINDING SURFACES	46
METALLOGRAPHIC POLISHING	48
METALLOGRAPHIC POLISHING PADS	48
POLYCRYSTALLINE DIAMOND	58
MONOCRYSTALLINE DIAMOND	62
DIAMOND EXTENDERS / LUBRICANTS	64
FINAL POLISHING	65
ETCHING	73

PACE[®] **TECHNOLOGIES**

Metallographic Consumables





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Abrasive Cutting Fluid Recommendations

Cutting Fluid	Application	Recommended Dilution	Changing Frequency
MAXCUT 1000 cutting fluid	As a replacement for competitors cutting fluids	25:1 (water)	50 cuts or weekly
MAXCUT2 1000 cutting fluid	Recommended for reducing corrosion in cutting chamber	25:1 (water)	50 cuts or weekly



Tips: Abrasive Cutter Care:

1. Use clean/fresh MAXCUT2 cutting fluids; fluids should be changed weekly
2. Rinse and dry table and vises after use
3. When cutter is not in use open hood to prevent humidity build-up
4. If cutter will not be used for an extended period of time, spray table and vises with a water displacement oil such as WD40®

Abrasive Cutting Fluids

PACE Product Name	Catalog Number	Qty
MAXCUT Abrasive Cutting Fluid (32 oz)	MAXCUT-1000-32	32 oz
MAXCUT Abrasive Cutting Fluid (1/2 gallon)	MAXCUT-1000-64	1/2 gallon
MAXCUT Abrasive Cutting Fluid (1 gallon)	MAXCUT-1000-128	1 gallon
MAXCUT Abrasive Cutting Fluid (5 gallons)	MAXCUT-1000-5G	5 gallons
MAXCUT2 Abrasive Cutting Fluid with Anti-corrosion Additive (32 oz)	MAXCUT2-1000-32	32 oz
MAXCUT2 Abrasive Cutting Fluid with Anti-corrosion Additive (1/2 gallon)	MAXCUT2-1000-64	1/2 gallon
MAXCUT2 Abrasive Cutting Fluid with Anti-corrosion Additive (1 gallon)	MAXCUT2-1000-128	1 gallon
MAXCUT2 Abrasive Cutting Fluid with Anti-corrosion Additive (5 gallons)	MAXCUT2-1000-5G	5 gallons
Propylene Glycol Based Corrosion Inhibitor Additive (32 oz)	PCC-5000-32	32 oz

ABRASIVE CUTTING CONSUMABLES

Abrasive Cutting Blades

10-inch (250 mm) MAXCUT Abrasive Blades (32 mm arbor)

PACE Product Name	M.O.S	Catalog Number	Qty
Soft non-ferrous materials (aluminum, brass, zinc, etc.)	3440	MAX-C250	10/box
Hard non-ferrous materials (titanium)	3440	MAX-C250	10/box
Soft steel	4500	MAX-E250	10/box
Case Hardened steel	4585 / 3055	MAX-D250 / MAX-VHS250	10/box
Nickel, Superalloys	4580	MAX-A250	10/box
Very hard ferrous materials (>50 Rc) (MOS 3055 rpm)	3055	MAX-VHS250	10/box
Universal Thin Blade	3820	MAX-A250	10/box
General Industrial Blade	4500	MAX-I250	10/box
10-inch x 1.5 mm thick x 1.25-inch 180 grit high concentration Diamond Abrasive Blade cutting wheel	6100	DMAX-250	each

12-inch (300 mm) MAXCUT Abrasive Blades (32 mm arbor)

PACE Product Name	M.O.S	Catalog Number	Qty
Soft non-ferrous materials (aluminum, brass, zinc, etc.)	3185	MAX-C300	10/box
Hard non-ferrous materials (titanium)	3185	MAX-C300	10/box
Soft steel	3800	MAX-E300	10/box
Case Hardened steel	3820 / 2500	MAX-D300 / MAX-VHS300	10/box
Nickel, Superalloys	3185	MAX-A300	10/box
Very hard ferrous materials (>50 Rc) (MOS 3055 rpm)	2500	MAX-VHS300	10/box
Universal Thin Blade	3185	MAX-A300	10/box
General Industrial Blade	3800	MAX-I300	10/box
12-inch x 1.5 mm thick x 1.25-inch 180 grit high concentration Diamond Abrasive Blade cutting wheel	5000	DMAX-305	each

14-inch (350 mm) MAXCUT Abrasive Blades (32 mm arbor)

PACE Product Name	M.O.S	Catalog Number	Qty
Soft non-ferrous materials (aluminum, brass, zinc, etc.)	3460	MAX-C350	10/box
Hard non-ferrous materials (titanium)	3460	MAX-C350	10/box
Soft steel	3200	MAX-E350	10/box
Case Hardened steel	3275 / 2220	MAX-D350 / MAX-VHS350	10/box
Nickel, Superalloys	2730	MAX-A350	10/box
Very hard ferrous materials (>50 Rc) (MOS 3055 rpm)	2220	MAX-VHS350	10/box
Universal Thin Blade	2730	MAX-A350	10/box
General Industrial Blade	3200	MAX-I350	10/box
14-inch x 1.5 mm thick x 1.25-inch 180 grit high concentration Diamond Abrasive Blade cutting wheel	4350	DMAX-350	each

16-inch (400 mm) MAXCUT Abrasive Blades (32 mm arbor)

PACE Product Name	M.O.S	Catalog Number	Qty
Soft non-ferrous materials (aluminum, brass, zinc, etc.)	2390	MAX-C400	10/box
Hard non-ferrous materials (titanium)	2390	MAX-C400	10/box
Soft steel	3800	MAX-E400	10/box
Case Hardened steel	3800 / 1925	MAX-D400 / MAX-VHS400	10/box
Nickel, Superalloys	2860	MAX-A400	10/box
Very hard ferrous materials (>50 Rc) (MOS 3055 rpm)	1925	MAX-VHS400	10/box
Universal Thin Blade	2860	MAX-A400	10/box
General Industrial Blade	3800	MAX-I400	10/box
16-inch x 1.5 mm thick x 1.25-inch 180 grit high concentration Diamond Abrasive Blade cutting wheel	3800	DMAX-400	each

ABRASIVE CUTTING RECOMMENDATIONS

Application	Advantages	Disadvantage	Blade Composition	Recommended Blade	
General cutting with universal thin resin / rubber bonded blades	Thin durable longer lasting blade for cutting most materials.	Rubber bonded blades can produce a burning rubber smell	Alumina resin-bonded	MAX-A	
Hard non-ferrous metals (titanium, zirconium, etc.)	SiC abrasives are much more effective in cutting non-ferrous metals	Rubber bonded blades can produce a burning rubber smell	SiC / resin-rubber bonded	MAX-C	
General purpose blade for steels and ferrous metals	Resin bonded blades break down easily to expose fresh abrasives for cleaner cuts	Generally thicker blades with shorter working life	Alumina / resin-bonded	MAX-D	
Soft non-ferrous metals (aluminum, brass, zinc, etc.)	Rubber bonded blades can produce a burning rubber smell	generally thicker blades with shorter working life	Alumina / resin bonded	MAX-E	
Industrial general purposed reinforced blade	Lower cost, longer life resin bonded blades	Do not breakdown as easily in order to produce fresh abrasives whic may result in burning of the sample	Alumina / resin-bonded	MAX-I	
Heat treated and hardened steels	Specifically designed metallographic abrasive blades to reduce heat damage during sectioning	Rubber bonded blades can produce a burning rubber smell	Alumina / resin-bonded	MAX-VHS	
Non-metallic materilas such as glass, minerals, ceramics and composites	Diamond Blades do not wear down like abrasives blades	Relatively more expensive	Diamond	DMAX	

Abrasive Blade Maximum Operating Speed (M.O.S) (rpm)

Blade (M.O.S.)	10-inch	12-inch	14-inch	16-inch
MAX-A	3820	3185	2730	2860
MAX-C	3440	3185	3460	2390
MAX-D	4585	3820	3275	3800
MAX-E	4500	3800	3200	3800
MAX-I	4500	3800	3200	3800
MAX-VHS	3055	2500	2220	1925
DMAX	6100	5000	4350	3800

Tips: Abrasive Cutting:

1. Properly fixture or clamp the sample/ specimen
2. Select the proper abrasive blade
3. Set the correct cutting speed
4. Use appropriate cutting fluid and direct the flow to the cutting zone
5. Cut specimen while monitoring the motor amperage. The correct blade will minimize the current draw on the motor
6. After completion of the cutting operation, clean and dry the cutter fixtures, table and cutting chamber
7. When not in use clean/dry and leave the hood in the open position to prevent corrosion. The use of a water displacement oil will also help prevent corrosion

Abrasive Blade Thickness (inches)

Blade Thickness	10-inch	12-inch	14-inch	16-inch
MAX-A	0.039	0.055	0.063	0.090
MAX-C	0.059	0.078	0.078	0.100
MAX-D	0.059	0.078	0.078	0.100
MAX-E	0.059	0.078	0.078	0.100
MAX-I	0.059	0.078	0.078	0.100
MAX-VHS	0.075	0.078	0.098	0.100
DMAX	0.059	0.060	0.060	0.075

PRECISION SECTIONING CONSUMABLES



Metallographic
Diamond Blades



Electroplated Diamond Blades

3-inch (75 mm) Diamond Blades (1/2-inch arbor, 0.006-inch thick)



PACE Product Name	Catalog Number	Qty
3-inch Diamond Wafering Blade (fine-grit, low conc.)	WB-0030LC	each
3-inch Diamond Wafering Blade (medium-grit, low conc.)	WB-0035LC	each
3-inch Diamond Wafering Blade (medium-grit, high conc.)	WB-0035HC	each
3-inch CBN Wafering Blade (medium-grit, high conc.)	WCBN-0035	each

4-inch (102 mm) Diamond Blades (1/2-inch arbor, 0.012-inch thick)



PACE Product Name	Catalog Number	Qty
4-inch Diamond Wafering Blade (fine-grit, low conc.)	WB-0040LC	each
4-inch Diamond Wafering Blade (medium-grit, low conc.)	WB-0045LC	each
4-inch Diamond Wafering Blade (medium-grit, high conc.)	WB-0045HC	each
4-inch CBN Wafering Blade (medium-grit, high conc.)	WCBN-0045	each
4-inch CBN/Diamond Hybrid Wafering Blade (medium-grit, high conc.)	WCBND-0045	each
4 x 0.024 x 0.5-inch Electroplated 120-grit Diamond Blade	WB-040EPD	each

5-inch (127 mm) Diamond Blades (1/2-inch arbor, 0.015-inch thick)



PACE Product Name	Catalog Number	Qty
6-inch Diamond Wafering Blade (fine-grit, low conc.)	WB-0060LC	each
6-inch Diamond Wafering Blade (medium-grit, low conc.)	WB-0065LC	each
6-inch Diamond Wafering Blade (medium-grit, high conc.)	WB-0065HC	each
6-inch CBN Wafering Blade (medium-grit, high conc.)	WCBN-0065	each
6-inch CBN/Diamond Hybrid Wafering Blade (medium-grit, high conc.)	WCBND-0065	each
6 x 0.032 x 0.5-inch Electroplated 120-grit Diamond Blade	WB-060EPD	each

6-inch (153 mm) Diamond Blades (1/2-inch arbor, 0.020-inch thick)

PACE Product Name	Catalog Number	Qty
5-inch Diamond Wafering Blade (fine-grit, low conc.)	WB-0050LC	each
5-inch Diamond Wafering Blade (medium-grit, low conc.)	WB-0055LC	each
5-inch Diamond Wafering Blade (medium-grit, high conc.)	WB-0055HC	each
5-inch CBN Wafering Blade (medium-grit, high conc.)	WCBN-0055	each
5-inch CBN/Diamond Hybrid Wafering Blade (medium-grit, high conc.)	WCBND-0055	each
5 x 0.024 x 0.5-inch Electroplated 120-grit Diamond Blade	WB-050EPD	each



7-inch (175 mm) Diamond Blades (1/2-inch arbor, 0.024-inch thick)

PACE Product Name	Catalog Number	Qty
7-inch Diamond Wafering Blade (fine-grit, low conc.)	WB-0070LC	each
7-inch Diamond Wafering Blade (medium-grit, low conc.)	WB-0075LC	each
7-inch Diamond Wafering Blade (medium-grit, high conc.)	WB-0075HC	each
7-inch CBN Wafering Blade (medium-grit, high conc.)	WCBN-0075	each
7-inch CBN/Diamond Hybrid Wafering Blade (medium-grit, high conc.)	WCBND-0075	each
7 x 0.039 x 0.5-inch Electroplated 120-grit Diamond Blade	WB-070EPD	each



8-inch (204 mm) Diamond Blades (1/2-inch arbor, 0.024-inch thick)

PACE Product Name	Catalog Number	Qty
8-inch Diamond Wafering Blade (fine-grit, low conc.)	WB-0080LC	each
8-inch Diamond Wafering Blade (medium-grit, low conc.)	WB-0085LC	each
8-inch Diamond Wafering Blade (medium-grit, high conc.)	WB-0085HC	each
8-inch CBN Wafering Blade (medium-grit, high conc.)	WCBN-0085	each
8 x 0.039 x 0.5-inch Electroplated 120-grit Diamond Blade	WB-080EPD	each



Precision Abrasive Blades (1/2-inch arbor)

PACE Product Name	Catalog Number	Qty
6 x 0.0625-inch Alumina Abrasive Blade (ferrous metals)	MAX-D150	10
6 x 0.0385-inch SiC Abrasive Blade (non-ferrous metals)	MAX-C150	10
7 x 0.0285-inch Abrasive Blade (general purpose)	MAX-7000S	10



PRECISION SECTIONING CONSUMABLES

Wafer Cutting Accessories



PACE Product Name	Catalog Number	Qty
DIACUT™ Dressing Stick (1/2 x 1/2 x 4-1/2-inch)	DRESS-0010	each
DIACUT™ Oil-based Cutting Fluid (16 oz)	OL-3000-16	16 oz
DIACUT™ Oil-based Cutting Fluid (32 oz)	OL-3000-32	32 oz
DIACUT™ Water-based Cutting Fluid (16 oz)	WL-3000-16	16 oz
DIACUT™ Water-based Cutting Fluid (32 oz)	WL-3000-32	32 oz
DIACUT™ 2 Water-based Anti-corrosion Cutting Fluid (16 oz)	WL2-3000-16	16 oz
DIACUT™ 2 Water-based Anti-corrosion Cutting Fluid (32 oz)	WL2-3000-32	32 oz
Propylene Glycol-based Anti-Corrosion Additive (32 oz)	PCC-5000-32	32 oz

Tips: Precision Wafering:

1. Properly fixture or clamp the sample/specimen
2. Select the proper wafering blade and cutting fluid
3. Set the blade speed and load
4. For samples with coatings orient the sample so the coating is cut in compression
5. Dress or condition the blade periodically when the cutting rate diminishes

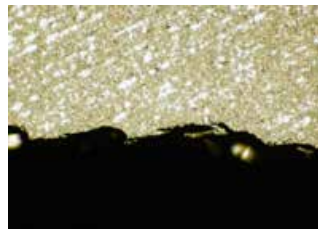
Material	Characteristic	Speed (rpm)	Load	Blade (grit/ conc)
Silicon substrates	Soft/Brittle	<300	Low	Fine/Low
Gallium arsenide	Soft/Brittle	<200	Low	Fine/Low
Boron composites	Hard/Brittle	500	Medium	Fine/Low
Ceramic fiber composites	Hard/Brittle	1000	Medium	Fine/Low
Glass	Brittle	1000	Medium	Fine/Low
Mineralis	Friable/Brittle	>1500	High	Fine/Low
Alumina ceramic	Hard/Tough	>1500	High	Medium/Low
Zirconia (PSZ)	Hard/Tough	>3500	High	Medium/Low
Silicon nitride	Hard/Tough	>3500	High	Medium/Low
Metal matrix composites	Hard/Tough	>3500	High	Medium/High
General Purpose		Variable	Varialbe	Medium/High



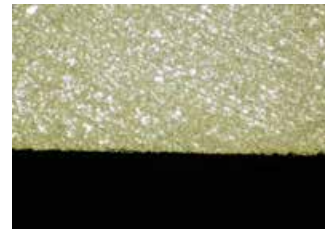
Boron-graphite composite sectioned with fine grit diamond wafering blade. Boron fibers damage minimal.



Boron-graphite composite sectioned with medium grit diamond wafering blade. Boron fibers damaged.



Silicon edge damaged after sectioning with medium grit diamond wafering blade



Silicon edge intact after sectioning with fine grit diamond wafering blade

COMPRESSION MOUNTING CONSUMABLES



	PHENOLICS	ACRYLIC	EPOXY (glass-filled)	DIALLYL PHTHALATE
Type	Thermoset	Thermoplastic	Thermoset	Thermoset
Cost	Low	Moderate	Moderate	Moderate
Ease of Use	Excellent	Moderate	Good	Good
Color	Black, red, green	Clear	Gray	Blue
Cycle Time (1.25-inch mount) TERAPRESS TP-7500S	4-5 minutes	8-10 minutes	5-7 minutes	5-7 minutes
Edge Retention	Fair	Good	Excellent	Excellent
Clarity	None	Excellent	None	None
Hardness	Low	Medium	High	High

	PHENOLICS	ACRYLIC	EPOXY (glass-filled)	DIALLYL PHTHALATE
Shore-D hardness	82	80	88	88
Shrinkage (in/in)	0.006	0.001-0.003	0.001-0.003	0.001-0.003
Chemical resistance	Glycol, petrochemicals, solvents, acids	Alcohol, dilute acids, solvents	Solvents, acids, alkalies & oxidizers	Solvents, acid and alkalies

Phenolic Compression Mounting



PACE Product Name	Catalog Number	Qty
Black Phenolic powder (5 lbs)	CM-2001B-5	5 lbs
Black Phenolic powder (25 lbs)	CM-2001B-25	25 lbs
Red Phenolic powder (5 lbs)	CM-2001R-5	5 lbs
Red Phenolic powder (25 lbs)	CM-2001R-25	25 lbs
Green Phenolic powder (5 lbs)	CM-2001G-5	5 lbs
Green Phenolic powder (25 lbs)	CM-2001G-5	25 lbs

TIP: Phenolic Colors

- Use different phenolic colors to code jobs, specimen types, or for different test dates. For example, changing the phenolic color each month will show which samples or jobs are getting old
- If the color dye in the mount bleeds out when rinsing with an alcohol, this is an indication that the mount was not cured either at a high enough temperature or for the proper length of time

Acrylic Clear Compression Mounting



PACE Product Name	Catalog Number	Qty
TRANSACRYLIC clear compression mounting powder (5 lbs)	CM-2101A-5	5 lbs
TRANSACRYLIC clear compression mounting powder (25 lbs)	CM-2101A-25	25 lbs

TIP: Acrylic Mounts

A common problem with acrylic mounts, known as the "cotton ball" effect, can occur with thermoplastic acrylic resins, common causes include:

- Heating the compression mounting resin too fast so that a liquid layer forms around the unmelted powder so that the entrapped air cannot escape
- Mounting force is too low and cannot compress the entrapped air

To eliminate the issue: lower the mounting temperature, increase the mounting force and increase the mounting time

COMPRESSION MOUNTING CONSUMABLES

Glass Filled Epoxy Compression Mounting



PACE Product Name	Catalog Number	Qty
EPOCOMP Epoxy Resin powder (5.0 lbs)	EP-2201A-5	5 lbs
EPOCOMP Epoxy Resin powder (25 lbs)	EP-2201A-25	25 lbs
EPOCOMP Fine Epoxy Resin powder (5 lbs)	EPF-2201A-5	5 lbs
EPOCOMP Fine Epoxy Resin powder (25 lbs)	EPF-2201A-25	25 lbs

Diallyl Phthalate Compression Mounting



PACE Product Name	Catalog Number	Qty
Diallyl Phthalate blue compression mounting powder (5 lbs)	CM-2301A-5	5 lbs
Diallyl Phthalate blue compression mounting powder (25 lbs)	CM-2301A-25	25 lbs

TIP: Glass Filled Mounts

- Glass filled epoxies and diallyl phthalates are excellent mounting compounds for protecting the specimen edges during grinding and polishing
- Glass filled resins can be expensive, so to reduce the cost per mount, it is recommended that the epoxy or diallyl phthalate be used at the specimen interface and then layered with a lower cost mounting compound such as a phenolic. A common combination is red phenolic / glass filled epoxy.

Conductive Compression Mounting



PACE Product Name	Catalog Number	Qty
Conductive (graphite) powder (1 lb)	CONDUCTO-1	1 lb
Conductive (graphite) powder (5 lbs)	CONDUCTO-5	5 lbs
Conductive (graphite) powder (25 lbs)	CONDUCTO-25	25 lbs
Conductive (copper) powder (1 lb)	CONDUCTO-CU-1	1 lb
Conductive (copper) powder (5 lbs)	CONDUCTO-CU-5	5 lbs
Conductive (copper) powder (25 lbs)	CONDUCTO-CU-25	25 lbs

TIP: Conductive Mounts

- Conductive mounts are used to provide conductivity to the mount for use with electron microscopy
- Conductive mounts use either graphite powder or copper as the conductive filler

Miscellaneous Compression Mounting Accessories



PACE Product Name	Catalog Number	Qty
Mold release (8 oz)	MR-1000-08	8 oz
Mold release (16 oz)	MR-1000-16	16 oz
Mold release (1 gallon)	MR-1000-128	1 gallon
Utility heat protective gloves (pair)	GLOVES	pair
Small disposable protective gloves (200/box)	GLOVES-S200	200/box
Medium disposable protective gloves (200/box)	GLOVES-M200	200/box
Large disposable protective gloves (200/box)	GLOVES-L200	200/box
Metal specimen clips (100/pkg)	MKLIP-0100	100/pkg
Plastic spring specimen clips (100/pkg)	SKLIP-0100	100/pkg
Plastic spring specimen clips (1000/pkg)	SKLIP-01000	1000/pkg
Plastic specimen clips (100/pkg)	KLIP-0100	100/pkg
30 ml measuring scoop	MS-1000-30	each
Scribing tool	SCRIBE	each

Compression Mounting Recommended Procedures:

1. Clean specimens to remove cutting and handling residue
2. Remove debris from mold assembly
3. Apply thin coat of mold release compound to mold assembly
4. Raise mold ram to up position
5. Center specimen on ram
6. Lower ram assembly
7. Pour predetermined amount of resin into mold
8. Lock mold assembly cover
9. Slowly raise ram into up position
10. Apply recommended heat and maintain force for specified period of time
11. Cool to near room temperature
12. Remove mounted specimen
13. Clean mold and ram assembly

ACRYLIC MOUNTING CONSUMABLES

Acrylic Castable Mounting:

Castable acrylics are easy to use and are very robust. The main advantage of mounting with castable acrylics is the fast curing time. Depending upon the mixing ratio, castable acrylic mounts are typically ready to use within 8-15 minutes. Also unlike epoxy resins, the ratio of the various acrylic parts (powder to liquid) can be altered up to 25% with no adverse effects to the final properties of the mount. This is because both the liquid and powder are acrylics containing various additives and curing agents. By varying the ratio of the liquid to powder, the curing time and viscosity can be altered.

NOTE: The acrylic powder contains a catalyst that reacts with the liquid hardener to initiate the curing process. Fillers are added to increase hardness and to reduce shrinkage.

Characteristics of Castable Acrylics:

- Rapid mounting, producing very repeatable and consistent mounts
- Moderate shrinkage and good hardness
- Semi-transparent
- High odor

CASTAMOUNT Acrylics (Castable Mounting)



PACE Product Name	Catalog Number	Qty
CASTAMOUNT Acrylic kit (1 lb resin with hardener)	AK-5000-K1	1 lb
CASTAMOUNT Acrylic kit (5 lbs resin with 64 oz hardener)	AK-5000-K5	5 lbs
CASTAMOUNT Acrylic Powders		
CASTAMOUNT Acrylic powder (1 lb)	AR-5000-P1	1 lb
CASTAMOUNT Acrylic powder (5 lbs)	AR-5000-P5	5 lbs
CASTAMOUNT Acrylic powder (25 lbs)	AR-5000-P25	25 lbs
CASTAMOUNT Acrylic powder (100 lbs)	AR-5000-P100	100 lbs
CASTAMOUNT Acrylic Liquids		
CASTAMOUNT Acrylic hardener (12 oz)	AH-5000-H12	12 oz
CASTAMOUNT Acrylic hardener (32 oz)	AH-5000-H32	32 oz
CASTAMOUNT Acrylic hardener (1/2 gallon)	AH-5000-H64	1/2 gallon
CASTAMOUNT Acrylic hardener (1 gallon)	AH-5000-H128	1 gallon
CASTAMOUNT Acrylic hardener (5 gallons)	AH-5000-H640	5 gallons

TIP: Acrylics

Acrylics can be submerged into a water bath during curing. This reduces the exotherm heat and thus reduces the shrinkage of the mount at the specimen interface. A secondary advantage is that the water also absorbs the odor.

ACRYLIC PLUS Acrylics (Castable Mounting)



PACE Product Name	Catalog Number	Qty
ACRYLIC PLUS Castable Mounting Resin Kit (1 lb/12 oz liquid)	ACYP-5000-K1	1 lb
ACRYLIC PLUS Castable Mounting Resin Kit (5 lbs/64 oz liquid)	ACYP-5000-K5	5 lbs
ACRYLIC PLUS Acrylic Powders		
ACRYLIC PLUS Resin powder (1 lb)	ACYP-5000-P1	1 lb
ACRYLIC PLUS Resin powder (5 lbs)	ACYP-5000-P5	5 lbs
ACRYLIC PLUS Resin powder (25 lbs)	ACYP-5000-P25	25 lbs
ACRYLIC PLUS Resin powder (100 lbs)	ACYP-5000-P100	100 lbs
ACRYLIC PLUS Acrylic Liquids		
ACRYLIC PLUS Resin hardener (12 oz)	ACYP-5000-H12	12 oz
ACRYLIC PLUS Resin hardener (32 oz)	ACYP-5000-H32	32 oz
ACRYLIC PLUS Resin hardener (1/2 gallon)	ACYP-5000-H64	1/2 gallon
ACRYLIC PLUS Resin hardener (1 gallon)	ACYP-5000-H128	1 gallon
ACRYLIC PLUS Resin hardener (5 gallons)	ACYP-5000-H640	5 gallons

SUPERMOUNT Glass Filled Acrylics (Castable Mounting)



PACE Product Name	Catalog Number	Qty
Glass Filled Acrylic Kit (gray) (1 lb resin with 12 oz hardener)	GKAK-5000-K1	1 lb
Glass Filled Acrylic Kit (gray) (5 lbs resin with 64 oz hardener)	GKAK-5000-K5	5 lbs
SUPERMOUNT PLUS Acrylic Powders		
SUPERMOUNT PLUS Resin powder (1 lb)	GRAR-5000-P1	1 lb
SUPERMOUNT PLUS Resin powder (5 lbs)	GRAR-5000-P5	5 lbs
SUPERMOUNT PLUS Resin powder (25 lbs)	GRAR-5000-P25	25 lbs
SUPERMOUNT PLUS Resin powder (100 lbs)	GRAR-5000-P100	100 lbs
SUPERMOUNT Acrylic Liquids		
SUPERMOUNT PLUS Resin hardener (12 oz)	GRAH-5000-H12	12 oz
SUPERMOUNT PLUS Resin hardener (32 oz)	GRAH-5000-H32	32 oz
SUPERMOUNT PLUS Resin hardener (1/2 gallon)	GRAH-5000-H64	1/2 gallon
SUPERMOUNT PLUS Resin hardener (1 gallon)	GRAH-5000-H128	1 gallon
SUPERMOUNT PLUS Resin hardener (5 gallons)	GRAH-5000-H640	5 gallons

EPOXY MOUNTING CONSUMABLES

Epoxy Castable Mounting:

The most common and best performing castable resins are epoxy based. Epoxy resins are typically two-part systems consisting of a resin and a catalyst (hardener). Mixing ratios vary depending upon the volume of the mixture or the mount size. Larger mounts require a ratio of less hardener to resin. The advantages of mounting with epoxy resins include:

- Low shrinkage
- Relatively clear
- Relatively low exotherms
- Excellent adhesion
- Excellent chemical resistance
- Good hardness
- Relatively inexpensive

Epoxy Curing Characteristics:

Epoxy curing times are dependent upon a number of variables including:

- Volume of mounting resin (larger mounts cure faster)
- Thermal mass of specimen (larger specimens absorb heat and therefore require longer curing times)
- Specimen material properties
- Initial resin temperature (higher resin temperatures cure faster)
- Ambient temperature (higher room temperatures cure faster)
- Relative humidity and shelf life (absorption of water degrades resin and shortens shelf life)
- Mounting mold (plastic and rubber molds absorb heat differently)

TIP: Epoxies

Preheat resin and sample to 35°C (95°F) to expedite the initial heating process and for decreasing overall curing time.

Epoxy Standard Cure (5:2 Resin: Hardener) Castable Mounting



PACE Product Name	Catalog Number	Qty
Standard Epoxy Resin		
Epoxy castable resin (32 oz)	EP-3000-32	32 oz
Epoxy castable resin (1-gallon)	EP-3000-128	1 gallon
Epoxy castable resin (5-gallons)	EP-3000-5G	5 gallons
Standard Epoxy Hardener		
Epoxy hardener (8 oz)	EH-3000-08	8 oz
Epoxy hardener (32 oz)	EH-3000-32	32 oz
Epoxy hardener (1 gallon)	EH-3000-128	1 gallon

Fast Curing Quick Mounting Epoxy (10:1 Resin: Hardener) Castable Mounting



PACE Product Name	Catalog Number	Qty
Quick Mounting Epoxy Resins		
Quick Mounting fast epoxy castable resin (32 oz)	ERF-3000-32	32 oz
Quick Mounting fast epoxy castable resin (1-gallon)	ERF-3000-128	1 gallon
Quick Mounting fast epoxy castable resin (5-gallons)	ERF-3000-5G	5 gallons
Quick Mounting Epoxy Hardener		
Quick Mounting fast epoxy hardener (8 oz)	EHF-3000-08	8 oz
Quick Mounting fast epoxy hardener (32 oz)	EHF-3000-32	32 oz
Quick Mounting fast epoxy hardener (1 gallon)	EHF-3000-128	1 gallon

Low Viscosity ULTRATHIN Epoxy (10:1 Resin: Hardener) Castable Mounting



PACE Product Name	Catalog Number	Qty
ULTRATHIN Low Viscosity Epoxy Resins		
Low Viscosity castable epoxy resin (32 oz)	ULTRA-3000R-32	32 oz
Low Viscosity castable epoxy resin (1-gallon)	ULTRA-3000R-128	1 gallon
Low Viscosity castable epoxy resin (5-gallons)	ULTRA-3000R-5G	5 gallons
ULTRATHIN Low Viscosity Epoxy		
Low Viscosity castable epoxy hardener (8 oz)	ULTRA-3000H-08	8 oz
Low Viscosity castable epoxy hardener (32 oz)	ULTRA-3000H-32	32 oz
Low Viscosity castable epoxy hardener (1 gallon)	ULTRA-3000H-128	1 gallon

EPOXY ELITE (non-butyl glycidyl ether resin) (3:1 Resin: Hardener) Castable Mounting



PACE Product Name	Catalog Number	Qty
ELITE Epoxy Resins		
EPOXY-ELITE™ Resin (32 oz)	ELITE-3000R-32	32 oz
EPOXY-ELITE™ Resin (1-gallon)	ELITE-3000R-128	1 gallon
EPOXY-ELITE™ Resin (5-gallons)	ELITE-3000R-5G	5 gallons
EPOXY-ELITE Epoxy Hardeners		
EPOXY-ELITE™ Hardener (8 oz)	ELITE-3000H-08	8 oz
EPOXY-ELITE™ Hardener (32 oz)	ELITE-3000H-32	32 oz
EPOXY-ELITE™ Hardener (1 gallon)	ELITE-3000H-128	1 gallon

POLYESTER MOUNTING CONSUMABLES

Polyester Castable Mounting:

Polyesters are typically used when a very clear mount is required. Polyester resins are also useful for mounting parts for display. In this case, the part appears suspended in the plastic. The procedure for molding samples to be displayed is to first determine the mixing ratio of the resin to hardener (catalyst). This ratio is variable depending upon the mass of the casting. The table to the right for Polyester catalyst mixing ratio's is based on ambient and resin temperatures of 70°F

For larger volumes, the amount of hardener needs to be reduced significantly. The procedure for suspending the sample in the mount is to pour an initial layer and allow it to pot or gel (do not let it fully cure). The object or specimen is then placed on the initial "rubbery" polyester layer and another layer of the liquid polyester is poured. Multiple layers can be poured in this fashion if required.

Single Layer Casting (metallographic)		Multiple Layer Casting (display)	
Layer Thickness (inches)	Drops of catalyst per ounce of resin	Layer	Drops of catalyst per ounce of resin
1/8	15	1st layer	4-5
1/4	8	2nd layer	3-4
1/2	6	3rd layer	2-3
3/4	5	4th layer	1-2
1-1.5	4	5th layer or more	1

Polyester Characteristics:

- Very clear (water clear)
- High odor
- Best resin system for making large casting

Polyester Resin (Clear Castable Mounting)



PACE Product Name	Catalog Number	Qty
Clear Polyester castable resin (1 gallon))	POLYCAST-128	1 gallon
Polyester Hardener (2 oz)	POLYHARD-02	2 oz
Polyester Color Dye Set (3 colors))	DYE-1000	3 colors

TIP: Polyesters

Polyesters can be submerged into a water bath during curing. This reduces the exotherm heat and thus reduces the shrinkage of the mount at the specimen interface. A secondary advantage is that the water also absorbs the odor.

Castable Mounting Molds



PACE Product Name	Catalog Number	Qty
Reusable Plastic Molds		
1.0-inch reusable two piece plastic mold (12/pkg)	METPREP-0100	12/pkg
1.25-inch reusable two piece plastic mold (12/pkg)	METPREP-0125	12/pkg
1.5-inch reusable two piece plastic mold (12/pkg)	METPREP-0150	12/pkg
2.0-inch reusable two piece plastic mold (12/pkg)	METPREP-0200	12/pkg
Disposable Plastic Molds		
1.0-inch disposable red mount cap - 50/pkg	MOUNT-0100	50/pkg
1.25-inch disposable red mount cap - 50/pkg	MOUNT-0125	50/pkg
1.5-inch disposable red mount cap - 50/pkg	MOUNT-0150	50/pkg
Silicon Rubber Molds		
1.0-inch diameter Silicon Rubber Molds - 3/pkg	RMOUNT-0100	3/pkg
1.25-inch diameter Silicon Rubber Molds - 3/pkg	RMOUNT-0125	3/pkg
1.5-inch diameter Silicon Rubber Molds - 3/pkg	RMOUNT-0150	3/pkg
2.0-inch diameter Silicon Rubber Molds - 3/pkg	RMOUNT-0200	3/pkg
2.75 x 1.55 x 7/8-inch (70 x 39 x 22 mm) Silicon Rubber Molds	RMOUNT-315R	each
3 x 2 x 7/8-inch (76 x 51 x 22 mm) Silicon Rubber Molds	RMOUNT-302R	each

Castable Mounting Accessories



PACE Product Name	Catalog Number	Qty
1-gallon castable pump dispenser	ED-3000-01	each
1.25-inch storage container - 25/pkg	STORE-0125	25/pkg
Mold release (8 oz)	MR-1000-08	each
Mold release (16 oz)	MR-1000-16	each
Mixing Cups		
Graduated Paper Mixing cups (3 oz) - 100/pk	MCUPS-0100	50/pkg
Plastic Mixing cups (9 oz) - 50/pkg	PCUPS-050	50/pkg
Vacuum Impregnator Pouring cups - 50/pkg	POUR-CUP	50/pkg
Mounting Klips		
Metal Spring Specimen mounting clip - 100/pkg	MKLIP-0100	100/pkg
Plastic Spring Specimen mounting clip - 100/pkg	SKLIP-0100	100/pkg
1.5-inch Plastic Specimen mounting clip - 100/pkg	KLIP-0100	100/pkg
Latex Gloves		
Small Latex Gloves (200/box)	GLOVES-S100	200/pkg
Medium Latex Gloves (200/box)	GLOVES-M100	200/pkg
Large Latex Gloves (200/box)	GLOVES-L100	200/pkg

ABRASIVE BELTS, POWDERS & ROLLS

Specimen Planar Grinding:

In geneal, it is better to cut as close to the areas to be investigated than to grind with very coarse abrasives such as 60, 80 and 120 grit grinding papers; however, if the specimen requires coarse abrasive grinding it is HIGHLY recommended that a belt grinder with a planar grinding / squaring fixutre be used. The squaring fixture is important so that mounted specimens remain both square and flat.

Note: It is nearly impossible to main a square sample by hand on a belt grinder. Square specimen mounts are very important for subsequent specimen preparation on automated single specimen preparation machines. PACE Technologies is the only metallographic equipment manufacturer that offers a planar grinding fixture for its PENTA 7500 belt grinder.

Abrasive Belts (4-inch x 36-inch)



Zirconia (blue), Alumina (red) & Silicon Carbide (black) Abrasive Grinding Belts

PACE Product Name	Catalog Number	Qty
60 grit Zirconia Abrasive Belts	ZrO2-B060	5/pkg
120 grit Zirconia Abrasive Belts	ZrO2-B120	5/pkg
120 grit Alumina Abrasive Belts	ALO-B120	5/pkg
60 grit SiC Abrasive Belts	SIC-B60	10/pkg
80 grit SiC Abrasive Belts	SIC-B80	10/pkg
120 grit SiC Abrasive Belts	SIC-B120	10/pkg
180 grit SiC Abrasive Belts	SIC-B180	10/pkg
240 grit SiC Abrasive Belts	SIC-B240	10/pkg

Abrasive Belt Type	Benefit
Alumina	Hard and durable abrasive, not as sharp as SiC; however, alumina lasts longer than SiC
Silicon Carbide	Very hard and friable. Fast initial cutting, however SiC abrasive breaks down very fast so it is a "short-lived" abrasive
Zirconia	Very durable and hard abrasive. It is a loner lasting abrasive and is an excellent choice for belts grinders. The only drawback is that it requires higher grinding forces as compared to SiC and alumina abrasives.

Silicon Carbide (SiC) Abrasive Powders



SiC Abrasive Powders

PACE Product Name	Catalog Number	Qty
120 grit (P120-grit) SiC Powder (1 lb)	SIC-120-P1	1 lb
120 grit (P120-grit) SiC Powder (5 lbs)	SIC-120-P5	5 lbs
240 grit (P280-grit) SiC Powder (1 lb)	SIC-240-P1	1 lb
240 grit (P280-grit) SiC Powder (5 lbs)	SIC-120-P5	5 lbs
320 grit (P400-grit) SiC Powder (1 lb)	SIC-320-P1	1 lb
320 grit (P400-grit) SiC Powder (5 lbs)	SIC-320-P5	5 lbs
400 grit (P800-grit) SiC Powder (1 lb)	SIC-400-P1	1 lb
400 grit (P800-grit) SiC Powder (5 lbs)	SIC-400-P5	5 lbs
600 grit (P1200-grit) SiC Powder (1 lb)	SIC-600-P1	1 lb
600 grit (P1200-grit) SiC Powder (5 lbs)	SIC-600-P5	5 lbs
800 grit (P2400-grit) SiC Powder (1 lb)	SIC-800-P1	1 lb
800 grit (P2400-grit) SiC Powder (5 lbs)	SIC-800-P5	5 lbs
1000 grit (P3000-grit) SiC Powder (1 lb)	SIC-1000-P1	1 lb
1000 grit (P3000-grit) SiC Powder (5 lbs)	SIC-1000-P5	5 lbs
1200 grit (P1200-grit) SiC Powder (1 lb)	SIC-1200-P1	1 lb
1200 grit (P1200-grit) SiC Powder (5 lbs)	SIC-1200-P5	5 lbs

Silicon Carbide Powders:

The main application for grinding with silicon carbide particles is in conjunction with flat lapping on hard metal plates such as cast iron. For metallographic specimen preparation silicon carbide powders are used for grinding petrographic thin section specimens.

Silicon Carbide (SiC) Abrasive Rolls (3-7/16-inch width, 60-foot length, 1-inch core)

PACE Product Name	Catalog Number	Qty
120 grit SiC Abrasive Roll (each)	SIC-120R-60	each
240 grit SiC Abrasive Roll (each)	SIC-240R-60	each
320 grit SiC Abrasive Roll (each)	SIC-320R-60	each
360 grit SiC Abrasive Roll (each)	SIC-360R-60	each
400 grit SiC Abrasive Roll (each)	SIC-400R-60	each
600 grit SiC Abrasive Roll (each)	SIC-600R-60	each
800 grit SiC Abrasive Roll (each)	SIC-800R-60	each
1200grit SiC Abrasive Roll (each)	SIC-1200R-60	each



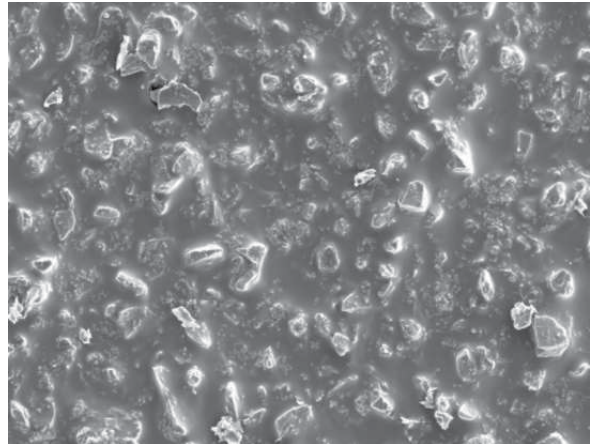
SiC Abrasive Rolls

GRINDING CONSUMABLES

Silicon Carbide Abrasives:

SiC is a manufactured abrasive produced by a high temperature reaction between silica and carbon. It has a hexagonal-rhombohedral crystal structure and has a hardness of approximately 2500 HV. It is an ideal abrasive for cutting and grinding because of its hardness and sharp edges. It is also somewhat brittle, and therefore it cleaves easily to produce sharp new edges (self sharpening). SiC is an excellent abrasive for maximizing cutting rates while minimizing surface and subsurface damage. For metallographic preparation, SiC abrasives are used in abrasive blades and for coated abrasive grinding papers ranging from very coarse 60 grit to very fine 1200 grit sizes.

Bonded or coated abrasive papers of SiC are designed so that the abrasive will have a large number of cutting points (negative abrasive rank angle). This is achieved by aligning the abrasive particles approximately normal to the backing. Note that coated abrasives are not quite coplanar, thus SiC papers produce the maximum efficiency (cut rate, stock removal and minimal damage) because new abrasive is exposed as the old abrasive breaks down.



SiC Grinding Characteristics:

- Easy to use
- Repeatable
- Relatively lower cost to other options
- Available with and without a pressure sensitive adhesive (PSA) backing

8-inch SiC Papers with Adhesive Backing, PSA (25/pkg)



120 grit 8-inch SiC Paper
with PSA (25/pkg)
Catalog no. SIC-120P8-25

PACE Product Name	Catalog Number	Qty
8-inch Combo Pack (5 each - 240, 360, 600, 800, 1200 grit SiC) (PSA)	SIC-P08C	5 each
8-inch 60 grit SiC (PSA)-25/pkg	SIC-060P8-25	25/pkg
8-inch 80 grit SiC (PSA)-25/pkg	SIC-080P8-25	25/pkg
8-inch 120 grit SiC (PSA)-25/pkg	SIC-120P8-25	25/pkg
8-inch 180 grit SiC (PSA)-25/pkg	SIC-180P8-25	25/pkg
8-inch 240 grit SiC (PSA)-25/pkg	SIC-240P8-25	25/pkg
8-inch 320 grit SiC (PSA)-25/pkg	SIC-320P8-25	25/pkg
8-inch 360 grit SiC (PSA)-25/pkg	SIC-360P8-25	25/pkg
8-inch 400 grit SiC (PSA)-25/pkg	SIC-400P8-25	25/pkg
8-inch 600 grit SiC (PSA)-25/pkg	SIC-600P8-25	25/pkg
8-inch 800 grit SiC (PSA)-25/pkg	SIC-800P8-25	25/pkg
8-inch 1000 grit SiC (PSA)-25/pkg	SIC-1000P8-25	25/pkg
8-inch 1200 grit SiC (PSA)-25/pkg	SIC-1200P8-25	25/pkg

8-inch SILICON CARBIDE ABRASIVE PAPER

8-inch SiC Papers with Adhesive Backing, PSA (100/pkg)



360 grit 8-inch SiC Paper
with PSA (100/pkg)
Catalog no. SIC-360P8-100

PACE Product Name	Catalog Number	Qty
8-inch 60 grit SIC (PSA)-100/pkg	SIC-060P8-100	100/pkg
8-inch 80 grit SIC (PSA)-100/pkg	SIC-080P8-100	100/pkg
8-inch 120 grit SIC (PSA)-100/pkg	SIC-120P8-100	100/pkg
8-inch 180 grit SIC (PSA)-100/pkg	SIC-180P8-100	100/pkg
8-inch 240 grit SIC (PSA)-100/pkg	SIC-240P8-100	100/pkg
8-inch 320 grit SIC (PSA)-100/pkg	SIC-320P8-100	100/pkg
8-inch 360 grit SIC (PSA)-100/pkg	SIC-360P8-100	100/pkg
8-inch 400 grit SIC (PSA)-100/pkg	SIC-400P8-100	100/pkg
8-inch 600 grit SIC (PSA)-100/pkg	SIC-600P8-100	100/pkg
8-inch 800 grit SIC (PSA)-100/pkg	SIC-800P8-100	100/pkg
8-inch 1000 grit SIC (PSA)-100/pkg	SIC-1000P8-100	100/pkg
8-inch 1200 grit SIC (PSA)-100/pkg	SIC-1200P8-100	100/pkg

8-inch SiC Papers Plain-backed Non-Adhesive Backed (100/pkg)



1200 grit 8-inch SiC Plain-
backed Paper (100/pkg)
Catalog no. SIC-2108-1200

PACE Product Name	Catalog Number	Qty
8-inch 60 grit SIC (Plain)-100/pkg	SIC-2108-060	100/pkg
8-inch 80 grit SIC (Plain)-100/pkg	SIC-2108-080	100/pkg
8-inch 120 grit SIC SIC (Plain)-100/pkg	SIC-2108-120	100/pkg
8-inch 180 grit SIC (Plain)-100/pkg	SIC-2108-180	100/pkg
8-inch 240 grit SIC (Plain)-100/pkg	SIC-2108-240	100/pkg
8-inch 320 grit SIC (Plain)-100/pkg	SIC-2108-320	100/pkg
8-inch 360 grit SIC (Plain)-100/pkg	SIC-2108-360	100/pkg
8-inch 400 grit SIC (Plain)-100/pkg	SIC-2108-400	100/pkg
8-inch 600 grit SIC (Plain)-100/pkg	SIC-2108-600	100/pkg
8-inch 800 grit SIC (Plain)-100/pkg	SIC-2108-800	100/pkg
8-inch 1000 grit SIC (Plain)-100/pkg	SIC-2108-1000	100/pkg
8-inch 1200 grit SIC (Plain)-100/pkg	SIC-2108-1200	100/pkg
8-inch Double-sided adhesive-10/pkg	DSA-08	10/pkg

10-inch SILICON CARBIDE ABRASIVE PAPERS

Silicon Carbide Converter:

PACE Technologies is the only metallographic supplier that converts its own SiC papers, which provides better quality control, distribution and flexibility for supplying metallographic silicon carbide papers.

SiC Conversion Characteristics:

- PSA laminating
- Diecutting
- Relatively lower cost to produce
- Focus on metallographic vs. industrial graded products



60 grit 10-inch SiC Paper
with PSA (25/pkg)

Catalog no. SIC-060P10-25

10-inch SiC Papers with Adhesive Backing, PSA (25/pkg)



60 grit 10-inch SiC Paper
with PSA (25/pkg)

Catalog no. SIC-060P10-25

PACE Product Name	Catalog Number	Qty
10-inch Combo Pack (5 each - 240, 360, 600, 800, 1200 grit SiC) (PSA)	SIC-P10C	5 each
10-inch 60 grit SiC (PSA)-25/pkg	SIC-060P10-25	25/pkg
10-inch 80 grit SiC (PSA)-25/pkg	SIC-080P10-25	25/pkg
10-inch 120 grit SiC (PSA)-25/pkg	SIC-120P10-25	25/pkg
10-inch 180 grit SiC (PSA)-25/pkg	SIC-180P10-25	25/pkg
10-inch 240 grit SiC (PSA)-25/pkg	SIC-240P10-25	25/pkg
10-inch 320 grit SiC (PSA)-25/pkg	SIC-320P10-25	25/pkg
10-inch 360 grit SiC (PSA)-25/pkg	SIC-360P10-25	25/pkg
10-inch 400 grit SiC (PSA)-25/pkg	SIC-400P10-25	25/pkg
10-inch 600 grit SiC (PSA)-25/pkg	SIC-600P10-25	25/pkg
10-inch 800 grit SiC (PSA)-25/pkg	SIC-800P10-25	25/pkg
10-inch 1000 grit SiC (PSA)-25/pkg	SIC-1000P10-25	25/pkg
10-inch 1200 grit SiC (PSA)-25/pkg	SIC-1200P10-25	25/pkg

10-inch SiC Papers with Adhesive Backing, PSA (100/pkg)



240 grit 10-inch SiC Paper
with PSA (100/pkg)
Catalog no. SIC-240P10-100

PACE Product Name	Catalog Number	Qty
10-inch 60 grit SIC (PSA)-100/pkg	SIC-060P10-100	100/pkg
10-inch 80 grit SIC (PSA)-100/pkg	SIC-080P10-100	100/pkg
10-inch 120 grit SIC (PSA)-100/pkg	SIC-120P10-100	100/pkg
10-inch 180 grit SIC (PSA)-100/pkg	SIC-180P10-100	100/pkg
10-inch 240 grit SIC (PSA)-100/pkg	SIC-240P10-100	100/pkg
10-inch 320 grit SIC (PSA)-100/pkg	SIC-320P10-100	100/pkg
10-inch 360 grit SIC (PSA)-100/pkg	SIC-360P10-100	100/pkg
10-inch 400 grit SIC (PSA)-100/pkg	SIC-400P10-100	100/pkg
10-inch 600 grit SIC (PSA)-100/pkg	SIC-600P10-100	100/pkg
10-inch 800 grit SIC (PSA)-100/pkg	SIC-800P10-100	100/pkg
10-inch 1000 grit SIC (PSA)-100/pkg	SIC-1000P10-100	100/pkg
10-inch 1200 grit SIC (PSA)-100/pkg	SIC-1200P10-100	100/pkg

10-inch SiC Papers Plain-backed Non-Adhesive Backed (100/pkg)



800 grit 10-inch SiC Plain-backed
Paper (100/pkg)
Catalog no. SIC-2110-800

PACE Product Name	Catalog Number	Qty
10-inch 60 grit SIC (Plain)-100/pkg	SIC-2110-060	100/pkg
10-inch 80 grit SIC (Plain)-100/pkg	SIC-2110-080	100/pkg
10-inch 120 grit SIC SIC (Plain)-100/pkg	SIC-2110-120	100/pkg
10-inch 180 grit SIC (Plain)-100/pkg	SIC-2110-180	100/pkg
10-inch 240 grit SIC (Plain)-100/pkg	SIC-2110-240	100/pkg
10-inch 320 grit SIC (Plain)-100/pkg	SIC-2110-320	100/pkg
10-inch 360 grit SIC (Plain)-100/pkg	SIC-2110-360	100/pkg
10-inch 400 grit SIC (Plain)-100/pkg	SIC-2110-400	100/pkg
10-inch 600 grit SIC (Plain)-100/pkg	SIC-2110-600	100/pkg
10-inch 800 grit SIC (Plain)-100/pkg	SIC-2110-800	100/pkg
10-inch 1000 grit SIC (Plain)-100/pkg	SIC-2110-1000	100/pkg
10-inch 1200 grit SIC (Plain)-100/pkg	SIC-2110-1200	100/pkg
10-inch Double-sided adhesive-10/pkg	DSA-10	10/pkg

12-inch SILICON CARBIDE ABRASIVE PAPERS

12-inch SiC Papers with Adhesive Backing, PSA (25/pkg)



240 grit 12-inch SiC Paper
with PSA (25/pkg)
Catalog no. SIC-240P12-25

PACE Product Name	Catalog Number	Qty
12-inch Combo Pack (5 each - 240, 360, 600, 800, 1200 grit SiC) (PSA)	SIC-P12C	5 each
12-inch 60 grit SiC (PSA)-25/pkg	SIC-060P12-25	25/pkg
12-inch 80 grit SiC (PSA)-25/pkg	SIC-080P12-25	25/pkg
12-inch 120 grit SiC (PSA)-25/pkg	SIC-120P12-25	25/pkg
12-inch 180 grit SiC (PSA)-25/pkg	SIC-180P12-25	25/pkg
12-inch 240 grit SiC (PSA)-25/pkg	SIC-240P12-25	25/pkg
12-inch 320 grit SiC (PSA)-25/pkg	SIC-320P12-25	25/pkg
12-inch 360 grit SiC (PSA)-25/pkg	SIC-360P12-25	25/pkg
12-inch 400 grit SiC (PSA)-25/pkg	SIC-400P12-25	25/pkg
12-inch 600 grit SiC (PSA)-25/pkg	SIC-600P12-25	25/pkg
12-inch 800 grit SiC (PSA)-25/pkg	SIC-800P12-25	25/pkg
12-inch 1000 grit SiC (PSA)-25/pkg	SIC-1000P12-25	25/pkg
12-inch 1200 grit SiC (PSA)-25/pkg	SIC-1200P12-25	25/pkg

12-inch SiC Papers with Adhesive Backing, PSA (100/pkg)



600 grit 12-inch SiC Paper
with PSA (100/pkg)
Catalog no. SIC-600P12-100

PACE Product Name	Catalog Number	Qty
12-inch 60 grit SiC (PSA)-100/pkg	SIC-060P12-100	100/pkg
12-inch 80 grit SiC (PSA)-100/pkg	SIC-080P12-100	100/pkg
12-inch 120 grit SiC (PSA)-100/pkg	SIC-120P12-100	100/pkg
12-inch 180 grit SiC (PSA)-100/pkg	SIC-180P12-100	100/pkg
12-inch 240 grit SiC (PSA)-100/pkg	SIC-240P12-100	100/pkg
12-inch 320 grit SiC (PSA)-100/pkg	SIC-320P12-100	100/pkg
12-inch 360 grit SiC (PSA)-100/pkg	SIC-360P12-100	100/pkg
12-inch 400 grit SiC (PSA)-100/pkg	SIC-400P12-100	100/pkg
12-inch 600 grit SiC (PSA)-100/pkg	SIC-600P12-100	100/pkg
12-inch 800 grit SiC (PSA)-100/pkg	SIC-800P12-100	100/pkg
12-inch 1000 grit SiC (PSA)-100/pkg	SIC-1000P12-100	100/pkg
12-inch 1200 grit SiC (PSA)-100/pkg	SIC-1200P12-100	100/pkg

12-inch SiC Papers Plain-backed Non-Adhesive Backed (100/pkg)



1000 grit 12-inch SiC Plain-backed Paper
(100/pkg)

Catalog no. SIC-2112-1000

PACE Product Name	Catalog Number	Qty
12-inch 60 grit SiC (Plain)-100/pkg	SIC-2112-060	100/pkg
12-inch 80 grit SiC (Plain)-100/pkg	SIC-2112-080	100/pkg
12-inch 120 grit SiC (Plain)-100/pkg	SIC-2112-120	100/pkg
12-inch 180 grit SiC (Plain)-100/pkg	SIC-2112-180	100/pkg
12-inch 240 grit SiC (Plain)-100/pkg	SIC-2112-240	100/pkg
12-inch 320 grit SiC (Plain)-100/pkg	SIC-2112-320	100/pkg
12-inch 360 grit SiC (Plain)-100/pkg	SIC-2112-360	100/pkg
12-inch 400 grit SiC (Plain)-100/pkg	SIC-2112-400	100/pkg
12-inch 600 grit SiC (Plain)-100/pkg	SIC-2112-600	100/pkg
12-inch 800 grit SiC (Plain)-100/pkg	SIC-2112-800	100/pkg
12-inch 1000 grit SiC (Plain)-100/pkg	SIC-2112-1000	100/pkg
12-inch 1200 grit SiC (Plain)-100/pkg	SIC-2112-1200	100/pkg
12-inch Double-sided adhesive-10/pkg	DSA-12	10/pkg

14-inch SILICON CARBIDE ABRASIVE PAPERS

14-inch SiC Papers with Adhesive Backing, PSA (25/pkg)



120 grit 14-inch SiC Paper
with PSA (25/pkg)
Catalog no. SIC-120P14-25

PACE Product Name	Catalog Number	Qty
14-inch Combo Pack (5 each - 240, 360, 600, 800, 1200 grit SiC) (PSA)	SIC-P14C	5 each
14-inch 60 grit SiC (PSA)-25/pkg	SIC-060P14-25	25/pkg
14-inch 80 grit SiC (PSA)-25/pkg	SIC-080P14-25	25/pkg
14-inch 120 grit SiC (PSA)-25/pkg	SIC-120P14-25	25/pkg
14-inch 180 grit SiC (PSA)-25/pkg	SIC-180P14-25	25/pkg
14-inch 240 grit SiC (PSA)-25/pkg	SIC-240P14-25	25/pkg
14-inch 320 grit SiC (PSA)-25/pkg	SIC-320P14-25	25/pkg
14-inch 360 grit SiC (PSA)-25/pkg	SIC-360P14-25	25/pkg
14-inch 400 grit SiC (PSA)-25/pkg	SIC-400P14-25	25/pkg
14-inch 600 grit SiC (PSA)-25/pkg	SIC-600P14-25	25/pkg
14-inch 800 grit SiC (PSA)-25/pkg	SIC-800P14-25	25/pkg
14-inch 1000 grit SiC (PSA)-25/pkg	SIC-1000P14-25	25/pkg
14-inch 1200 grit SiC (PSA)-25/pkg	SIC-1200P14-25	25/pkg

14-inch SiC Papers with Adhesive Backing, PSA (100/pkg)



400 grit 14-inch SiC Paper
with PSA (100/pkg)
Catalog no. SIC-400P14-100

PACE Product Name	Catalog Number	Qty
*14-inch 60 grit SiC (PSA)-50/pkg	SIC-060P14-50	50/pkg
*14-inch 80 grit SiC (PSA)-50/pkg	SIC-080P14-50	50/pkg
14-inch 120 grit SiC (PSA)-100/pkg	SIC-120P14-100	100/pkg
14-inch 180 grit SiC (PSA)-100/pkg	SIC-180P14-100	100/pkg
14-inch 240 grit SiC (PSA)-100/pkg	SIC-240P14-100	100/pkg
14-inch 320 grit SiC (PSA)-100/pkg	SIC-320P14-100	100/pkg
14-inch 360 grit SiC (PSA)-100/pkg	SIC-360P14-100	100/pkg
14-inch 400 grit SiC (PSA)-100/pkg	SIC-400P14-100	100/pkg
14-inch 600 grit SiC (PSA)-100/pkg	SIC-600P14-100	100/pkg
14-inch 800 grit SiC (PSA)-100/pkg	SIC-800P14-100	100/pkg
14-inch 1000 grit SiC (PSA)-100/pkg	SIC-1000P14-100	100/pkg
14-inch 1200 grit SiC (PSA)-100/pkg	SIC-1200P14-100	100/pkg

14-inch SiC Papers Plain-backed Non-Adhesive Backed (100/pkg)



1200 grit 14-inch SiC Plain-backed
Paper (100/pkg)
Catalog no. SIC-2114-1200

PACE Product Name	Catalog Number	Qty
14-inch 60 grit SIC (Plain)-50/pkg	SIC-2114-060	50/pkg
14-inch 80 grit SIC (Plain)-50/pkg	SIC-2114-080	50/pkg
14-inch 120 grit SIC SIC (Plain)-100/pkg	SIC-2114-120	100/pkg
14-inch 180 grit SIC (Plain)-100/pkg	SIC-2114-180	100/pkg
14-inch 240 grit SIC (Plain)-100/pkg	SIC-2114-240	100/pkg
14-inch 320 grit SIC (Plain)-100/pkg	SIC-2114-320	100/pkg
14-inch 360 grit SIC (Plain)-100/pkg	SIC-2114-360	100/pkg
14-inch 400 grit SIC (Plain)-100/pkg	SIC-2114-400	100/pkg
14-inch 600 grit SIC (Plain)-100/pkg	SIC-2114-600	100/pkg
14-inch 800 grit SIC (Plain)-100/pkg	SIC-2114-800	100/pkg
14-inch 1000 grit SIC (Plain)-100/pkg	SIC-2114-1000	100/pkg
14-inch Double-sided adhesive-10/pkg	DSA-14	10/pkg

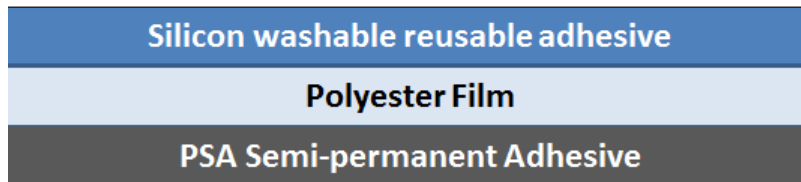
SILICON CARBIDE FOIL SYSTEM

Grinding Foils (alternative to PSA backed adhesives):

As an alternative to PSA (pressure sensitive adhesive) silicon carbide papers, PACE Technologies offers a non-PSA-backed abrasive grinding foil system. Grinding foils utilize a polyester film backing which attaches to a reusable / washable silicon adhesive receiver disk. The grinding foil system offers a lower cost alternative to PSA-backed grinding papers.

SiC Foil Characteristics:

- Lower cost to PSA backed papers
- Reuseable / Washable Silicon backing material
- Easy to use
- Compatible with competitors products



120 grit (105 micron) front / back side SiC foil



600 grit (15 micron) front / back side SiC foil



240 grit (63 micron) front / back side SiC foil



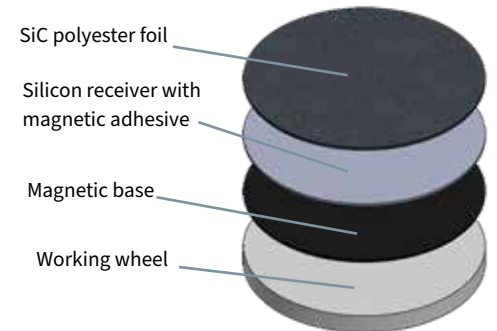
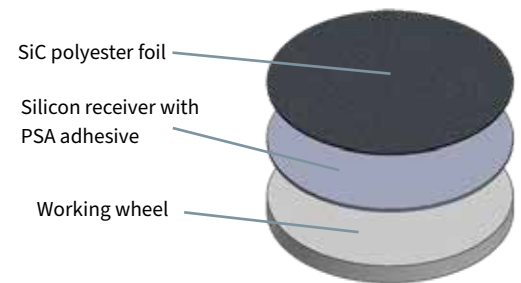
800 grit (6 micron) front / back side SiC foil



360 grit (30 micron) front / back side SiC foil



1200 grit (2 micron) front / back side SiC foil



Receiver Disks for SiC Foils 2/pkg)

PACE Product Name	Catalog Number	Qty
8-inch Receivers for SiC Foils (PSA-backed)	REC-5008	2/pkg
10-inch Receivers for SiC Foils (PSA-backed)	REC-5010	2/pkg
12-inch Receivers for SiC Foils (PSA-backed)	REC-5012	2/pkg
8-inch Receivers for SiC Foils (magnetic-backed)	MREC-5008	2/pkg
10-inch Receivers for SiC Foils (magnetic-backed)	MREC-5010	2/pkg
12-inch Receivers for SiC Foils (magnetic-backed)	MREC-5012	2/pkg

8-inch SiC Foils with Polyester Film Backing (50/pkg)

PACE Product Name	Catalog Number	Qty	
8-inch 120 grit (105 micron) - SiC Foils (50/pkg)	SIC-5108-120	50/pkg	
8-inch 240 grit (63 micron) - SiC Foils (50/pkg)	SIC-5108-240	50/pkg	
8-inch 360 grit (30 micron) - SiC Foils (50/pkg)	SIC-5108-360	50/pkg	
8-inch 600 grit (15 micron) - SiC Foils (50/pkg)	SIC-5108-600	50/pkg	
8-inch 800 grit (6.5 micron) - SiC Foils (50/pkg)	SIC-5108-800	50/pkg	
8-inch 1200 grit (2.5 micron) - SiC Foils (50/pkg)	SIC-5108-1200	50/pkg	48.00

10-inch SiC Foils with Polyester Film Backing (50/pkg)

PACE Product Name	Catalog Number	Qty
10-inch 120 grit (105 micron) - SiC Foils (50/pkg)	SIC-5110-120	50/pkg
10-inch 240 grit (63 micron) - SiC Foils (50/pkg)	SIC-5110-240	50/pkg
10-inch 360 grit (30 micron) - SiC Foils (50/pkg)	SIC-5110-360	50/pkg
10-inch 600 grit (15 micron) - SiC Foils (50/pkg)	SIC-5110-600	50/pkg
10-inch 800 grit (6.5 micron) - SiC Foils (50/pkg)	SIC-5110-800	50/pkg
10-inch 1200 grit (2.5 micron) - SiC Foils (50/pkg)	SIC-5110-1200	50/pkg

12-inch SiC Foils with Polyester Film Backing (50/pkg)

PACE Product Name	Catalog Number	Qty
12-inch 120 grit (105 micron) - SiC Foils (50/pkg)	SIC-5112-120	50/pkg
12-inch 240 grit (63 micron) - SiC Foils (50/pkg)	SIC-5112-240	50/pkg
12-inch 360 grit (30 micron) - SiC Foils (50/pkg)	SIC-5112-360	50/pkg
12-inch 600 grit (15 micron) - SiC Foils (50/pkg)	SIC-5112-600	50/pkg
12-inch 800 grit (6.5 micron) - SiC Foils (50/pkg)	SIC-5112-800	50/pkg
12-inch 1200 grit (2.5 micron) - SiC Foils (50/pkg)	SIC-5112-1200	50/pkg

DIAMOND GRINDING ABRASIVES (8-inch)

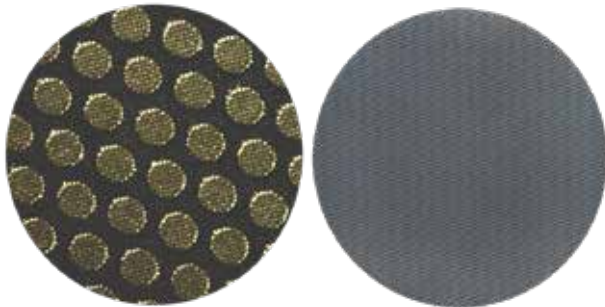
Diamond Grinding Disks:

Diamond grinding is most often used when grinding very hard / brittle materials such as engineered ceramics. Diamond grinding disks are also used to planar grind a wide range of other metals and minerals. The primary advantage of diamond grinding disks is that the abrasive is hard and does not wear down too quickly. The main disadvantage is that coarse diamond grinding can produce a lot of surface and subsurface damage.

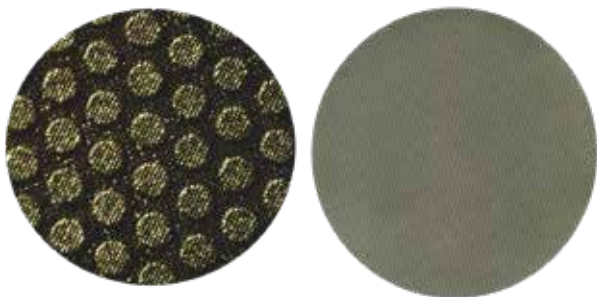
Note: For some materials excessive damage from coarse diamond grinding disk should be avoided as it may not be possible to remove the damage with fine grinding or fine polishing.

Diamond Grinding Characteristics:

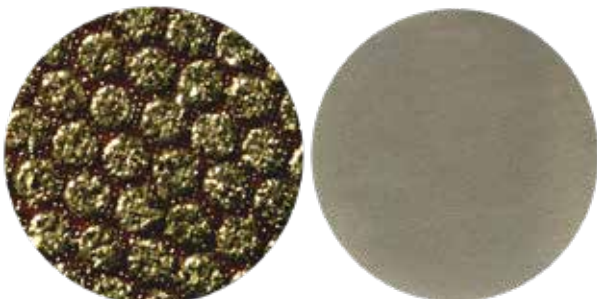
- Hardest known material
- Relatively expensive as compared to other options
- Reusable with proper cleaning and conditioning of the abrasive surface



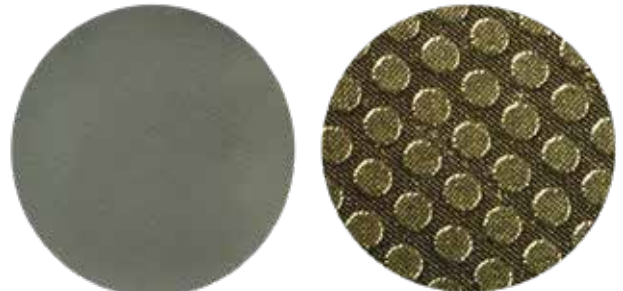
9 micron Diamond Disk (close-up on left)



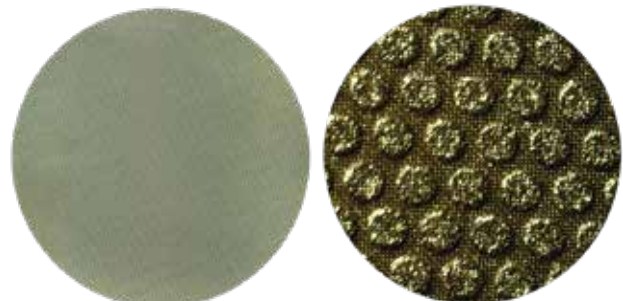
30 micron Diamond Disk (close-up on left)



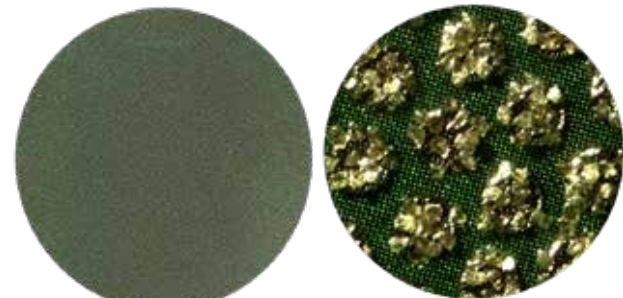
125 micron Diamond Disk (close-up on left)



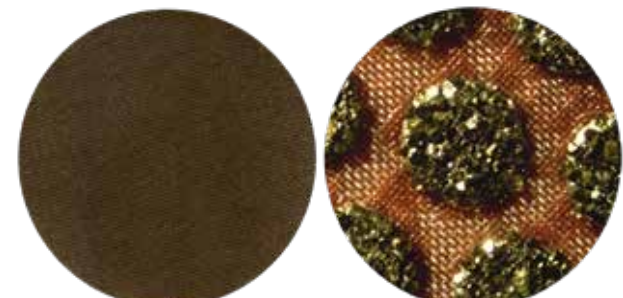
15 micron Diamond Disk (close-up on right)



45 micron Diamond Disk (close-up on right)

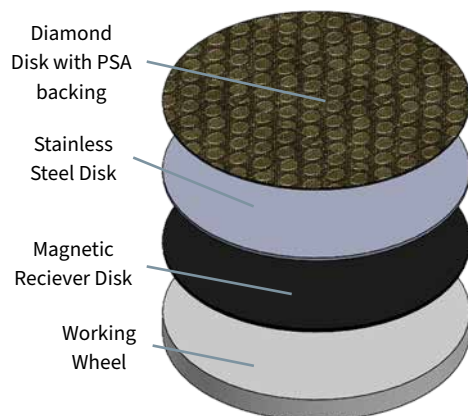


70 micron Diamond Disk (close-up on right)



250 micron Diamond Disk (close-up on right)

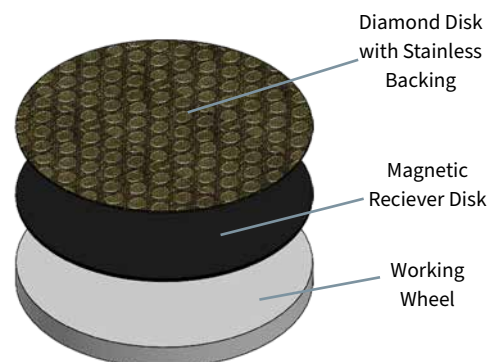
8-inch Diamond Grinding Disk, PSA (each)



PACE Product Name	Catalog Number	Qty
8-inch 250 micron diamond disk (PSA)	DIA-DISK-8250	each
8-inch 125 micron diamond disk (PSA)	DIA-DISK-8125	each
8-inch 75 micron diamond disk (PSA)	DIA-DISK-8075	each
8-inch 45 micron diamond disk (PSA)	DIA-DISK-8045	each
8-inch 30 micron diamond disk (PSA)	DIA-DISK-8030	each
8-inch 15 micron diamond disk (PSA)	DIA-DISK-8015	each
8-inch 9 micron diamond disk (PSA)	DIA-DISK-8009	each

8-inch Diamond Grinding Disk, Magnetic Stainless Steel Backing (each)

PACE Product Name	Catalog Number	Qty
8-inch 250 micron diamond disk (magnetic)	PDGD8-250M	each
8-inch 125 micron diamond disk (magnetic)	PDGD8-125M	each
8-inch 75 micron diamond disk (magnetic)	PDGD8-75M	each
8-inch 45 micron diamond disk (magnetic)	PDGD8-45M	each
8-inch 30 micron diamond disk (magnetic)	PDGD8-30M	each
8-inch 15 micron diamond disk (magnetic)	PDGD8-15M	each
8-inch 9 micron diamond disk (magnetic)	PDGD8-09M	each



8-inch Composite Grinding Disks

PACE Product Name	Catalog Number	Qty
8-inch MD ORION Composite Disk for 3-6 micron diamond suspensions	ORION-MD08	each
8-inch MD SIRIUS Composite Disk for 6-15 micron diamond suspensions	SIRIUS-MD08	each

8-inch Magnetic Plates

PACE Product Name	Catalog Number	Qty
8-inch Stainless Steel Plate	SSMAG-P08	each
8-inch Stainless Steel Plate with Teflon Coating	MAG-P08	each

DIAMOND GRINDING ABRASIVES (10-inch)

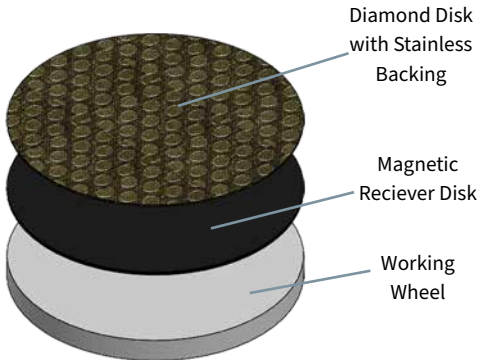
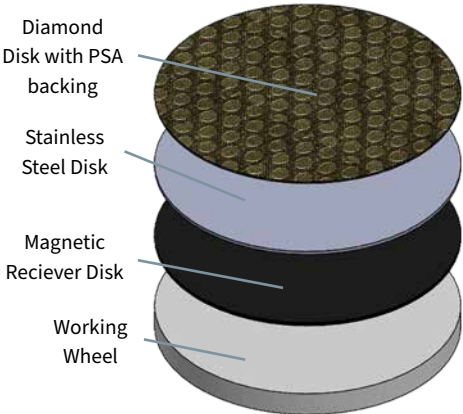
MAGNETIC BACKED DISKS

Diamond MD Grinding Disks:

As an alternative to PSA (pressure sensitive adhesives) diamond grinding disks, PACE Technologies offers magnetic backed (MD) abrasive diamond grinding disks. The magnetic diamond disks can be purchased pre-assembled on a magnetic stainless steel plate or the stainless steel plate can be purchased separately and the user can assemble the adhesive backed diamond grinding disks onto a magnetic stainless steel plate.

MD Grinding Disks:

- Easy to change disks
- More convenient for storage
- Do not need to dedicate a working plate to each abrasive size



Magnetic Receiver Disks

PACE Product Name	Catalog Number	Qty
8-inch MAGNETON Base Plate (PSA)	MAG-B08	each
10-inch MAGNETON Base Plate (PSA)	MAG-B10	each
12-inch MAGNETON Base Plate (PSA)	MAG-B12	each
14-inch MAGNETON Base Plate (PSA)	MAG-B14	each

10-inch Diamond Grinding Disk, PSA (each)

PACE Product Name	Catalog Number	Qty
10-inch 250 micron diamond disk (PSA)	DIA-DISK-10250	each
10-inch 125 micron diamond disk (PSA)	DIA-DISK-10125	each
10-inch 75 micron diamond disk (PSA)	DIA-DISK-10075	each
10-inch 45 micron diamond disk (PSA)	DIA-DISK-10045	each
10-inch 30 micron diamond disk (PSA)	DIA-DISK-10030	each
10-inch 15 micron diamond disk (PSA)	DIA-DISK-10015	each
10-inch 9 micron diamond disk (PSA)	DIA-DISK-10009	each

10-inch Diamond Grinding Disk, Magnetic Stainless Steel Backing (each)

PACE Product Name	Catalog Number	Qty
10-inch 250 micron diamond disk (magnetic)	PDGD10-250M	each
10-inch 125 micron diamond disk (magnetic)	PDGD10-125M	each
10-inch 75 micron diamond disk (magnetic)	PDGD10-75M	each
10-inch 45 micron diamond disk (magnetic)	PDGD10-45M	each
10-inch 30 micron diamond disk (magnetic)	PDGD10-30M	each
10-inch 15 micron diamond disk (magnetic)	PDGD10-15M	each
10-inch 9 micron diamond disk (magnetic)	PDGD10-09M	each

10-inch Composite Grinding Disks

PACE Product Name	Catalog Number	Qty
10-inch MD ORION Composite Disk for 3-6 micron diamond suspensions	ORION-MD10	each
10-inch MD SIRIUS Composite Disk for 6-15 micron diamond suspensions	SIRIUS-MD10	each

10-inch Magnetic Plates

PACE Product Name	Catalog Number	Qty
10-inch Stainless Steel Plate	SSMAG-P10	each
10-inch Stainless Steel Plate with Teflon Coating	MAG-P10	each

DIAMOND GRINDING ABRASIVES (12-inch)

12-inch Diamond Grinding Disk, PSA (each)

PACE Product Name	Catalog Number	Qty
12-inch 250 micron diamond disk (PSA)	DIA-DISK-12250	each
12-inch 125 micron diamond disk (PSA)	DIA-DISK-12125	each
12-inch 75 micron diamond disk (PSA)	DIA-DISK-12075	each
12-inch 45 micron diamond disk (PSA)	DIA-DISK-12045	each
12-inch 30 micron diamond disk (PSA)	DIA-DISK-12030	each
12-inch 15 micron diamond disk (PSA)	DIA-DISK-12015	each
12-inch 9 micron diamond disk (PSA)	DIA-DISK-12009	each

12-inch Diamond Grinding Disk, Magnetic Stainless Steel Backing (each)

PACE Product Name	Catalog Number	Qty
12-inch 250 micron diamond disk (magnetic)	PDGD12-250M	each
12-inch 125 micron diamond disk (magnetic)	PDGD12-125M	each
12-inch 75 micron diamond disk (magnetic)	PDGD12-75M	each
12-inch 45 micron diamond disk (magnetic)	PDGD12-45M	each
12-inch 30 micron diamond disk (magnetic)	PDGD12-30M	each
12-inch 15 micron diamond disk (magnetic)	PDGD12-15M	each
12-inch 9 micron diamond disk (magnetic)	PDGD12-09M	each

12-inch Composite Grinding Disks

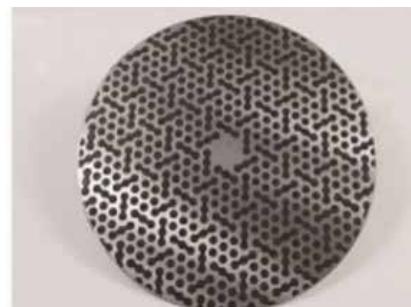
PACE Product Name	Catalog Number	Qty
12-inch MD ORION Composite Disk for 3-6 micron diamond suspensions	ORION-MD12	each
12-inch MD SIRIUS Composite Disk for 6-15 micron diamond suspensions	SIRIUS-MD12	each

12-inch Magnetic Plates

PACE Product Name	Catalog Number	Qty
12-inch Stainless Steel Plate	SSMAG-P12	each
12-inch Stainless Steel Plate with Teflon Coating	MAG-P12	each

COMPETITIVE STYLE DIAMOND GRINDING DISKS

PACE Product Name	Catalog Number	Qty
200 mm (~8-inch) P080 grit diamond disk (Magnetic)	MD-DISK-080-200	each
200 mm (~8-inch) P120 grit diamond disk (Magnetic)	MD-DISK-120-200	each
200 mm (~8-inch) P220 grit diamond disk (Magnetic)	MD-DISK-220-200	each
200 mm (~8-inch) P500 grit diamond disk (Magnetic)	MD-DISK-500-200	each
200 mm (~8-inch) P800 grit diamond disk (Magnetic)	MD-DISK-800-200	each
200 mm (~8-inch) P1200 grit diamond disk (Magnetic)	MD-DISK-1200-200	each
200 mm (~8-inch) P2000 grit diamond disk (Magnetic)	MD-DISK-2000-200	each

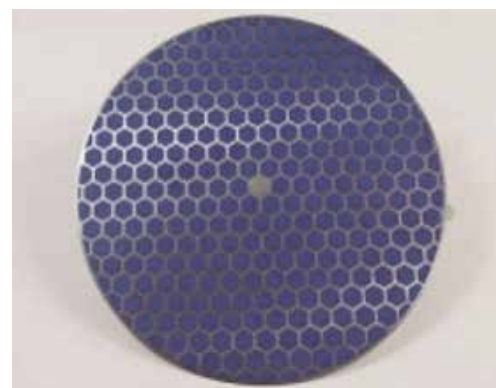


PACE Product Name	Catalog Number	Qty
250 mm (~10-inch) P080 grit diamond disk (Magnetic)	MD-DISK-080-250	each
250 mm (~10-inch) P120 grit diamond disk (Magnetic)	MD-DISK-120-250	each
250 mm (~10-inch) P220 grit diamond disk (Magnetic)	MD-DISK-220-250	each
250 mm (~10-inch) P500 grit diamond disk (Magnetic)	MD-DISK-500-250	each
250 mm (~10-inch) P800 grit diamond disk (Magnetic)	MD-DISK-800-250	each
250 mm (~10-inch) P1200 grit diamond disk (Magnetic)	MD-DISK-1200-250	each
250 mm (~10-inch) P2000 grit diamond disk (Magnetic)	MD-DISK-2000-250	each

PACE Product Name	Catalog Number	Qty
300 mm (~12-inch) P080 grit diamond disk (Magnetic)	MD-DISK-080-300	each
300 mm (~12-inch) P120 grit diamond disk (Magnetic)	MD-DISK-120-300	each
300 mm (~12-inch) P220 grit diamond disk (Magnetic)	MD-DISK-220-300	each
300 mm (~12-inch) P500 grit diamond disk (Magnetic)	MD-DISK-500-300	each
300 mm (~12-inch) P800 grit diamond disk (Magnetic)	MD-DISK-800-300	each
300 mm (~12-inch) P1200 grit diamond disk (Magnetic)	MD-DISK-1200-300	each
300 mm (~12-inch) P2000 grit diamond disk (Magnetic)	MD-DISK-2000-300	each

COMPETITIVE STYLE COMPOSITE GRINDING DISKS

PACE Product Name	Catalog Number	Qty
200 mm (~8-inch) Composite Disk (Magnetic)	MD-COMPDISK-200	each
250 mm (~10-inch) Composite Disk (Magnetic)	MD-COMPDISK-250	each
300 mm (~12-inch) Composite Disk (Magnetic)	MD-COMPDISK-300	each



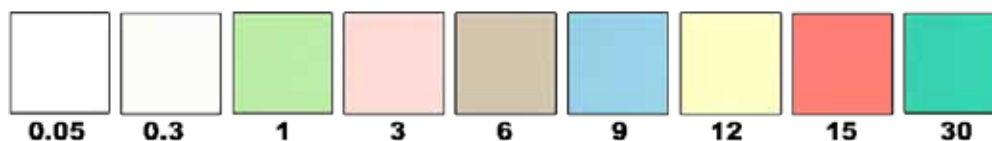
ABRASIVE LAPPING FILMS (8-inch)

Lapping Films (Superior Flatness):

The primary advantage to using abrasives coated on lapping films is that this surface improve flatness across the specimen surface. This is especially true for specimens that have a large difference in the hardness of the specimen constituents. The abrasive is coated onto a polyester film versus a paper backing. The result is a harder base surface. Typically abrasive lapping films include: silicon carbide, alumina and diamond. Diamond lapping films are quite common for grinding and polishing of electronic components, including silicon dies. Alumina is very useful for softer materials, such as aluminum, tin, lead, zinc; refractory materials such as rhenium, tungsten and niobium; as well as specimens having solder joints or soft coatings. Silicon carbide is very useful for metal coated specimens.

Lapping Film Characteristics:

- Produces flatter or more planar surfaces for materials having large difference in hardness
- Alternative to paper backed abrasive products



Alumina lapping films micron size color guide

8-inch Alumina Lapping Films with Plain-Backing

PACE Product Name	Catalog Number	Qty
0.05 um alumina plain-backed lapping film (8-inch) - 100/pkg	ALO-8105PB	100/pkg
0.3 um alumina plain-backed lapping film (8-inch) - 100/pkg	ALO-8103PB	100/pkg
1 um alumina plain-backed lapping film (8-inch) - 100/pkg	ALO-8001PB	100/pkg
3 um alumina plain-backed lapping film (8-inch) - 100/pkg	ALO-8003PB	100/pkg
5 um alumina plain-backed lapping film (8-inch) - 100/pkg	ALO-8005PB	100/pkg
9 um alumina plain-backed lapping film (8-inch) - 100/pkg	ALO-8009PB	100/pkg
12 um alumina plain-backed lapping film (8-inch) - 100/pkg	ALO-8012PB	100/pkg
15 um alumina plain-backed lapping film (8-inch) - 100/pkg	ALO-8015PB	100/pkg
30 um alumina plain-backed lapping film (8-inch) - 100/pkg	ALO-8030PB	100/pkg

8-inch Alumina Lapping Films with Adhesive (PSA) Backing

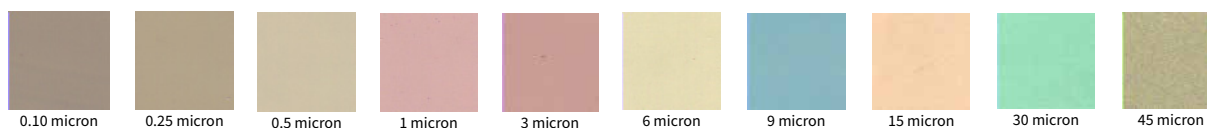
PACE Product Name	Catalog Number	Qty
0.05 um alumina PSA adhesive backed lapping film (8-inch) - 100/pkg	ALO-8105PSA	100/pkg
0.3 um alumina PSA adhesive backed lapping film (8-inch) - 100/pkg	ALO-8103PSA	100/pkg
1 um alumina PSA adhesive backed lapping film (8-inch) - 100/pkg	ALO-8001PSA	100/pkg
3 um alumina PSA adhesive backed lapping film (8-inch) - 100/pkg	ALO-8003PSA	100/pkg
5 um alumina PSA adhesive backed lapping film (8-inch) - 100/pkg	ALO-8005PSA	100/pkg
9 um alumina PSA adhesive backed lapping film (8-inch) - 100/pkg	ALO-8009PSA	100/pkg
12 um alumina PSA adhesive backed lapping film (8-inch) - 100/pkg	ALO-8012PSA	100/pkg
15 um alumina PSA adhesive backed lapping film (8-inch) - 100/pkg	ALO-8015PSA	100/pkg
30 um alumina PSA adhesive backed lapping film (8-inch) - 100/pkg	ALO-8030PSA	100/pkg

8-inch Diamond Lapping Films with Plain-backing

PACE Product Name	Catalog Number	Qty
0.10 micron diamond lapping film, (plain-backed) (8-inch) - 5/pkg	DA-01P8	5/pkg
0.25 micron diamond lapping film, (plain-backed) (8-inch) - 5/pkg	DA-025P8	5/pkg
0.50 micron diamond lapping film, (plain-backed) (8-inch) - 5/pkg	DA-05P8	5/pkg
1 micron diamond lapping film, (plain-backed) (8-inch) - 5/pkg	DA-1P8	5/pkg
3 micron diamond lapping film, (plain-backed) (8-inch) - 5/pkg	DA-3P8	5/pkg
6 micron diamond lapping film, (plain-backed) (8-inch) - 5/pkg	DA-6P8	5/pkg
9 micron diamond lapping film, (plain-backed) (8-inch) - 5/pkg	DA-9P8	5/pkg
15 micron diamond lapping film, (plain-backed) (8-inch) - 5/pkg	DA-15P8	5/pkg
30 micron diamond lapping film, (plain-backed) (8-inch) - 5/pkg	DA-308	5/pkg
45 micron diamond lapping film, (plain-backed) (8-inch) - 5/pkg	DA-45P8	5/pkg

8-inch Diamond Lapping Films with Adhesive (PSA) Backing

PACE Product Name	Catalog Number	Qty
0.10 micron diamond PSA adhesive backed lapping film (8-inch)- 5/pkg	DAA-01P8	5/pkg
0.25 micron diamond PSA adhesive backed lapping film (8-inch)- 5/pkg	DAA-025P8	5/pkg
0.50 micron diamond PSA adhesive backed lapping film (8-inch)- 5/pkg	DAA-05P8	5/pkg
1 micron diamond PSA adhesive backed lapping film (8-inch)- 5/pkg	DAA-1P8	5/pkg
3 micron diamond PSA adhesive backed lapping film (8-inch)- 5/pkg	DAA-3P8	5/pkg
6 micron diamond PSA adhesive backed lapping film (8-inch)- 5/pkg	DAA-6P8	5/pkg
9 micron diamond PSA adhesive backed lapping film (8-inch)- 5/pkg	DAA-9P8	5/pkg
15 micron diamond PSA adhesive backed lapping film (8-inch)- 5/pkg	DAA-15P8	5/pkg
30 micron diamond PSA adhesive backed lapping film (8-inch)- 5/pkg	DAA-308	5/pkg
45 micron diamond PSA adhesive backed lapping film (8-inch)- 5/pkg	DAA-45P8	5/pkg



Diamond lapping films micron size color guide

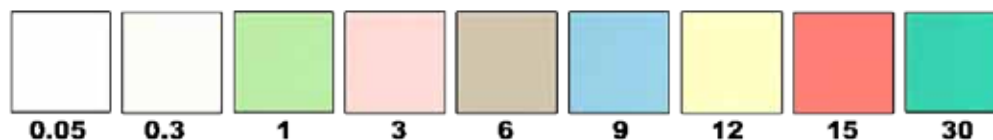
ABRASIVE LAPPING FILMS (10-inch)

10-inch Alumina Lapping Films with Plain-Backing

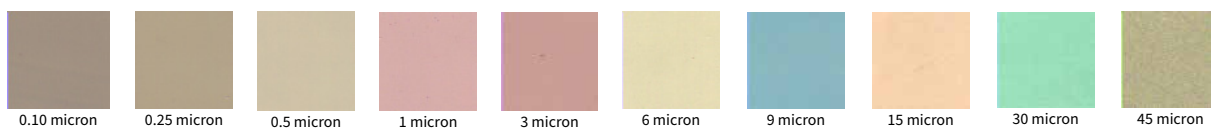
PACE Product Name	Catalog Number	Qty
0.05 um alumina plain-backed lapping film (10-inch) - 100/pkg	ALO-10105PB	100/pkg
0.3 um alumina plain-backed lapping film (10-inch) - 100/pkg	ALO-10103PB	100/pkg
1 um alumina plain-backed lapping film (10-inch) - 100/pkg	ALO-1001PB	100/pkg
3 um alumina plain-backed lapping film (10-inch) - 100/pkg	ALO-1003PB	100/pkg
5 um alumina plain-backed lapping film (10-inch) - 100/pkg	ALO-1005PB	100/pkg
9 um alumina plain-backed lapping film (10-inch) - 100/pkg	ALO-1009PB	100/pkg
12 um alumina plain-backed lapping film (10-inch) - 100/pkg	ALO-1012PB	100/pkg
15 um alumina plain-backed lapping film (10-inch) - 100/pkg	ALO-1015PB	100/pkg
30 um alumina plain-backed lapping film (10-inch) - 100/pkg	ALO-1030PB	100/pkg

10-inch Alumina Lapping Films with Adhesive (PSA) Backing

PACE Product Name	Catalog Number	Qty
0.05 um alumina PSA adhesive backed lapping film (10-inch) - 100/pkg	ALO-10105PSA	100/pkg
0.3 um alumina PSA adhesive backed lapping film (10-inch) - 100/pkg	ALO-10103PSA	100/pkg
1 um alumina PSA adhesive backed lapping film (10-inch) - 100/pkg	ALO-1001PSA	100/pkg
3 um alumina PSA adhesive backed lapping film (10-inch) - 100/pkg	ALO-1003PSA	100/pkg
5 um alumina PSA adhesive backed lapping film (10-inch) - 100/pkg	ALO-1005PSA	100/pkg
9 um alumina PSA adhesive backed lapping film (10-inch) - 100/pkg	ALO-1009PSA	100/pkg
12 um alumina PSA adhesive backed lapping film (10-inch) - 100/pkg	ALO-1012PSA	100/pkg
15 um alumina PSA adhesive backed lapping film (10-inch) - 100/pkg	ALO-1015PSA	100/pkg
30 um alumina PSA adhesive backed lapping film (10-inch) - 100/pkg	ALO-1030PSA	100/pkg



Alumina lapping films micron size color guide



Diamond lapping films micron size color guide

10-inch Diamond Lapping Films with Plain-backing

PACE Product Name	Catalog Number	Qty
0.10 micron diamond lapping film, (plain-backed) (10-inch) - 5/pkg	DA-01P10	5/pkg
0.25 micron diamond lapping film, (plain-backed) (10-inch) - 5/pkg	DA-025P10	5/pkg
0.50 micron diamond lapping film, (plain-backed) (10-inch) - 5/pkg	DA-05P10	5/pkg
1 micron diamond lapping film, (plain-backed) (10-inch) - 5/pkg	DA-1P10	5/pkg
3 micron diamond lapping film, (plain-backed) (10-inch) - 5/pkg	DA-3P10	5/pkg
6 micron diamond lapping film, (plain-backed) (10-inch) - 5/pkg	DA-6P10	5/pkg
9 micron diamond lapping film, (plain-backed) (10-inch) - 5/pkg	DA-9P10	5/pkg
15 micron diamond lapping film, (plain-backed) (10-inch) - 5/pkg	DA-15P10	5/pkg
30 micron diamond lapping film, (plain-backed) (10-inch) - 5/pkg	DA-30P10	5/pkg
45 micron diamond lapping film, (plain-backed) (10-inch) - 5/pkg	DA-45P10	5/pkg

10-inch Diamond Lapping Films with Adhesive (PSA) Backing

PACE Product Name	Catalog Number	Qty
0.10 micron diamond PSA adhesive backed lapping film (10-inch)- 5/pkg	DAA-01P10	5/pkg
0.25 micron diamond PSA adhesive backed lapping film (10-inch)- 5/pkg	DAA-025P10	5/pkg
0.50 micron diamond PSA adhesive backed lapping film (10-inch)- 5/pkg	DAA-05P10	5/pkg
1 micron diamond PSA adhesive backed lapping film (10-inch)- 5/pkg	DAA-1P10	5/pkg
3 micron diamond PSA adhesive backed lapping film (10-inch)- 5/pkg	DAA-3P10	5/pkg
6 micron diamond PSA adhesive backed lapping film (10-inch)- 5/pkg	DAA-6P10	5/pkg
9 micron diamond PSA adhesive backed lapping film (10-inch)- 5/pkg	DAA-9P10	5/pkg
15 micron diamond PSA adhesive backed lapping film (10-inch)- 5/pkg	DAA-15P10	5/pkg
30 micron diamond PSA adhesive backed lapping film (10-inch)- 5/pkg	DAA-30P10	5/pkg
45 micron diamond PSA adhesive backed lapping film (10-inch)- 5/pkg	DAA-45P10	5/pkg

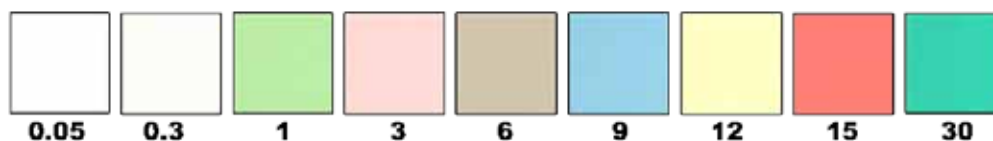
ABRASIVE LAPPING FILMS (12-inch)

12-inch Alumina Lapping Films with Plain-Backing

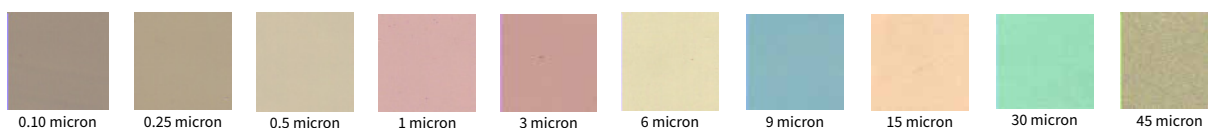
PACE Product Name	Catalog Number	Qty
0.05 um alumina plain-backed lapping film (12-inch) - 100/pkg	ALO-12105PB	100/pkg
0.3 um alumina plain-backed lapping film (12-inch) - 100/pkg	ALO-12103PB	100/pkg
1 um alumina plain-backed lapping film (12-inch) - 100/pkg	ALO-1201PB	100/pkg
3 um alumina plain-backed lapping film (12-inch) - 100/pkg	ALO-1203PB	100/pkg
5 um alumina plain-backed lapping film (12-inch) - 100/pkg	ALO-1205PB	100/pkg
9 um alumina plain-backed lapping film (12-inch) - 100/pkg	ALO-1209PB	100/pkg
12 um alumina plain-backed lapping film (12-inch) - 100/pkg	ALO-1212PB	100/pkg
15 um alumina plain-backed lapping film (12-inch) - 100/pkg	ALO-1215PB	100/pkg
30 um alumina plain-backed lapping film (12-inch) - 100/pkg	ALO-1230PB	100/pkg

12-inch Alumina Lapping Films with Adhesive (PSA) Backing

PACE Product Name	Catalog Number	Qty
0.05 um alumina PSA adhesive backed lapping film (12-inch) - 100/pkg	ALO-12105PSA	100/pkg
0.3 um alumina PSA adhesive backed lapping film (12-inch) - 100/pkg	ALO-12103PSA	100/pkg
1 um alumina PSA adhesive backed lapping film (12-inch) - 100/pkg	ALO-1201PSA	100/pkg
3 um alumina PSA adhesive backed lapping film (12-inch) - 100/pkg	ALO-1203PSA	100/pkg
5 um alumina PSA adhesive backed lapping film (12-inch) - 100/pkg	ALO-1205PSA	100/pkg
9 um alumina PSA adhesive backed lapping film (12-inch) - 100/pkg	ALO-1209PSA	100/pkg
12 um alumina PSA adhesive backed lapping film (12-inch) - 100/pkg	ALO-1212PSA	100/pkg
15 um alumina PSA adhesive backed lapping film (12-inch) - 100/pkg	ALO-1215PSA	100/pkg
30 um alumina PSA adhesive backed lapping film (12-inch) - 100/pkg	ALO-1230PSA	100/pkg



Alumina lapping films micron size color guide



Diamond lapping films micron size color guide

12-inch Diamond Lapping Films with Plain-backing

PACE Product Name	Catalog Number	Qty
0.10 micron diamond lapping film, (plain-backed) (12-inch) - 5/pkg	DA-01P12	3/pkg
0.25 micron diamond lapping film, (plain-backed) (12-inch) - 5/pkg	DA-025P12	3/pkg
0.50 micron diamond lapping film, (plain-backed) (12-inch) - 5/pkg	DA-05P12	3/pkg
1 micron diamond lapping film, (plain-backed) (12-inch) - 5/pkg	DA-1P12	3/pkg
3 micron diamond lapping film, (plain-backed) (12-inch) - 5/pkg	DA-3P12	3/pkg
6 micron diamond lapping film, (plain-backed) (12-inch) - 5/pkg	DA-6P12	3/pkg
9 micron diamond lapping film, (plain-backed) (12-inch) - 5/pkg	DA-9P12	3/pkg
15 micron diamond lapping film, (plain-backed) (12-inch) - 5/pkg	DA-15P12	3/pkg
30 micron diamond lapping film, (plain-backed) (12-inch) - 5/pkg	DA-30P12	3/pkg
45 micron diamond lapping film, (plain-backed) (12-inch) - 5/pkg	DA-45P12	3/pkg

12-inch Diamond Lapping Films with Adhesive (PSA) Backing

PACE Product Name	Catalog Number	Qty
0.10 micron diamond PSA adhesive backed lapping film (12-inch)- 5/pkg	DAA-01P12	3/pkg
0.25 micron diamond PSA adhesive backed lapping film (12-inch)- 5/pkg	DAA-025P12	3/pkg
0.50 micron diamond PSA adhesive backed lapping film (12-inch)- 5/pkg	DAA-05P12	3/pkg
1 micron diamond PSA adhesive backed lapping film (12-inch)- 5/pkg	DAA-1P12	3/pkg
3 micron diamond PSA adhesive backed lapping film (12-inch)- 5/pkg	DAA-3P12	3/pkg
6 micron diamond PSA adhesive backed lapping film (12-inch)- 5/pkg	DAA-6P12	3/pkg
9 micron diamond PSA adhesive backed lapping film (12-inch)- 5/pkg	DAA-9P12	3/pkg
15 micron diamond PSA adhesive backed lapping film (12-inch)- 5/pkg	DAA-15P12	3/pkg
30 micron diamond PSA adhesive backed lapping film (12-inch)- 5/pkg	DAA-30P12	3/pkg
45 micron diamond PSA adhesive backed lapping film (12-inch)- 5/pkg	DAA-45P12	3/pkg

SPECIALTY ABRASIVE GRINDING SURFACES

Alumina Grnding Abrasives (Reduced Embedded Abrasives):

Alumina abrasives are typically used for grinding specimens that have a tendency to embed more abrasives such as friable silicon carbide. Materials susceptible to embedding abrasive particles include low recrystallizing temperature metals such as tin, zinc and lead; electronic components containing solder joints; soft copper and aluminum metals; as well as refractory metals such as rhenium, niobium and tungsten. Alumina abrasives are the better choice because they are more durable and do not fracture easily.



Alumina Grinding Papers

8-inch Alumina Grinding Papers with Plain-Backing

PACE Product Name	Catalog Number	Qty
P120 grit ALO plain-backed grinding paper (8-inch)-100/pkg	ALO-2108-P120	100/pkg
P220 grit ALO plain-backed grinding paper (8-inch)-100/pkg	ALO-2108-P220	100/pkg
P500 grit ALO plain-backed grinding paper (8-inch)-100/pkg	ALO-2108-P500	100/pkg
P1200 grit ALO plain-backed grinding paper (8-inch)-100/pkg	ALO-2108-P1200	100/pkg

10-inch Alumina Grinding Papers with Plain-Backing

PACE Product Name	Catalog Number	Qty
P120 grit ALO plain-backed grinding paper (10-inch)-100/pkg	ALO-2110-P120	100/pkg
P220 grit ALO plain-backed grinding paper (10-inch)-100/pkg	ALO-2110-P220	100/pkg
P500 grit ALO plain-backed grinding paper (10-inch)-100/pkg	ALO-2110-P500	100/pkg
P1200 grit ALO plain-backed grinding paper (10-inch)-100/pkg	ALO-2110-P1200	100/pkg

12-inch Alumina Grinding Papers with Plain-Backing

PACE Product Name	Catalog Number	Qty
P120 grit ALO plain-backed grinding paper (12-inch)-100/pkg	ALO-2112-P120	100/pkg
P220 grit ALO plain-backed grinding paper (12-inch)-100/pkg	ALO-2112-P220	100/pkg
P500 grit ALO plain-backed grinding paper (12-inch)-100/pkg	ALO-2112-P500	100/pkg
P1200 grit ALO plain-backed grinding paper (12-inch)-100/pkg	ALO-2112-P1200	100/pkg

Zirconia Grnding Abrasives (Very Durable Abrasive):

Zirconia is a very durable and hard abrasive. It is a longer lasting abrasive and is an excellent choice for belt grinders and for planar grinding steps on rotary grinder/polishers. The primary drawbacks are that zirconia grinding requires higher grinding forces as compared to SiC and alumina abrasives and it is only available in coarser grit sizes.

8-inch Alumina Grinding Papers with PSA Adhesive-Backing

PACE Product Name	Catalog Number	Qty
P120 grit ALO PSA adhesive-backed grinding paper (8-inch)-100/pkg	ALO-120P8-100	100/pkg
P220 grit ALO PSA adhesive-backed grinding paper (8-inch)-100/pkg	ALO-220P8-100	100/pkg
P500 grit ALO PSA adhesive-backed grinding paper (8-inch)-100/pkg	ALO-500P8-100	100/pkg
P1200 grit ALO PSA adhesive-backed grinding paper (8-inch)-100/pkg	ALO-1200P8-100	100/pkg

10-inch Alumina Grinding Papers with PSA Adhesive-Backing

PACE Product Name	Catalog Number	Qty
P120 grit ALO PSA adhesive-backed grinding paper (10-inch)-100/pkg	ALO-120P10-100	100/pkg
P220 grit ALO PSA adhesive-backed grinding paper (10-inch)-100/pkg	ALO-220P10-100	100/pkg
P500 grit ALO PSA adhesive-backed grinding paper (10-inch)-100/pkg	ALO-500P10-100	100/pkg
P1200 grit ALO PSA adhesive-backed grinding paper (10-inch)-100/pkg	ALO-1200P10-100	100/pkg

12-inch Alumina Grinding Papers with PSA Adhesive-Backing

PACE Product Name	Catalog Number	Qty
P120 grit ALO PSA adhesive-backed grinding paper (12-inch)-100/pkg	ALO-120P12-100	100/pkg
P220 grit ALO PSA adhesive-backed grinding paper (12-inch)-100/pkg	ALO-220P12-100	100/pkg
P500 grit ALO PSA adhesive-backed grinding paper (12-inch)-100/pkg	ALO-500P12-100	100/pkg
P1200 grit ALO PSA adhesive-backed grinding paper (12-inch)-100/pkg	ALO-1200P12-100	100/pkg

Zirconia Grinding Papers with PSA Adhesive-Backing



Zirconia Grinding Papers

PACE Product Name	Catalog Number	Qty
120 grit Zirconia PSA adhesive-backed grinding paper (8-inch)-25/pkg	ZR-120P08-25	25/pkg
220 grit Zirconia PSA adhesive-backed grinding paper (8-inch)-25/pkg	ZR-220P08-25	25/pkg
120 grit Zirconia PSA adhesive-backed grinding paper (10-inch)-25/pkg	ZR-120P10-25	25/pkg
220 grit Zirconia PSA adhesive-backed grinding paper (10-inch)-25/pkg	ZR-220P10-25	25/pkg
120 grit Zirconia PSA adhesive-backed grinding paper (12-inch)-25/pkg	ZR-120P12-25	25/pkg
220 grit Zirconia PSA adhesive-backed grinding paper (12-inch)-25/pkg	ZR-220P12-25	25/pkg

METALLOGRAPHIC POLISHING PADS

Metallographic Polishing:

Metallographic polishing can be broken into two polishing categories: rough polishing and final polishing. Proper polishing requires the correct combination of polishing pad and abrasive under a correct polishing machines conditions (speed, direction and force).

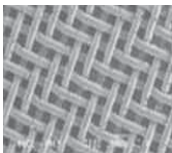
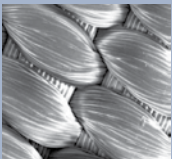
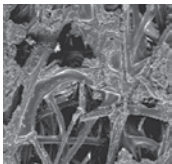
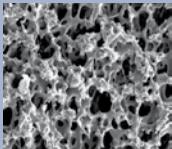
Minimizing Polishing Artifacts

To minimize polishing artifacts such as edge rounding, phase relief, smeared metal, grain pull-out and inclusion pull-out, the polishing time needs to be kept to a minimum. This can be accomplished by:

- minimizing sectioning damage
- grinding with the finest feasible abrasives
- using flat polishing base plates

Minimizing sectioning damage and using the correct grinding abrasives are fairly obvious. However, using a flat supporting plate is generally over looked by most suppliers of metallographic equipment, and if they do consider plate flatness they generally do not go far enough. As a guideline, an 8-inch plate should have no more than a 0.0001 inch (2.5 μ m) runout, which represents a 0.6 μ m runout over a 1-inch diameter specimen. Recognize that final polishing abrasives have a typical size of 0.05-0.06 μ m, thus these tolerances are required to minimize polishing times. In addition, if the specimen is not flat on the polishing plate then a differential pressure occurs across the specimen, which causes polishing relief. Likewise for a 12-inch diameter plate the runout should not exceed 0.0002 inches (5 μ m). As a result both polishing times and differential polishing pressures can be minimized.

Suggestion: If your polishing plate is not flat within these tolerances they should be lapped to these tighter tolerances.

SEM Image	Polishing Pad Description	Abrasive Application	Product Image
	CERMESH Metal Mesh cloth - this is a wire mesh material useful for coarse and intermediate lapping/polishing. The texture of this wire allows for the abrasive to become semi-fixed; thus offering the advantage of increased stock removal, while minimizing damage	45, 30 or 15 micron diamond suspensions	
	POLYPAD Polishing Pad - this cloth is a synthetic polyester polishing pad which has a similar action to a nylon pad, with the exception that it is much more durable. It is used in the intermediate polishing steps	15, 9 or 6 micron diamond suspensions	
	TEXPAN Polishing Pad - this is the most commonly used polishing cloth material for the intermediate polishing steps. TEXPAN Polishing pad is a non-woven polishing pad	9 or 6 micron diamond and 3 or 1 micron diamond with colloidal silica	
	Black CHEM 2 Polishing Pad this is a porometric polymer pad which has a consistency similar to a rubber type of pad. Black CHEM 2 pad has a low nap but behaves as an intermediate polishing pad with a performance between low napped and high napped pads.	Colloidal silica or diamond and colloidal silica mixtures	

SEM Image	Polishing Pad Description	Abrasive Application	Product Image
	GOLDPAD Polishing Pad is a low napped polishing pad for intermediate polishing primarily with 1-9 micron diamond	9 or 6 micron diamond and 3 or 1 micron diamond with colloidal silica	
	NYPAD Polishing Pad - this is a low napped silk polishing pad for intermediate polishing primarily with intermediate diamond abrasives	9 or 6 micron diamond and 3 or 1 micron diamond with colloidal silica	
	DACRON II Polishing Cloth - this is a low napped polishing pad for polishing primarily with 1-15 micron diamond abrasives. The DACRON II pad is the most popular intermediate polishing pad in Europe and is used mostly for polishing metals. Its high nap provides it a very soft and gentle polishing action	3 or 1 micron diamond or alumina	
	ATLANTIS Polishing Pad - is a woven low napped final with a foam backing for better matting to the specimen sample. It is an excellent polishing pad for 1-6 micron diamond	3 or 1 micron diamond or alumina	
	MICROPAD Polishing Cloth - this is the most common high napped final polishing pad for most metals and polymers. Its high nap provides it a very soft and gentle polishing action	1 micron or finer final polishing diamond or alumina	
	TRICOTE Polishing Pad - a tight high napped final polishing pad for most metals. It has a tighter nap than the MICROPAD Polishing Pads	1 micron or finer final polishing diamond or alumina	
	NAPPAD Polishing Pad - this is another high napped final polishing pad useful for most metals and polymers. It has a higher nap than MICROPAD, providing it with a very gentle polishing action which is very useful for polishing soft materials such as copper, aluminum and austenite steels	Alumina or colloidal silica polishing	
	MOLTEC 2 Polishing Pad - this is wool polishing cloth used for final polishing and has a very high nap. It is most commonly used for final polishing metals where edge retention is a minimal consideration	Alumina or colloidal silica polishing	
	FELT PAD Polishing Pad - this is thick felt pad used for final polishing glass and large surface area parts	Alumina or colloidal silica polishing	

METALLOGRAPHIC POLISHING PADS (8 & 9-inch)

8-inch Polishing Pads with PSA Adhesive-Backing

PACE Product Name	Catalog Number	Qty
Rough Polishing		
8-inch CERMESH metal mesh cloth (5/pkg)	CMESH-2008	5/pkg
8-inch POLYPAD polishing pad (10/pkg)	PP-6008	10/pkg
Intermediate Diamond Polishing		
8-inch TEXPAN polishing pad (10/pkg)	TP-5008	10/pkg
8-inch DACRON II [®] polishing pad (5/pkg)	DC2-3008	5/pkg
8-inch NYPAD polishing pad (10/pkg)	NY-3008	10/pkg
8-inch GOLDPAD polishing pad (10/pkg)	GP-4008	10/pkg
8-inch ATLANTIS polishing pad (5/pkg)	ATL-3008	5/pkg
Final Polishing		
8-inch TRICOTE polishing pad (10/pkg)	TRI-4008	10/pkg
8-inch MICROPAD polishing pad (10/pkg)	MP-9008	10/pkg
8-inch NAPPAD polishing pad (10/pkg)	NP-7008	10/pkg
8-inch MOLTEC 2 polishing pad (5/pkg)	MT2-7008	5/pkg
8-inch FELTPAD polishing pad (5/pkg)	FP-8125-08	5/pkg
CMP Polishing		
8-inch Black CHEM 2 polishing pad (10/pkg)	BC2-8008	10/pkg

8-inch Polishing Pads with Magnetic Rubber-Backing

PACE Product Name	Catalog Number	Qty
Rough Polishing		
8-inch CERMESH magnetic rubber metal mesh cloth (5/pkg)	CMESH-2008-MAG	5/pkg
8-inch POLYPAD magnetic rubber polishing pad (5/pkg)	PP-6008-MAG	5/pkg
Intermediate Diamond Polishing		
8-inch TEXPAN magnetic rubber polishing pad (5/pkg)	TP-5008-MAG	5/pkg
8-inch DACRON II [®] magnetic rubber polishing pad (5/pkg)	DC2-3008-MAG	5/pkg
8-inch NYPAD magnetic rubber polishing pad (5/pkg)	NY-3008-MAG	5/pkg
8-inch GOLDPAD magnetic rubber polishing pad (5/pkg)	GP-4008-MAG	5/pkg
8-inch ATLANTIS magnetic rubber polishing pad (5/pkg)	ATL-3008-MAG	5/pkg
Final Polishing		
8-inch TRICOTE magnetic rubber polishing pad (5/pkg)	TRI-4008-MAG	5/pkg
8-inch MICROPAD magnetic rubber polishing pad (5/pkg)	MP-9008-MAG	5/pkg
8-inch NAPPAD magnetic rubber polishing pad (5/pkg)	NP-7008-MAG	5/pkg
8-inch MOLTEC 2 magnetic rubber polishing pad (5/pkg)	MT2-7008-MAG	5/pkg
8-inch FELTPAD magnetic rubber polishing pad (5/pkg)	FP-8125-08-MAG	5/pkg
CMP Polishing		
8-inch Black CHEM 2 magnetic rubber polishing pad (5/pkg)	BC2-8008-MAG	5/pkg

8-inch Polishing Pads with Magnetic Stainless Steel-Backing

PACE Product Name	Catalog Number	Qty
Rough Polishing		
8-inch CERMESH magnetic stainless steel metal mesh cloth (5/pkg)	CMESH-2008-SSMAG	5/pkg
8-inch POLYPAD magnetic stainless steel polishing pad (5/pkg)	PP-6008-SSMAG	5/pkg
Intermediate Diamond Polishing		
8-inch TEXPAN magnetic stainless steel polishing pad (5/pkg)	TP-5008-SSMAG	5/pkg
8-inch DACRON II ® magnetic stainless steel polishing pad (5/pkg)	DC2-3008-SSMAG	5/pkg
8-inch NYPAD magnetic stainless steel polishing pad (5/pkg)	NY-3008-SSMAG	5/pkg
8-inch GOLDPAD magnetic stainless steel polishing pad (5/pkg)	GP-4008-SSMAG	5/pkg
8-inch ATLANTIS magnetic stainless steel polishing pad (5/pkg)	ATL-3008-SSMAG	5/pkg
Final Polishing		
8-inch TRICOTE magnetic stainless steel polishing pad (5/pkg)	TRI-4008-SSMAG	5/pkg
8-inch MICROPAD magnetic stainless steel polishing pad (5/pkg)	MP-9008-SSMAG	5/pkg
8-inch NAPPAD magnetic stainless steel polishing pad (5/pkg)	NP-7008-SSMAG	5/pkg
8-inch MOLTEC 2 magnetic stainless steel polishing pad (5/pkg)	MT2-7008-SSMAG	5/pkg
8-inch FELTPAD magnetic stainless steel polishing pad (5/pkg)	FP-8125-08-SSMAG	5/pkg
CMP Polishing		
8-inch Black CHEM 2 magnetic stainless steel polishing pad (5/pkg)	BC2-8008-SSMAG	5/pkg

9-inch Polishing Pads with PSA Adhesive-Backing

PACE Product Name	Catalog Number	Qty
Rough Polishing		
9-inch CERMESH metal mesh cloth (5/pkg)	CMESH-2009	5/pkg
9-inch POLYPAD polishing pad (10/pkg)	PP-6009	10/pkg
Intermediate Diamond Polishing		
9-inch TEXPAN polishing pad (10/pkg)	TP-5009	10/pkg
9-inch NYPAD polishing pad (10/pkg)	NY-3009	10/pkg
9-inch GOLDPAD polishing pad (10/pkg)	GP-4009	10/pkg
9-inch ATLANTIS polishing pad (5/pkg)	ATL-3009	5/pkg
Final Polishing		
9-inch TRICOTE polishing pad (10/pkg)	TRI-4009	10/pkg
9-inch MICROPAD polishing pad (10/pkg)	MP-9009	10/pkg
9-inch NAPPAD polishing pad (10/pkg)	NP-7009	10/pkg
9-inch MOLTEC 2 polishing pad (5/pkg)	MT2-7009	5/pkg
CMP Polishing		
9-inch Black CHEM 2 polishing pad (10/pkg)	BC2-8009	10/pkg

METALLOGRAPHIC POLISHING PADS (10-inch)

10-inch Polishing Pads with PSA Adhesive-Backing

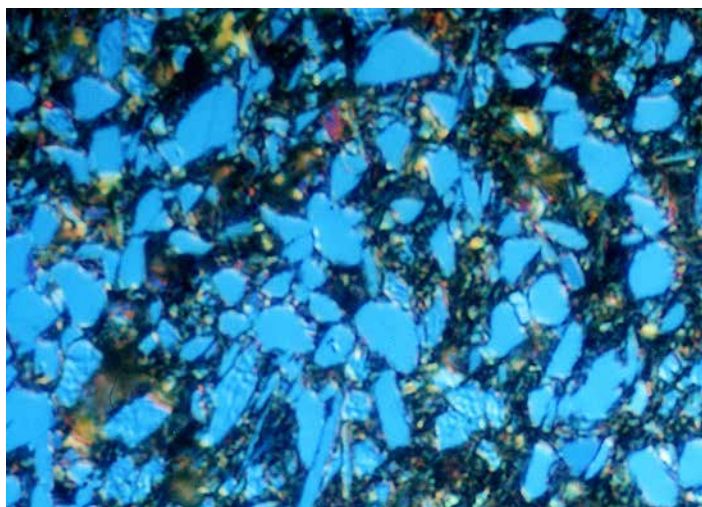
PACE Product Name	Catalog Number	Qty
Rough Polishing		
10-inch CERMESH metal mesh cloth (5/pkg)	CMESH-2010	5/pkg
10-inch POLYPAD polishing pad (10/pkg)	PP-6010	10/pkg
Intermediate Diamond Polishing		
10-inch TEXPAN polishing pad (10/pkg)	TP-5010	10/pkg
10-inch DACRON II ® polishing pad (5/pkg)	DC2-3010	5/pkg
10-inch NYPAD polishing pad (10/pkg)	NY-3010	10/pkg
10-inch GOLDPAD polishing pad (10/pkg)	GP-4010	10/pkg
10-inch ATLANTIS polishing pad (5/pkg)	ATL-3010	5/pkg
Final Polishing		
10-inch TRICOTE polishing pad (10/pkg)	TRI-4010	10/pkg
10-inch MICROPAD polishing pad (10/pkg)	MP-9010	10/pkg
10-inch NAPPAD polishing pad (10/pkg)	NP-7010	10/pkg
10-inch MOLTEC 2 polishing pad (5/pkg)	MT2-7010	5/pkg
10-inch FELTPAD polishing pad (5/pkg)	FP-8125-10	5/pkg
CMP Polishing		
10-inch Black CHEM 2 polishing pad (10/pkg)	BC2-8010	10/pkg

10-inch Polishing Pads with Magnetic Rubber-Backing

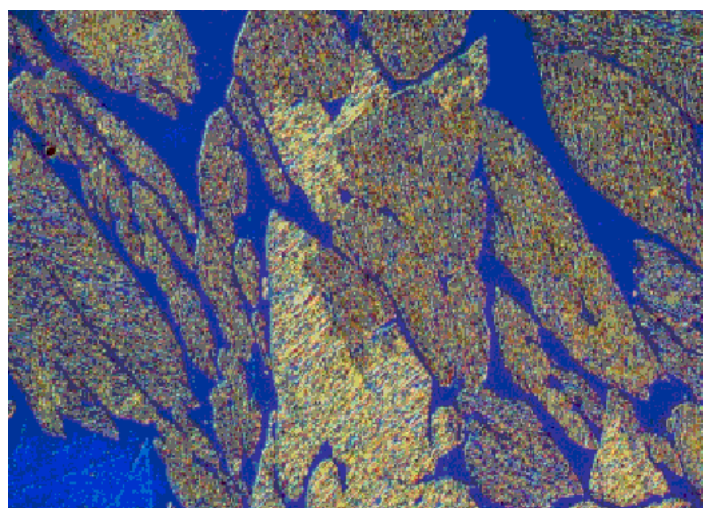
PACE Product Name	Catalog Number	Qty
Rough Polishing		
10-inch CERMESH magnetic rubber metal mesh cloth (5/pkg)	CMESH-2010-MAG	5/pkg
10-inch POLYPAD magnetic rubber polishing pad (5/pkg)	PP-6010-MAG	5/pkg
Intermediate Diamond Polishing		
10-inch TEXPAN magnetic rubber polishing pad (5/pkg)	TP-5010-MAG	5/pkg
10-inch DACRON II ® magnetic rubber polishing pad (5/pkg)	DC2-3010-MAG	5/pkg
10-inch NYPAD magnetic rubber polishing pad (5/pkg)	NY-3010-MAG	5/pkg
10-inch GOLDPAD magnetic rubber polishing pad (5/pkg)	GP-4010-MAG	5/pkg
10-inch ATLANTIS magnetic rubber polishing pad (5/pkg)	ATL-3010-MAG	5/pkg
Final Polishing		
10-inch TRICOTE magnetic rubber polishing pad (5/pkg)	TRI-4010-MAG	5/pkg
10-inch MICROPAD magnetic rubber polishing pad (5/pkg)	MP-9010-MAG	5/pkg
10-inch NAPPAD magnetic rubber polishing pad (5/pkg)	NP-7010-MAG	5/pkg
10-inch MOLTEC 2 magnetic rubber polishing pad (5/pkg)	MT2-7010-MAG	5/pkg
10-inch FELTPAD magnetic rubber polishing pad (5/pkg)	FP-8125-10-MAG	5/pkg
CMP Polishing		
10-inch Black CHEM 2 magnetic rubber polishing pad (5/pkg)	BC2-8010-MAG	5/pkg

10-inch Polishing Pads with Magnetic Stainless Steel-Backing

PACE Product Name	Catalog Number	Qty
Rough Polishing		
10-inch CERMESH magnetic stainless steel metal mesh cloth (5/pkg)	CMESH-2010-SSMAG	5/pkg
10-inch POLYPAD magnetic stainless steel polishing pad (5/pkg)	PP-6010-SSMAG	5/pkg
Intermediate Diamond Polishing		
10-inch TEXPAN magnetic stainless steel polishing pad (5/pkg)	TP-5010-SSMAG	5/pkg
10-inch DACRON II [®] magnetic stainless steel polishing pad (5/pkg)	DC2-3010-SSMAG	5/pkg
10-inch NYPAD magnetic stainless steel polishing pad (5/pkg)	NY-3010-SSMAG	5/pkg
10-inch GOLDPAD magnetic stainless steel polishing pad (5/pkg)	GP-4010-SSMAG	5/pkg
10-inch ATLANTIS magnetic stainless steel polishing pad (5/pkg)	ATL-3010-SSMAG	5/pkg
Final Polishing		
10-inch TRICOTE magnetic stainless steel polishing pad (5/pkg)	TRI-4010-SSMAG	5/pkg
10-inch MICROPAD magnetic stainless steel polishing pad (5/pkg)	MP-9010-SSMAG	5/pkg
10-inch NAPPAD magnetic stainless steel polishing pad (5/pkg)	NP-7010-SSMAG	5/pkg
10-inch MOLTEC 2 magnetic stainless steel polishing pad (5/pkg)	MT2-7010-SSMAG	5/pkg
10-inch FELTPAD magnetic stainless steel polishing pad (5/pkg)	FP-8125-10-SSMAG	5/pkg
CMP Polishing		
10-inch Black CHEM 2 magnetic stainless steel polishing pad (5/pkg)	BC2-8010-SSMAG	5/pkg



Zirconium Diboride particles in a Titanium Matrix, etched, 1000X (DIC)



431 Stainless Steel, mag. 400X, etched with Modified Murakami's

METALLOGRAPHIC POLISHING PADS (12-inch)

12-inch Polishing Pads with PSA Adhesive-Backing

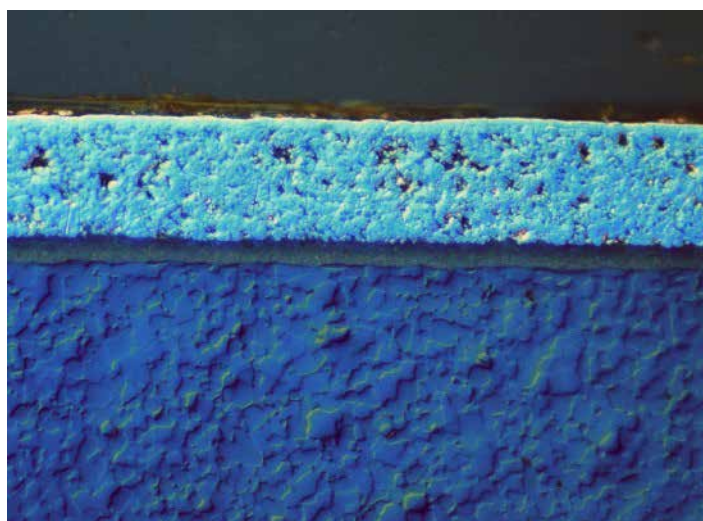
PACE Product Name	Catalog Number	Qty
Rough Polishing		
12-inch CERMESH metal mesh cloth (5/pkg)	CMESH-2012	5/pkg
12-inch POLYPAD polishing pad (10/pkg)	PP-6012	10/pkg
Intermediate Diamond Polishing		
12-inch TEXPAN polishing pad (10/pkg)	TP-5012	10/pkg
12-inch DACRON II ® polishing pad (5/pkg)	DC2-3012	5/pkg
12-inch NYPAD polishing pad (10/pkg)	NY-3012	10/pkg
12-inch GOLDPAD polishing pad (10/pkg)	GP-4012	10/pkg
12-inch ATLANTIS polishing pad (5/pkg)	ATL-3012	5/pkg
Final Polishing		
12-inch TRICOTE polishing pad (10/pkg)	TRI-4012	10/pkg
12-inch MICROPAD polishing pad (10/pkg)	MP-9012	10/pkg
12-inch NAPPAD polishing pad (10/pkg)	NP-7012	10/pkg
12-inch MOLTEC 2 polishing pad (5/pkg)	MT2-7012	5/pkg
12-inch FELTPAD polishing pad (5/pkg)	FP-8125-12	5/pkg
CMP Polishing		
12-inch Black CHEM 2 polishing pad (10/pkg)	BC2-8012	10/pkg

12-inch Polishing Pads with Magnetic Rubber-Backing

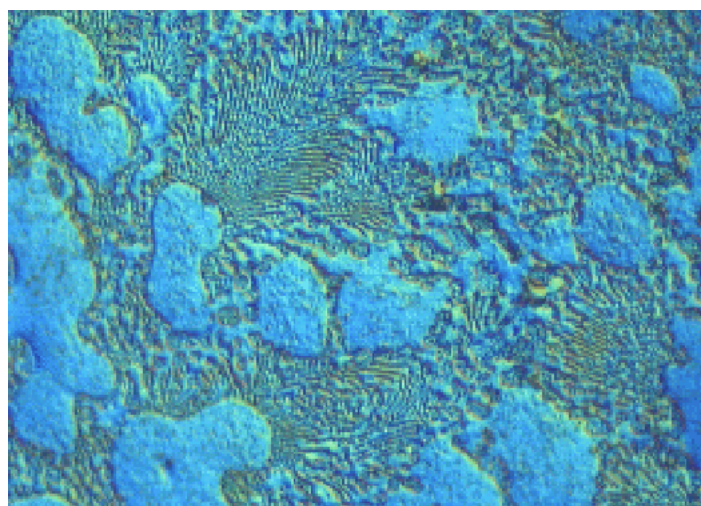
PACE Product Name	Catalog Number	Qty
Rough Polishing		
12-inch CERMESH magnetic rubber metal mesh cloth (5/pkg)	CMESH-2012-MAG	5/pkg
12-inch POLYPAD magnetic rubber polishing pad (5/pkg)	PP-6012-MAG	5/pkg
Intermediate Diamond Polishing		
12-inch TEXPAN magnetic rubber polishing pad (5/pkg)	TP-5012-MAG	5/pkg
12-inch DACRON II ® magnetic rubber polishing pad (5/pkg)	DC2-3012-MAG	5/pkg
12-inch NYPAD magnetic rubber polishing pad (5/pkg)	NY-3012-MAG	5/pkg
12-inch GOLDPAD magnetic rubber polishing pad (5/pkg)	GP-4012-MAG	5/pkg
12-inch ATLANTIS magnetic rubber polishing pad (5/pkg)	ATL-3012-MAG	5/pkg
Final Polishing		
12-inch TRICOTE magnetic rubber polishing pad (5/pkg)	TRI-4012-MAG	5/pkg
12-inch MICROPAD magnetic rubber polishing pad (5/pkg)	MP-9012-MAG	5/pkg
12-inch NAPPAD magnetic rubber polishing pad (5/pkg)	NP-7012-MAG	5/pkg
12-inch MOLTEC 2 magnetic rubber polishing pad (5/pkg)	MT2-7012-MAG	5/pkg
12-inch FELTPAD magnetic rubber polishing pad (5/pkg)	FP-8125-12-MAG	5/pkg
CMP Polishing		
12-inch Black CHEM 2 magnetic rubber polishing pad (5/pkg)	BC2-8012-MAG	5/pkg

12-inch Polishing Pads with Magnetic Stainless Steel-Backing

PACE Product Name	Catalog Number	Qty
Rough Polishing		
12-inch CERMESH magnetic stainless steel metal mesh cloth (5/pkg)	CMESH-2012-SSMAG	5/pkg
12-inch POLYPAD magnetic stainless steel polishing pad (5/pkg)	PP-6012-SSMAG	5/pkg
Intermediate Diamond Polishing		
12-inch TEXPAN magnetic stainless steel polishing pad (5/pkg)	TP-5012-SSMAG	5/pkg
12-inch DACRON II ® magnetic stainless steel polishing pad (5/pkg)	DC2-3012-SSMAG	5/pkg
12-inch NYPAD magnetic stainless steel polishing pad (5/pkg)	NY-3012-SSMAG	5/pkg
12-inch GOLDPAD magnetic stainless steel polishing pad (5/pkg)	GP-4012-SSMAG	5/pkg
12-inch ATLANTIS magnetic stainless steel polishing pad (5/pkg)	ATL-3012-SSMAG	5/pkg
Final Polishing		
12-inch TRICOTE magnetic stainless steel polishing pad (5/pkg)	TRI-4012-SSMAG	5/pkg
12-inch MICROPAD magnetic stainless steel polishing pad (5/pkg)	MP-9012-SSMAG	5/pkg
12-inch NAPPAD magnetic stainless steel polishing pad (5/pkg)	NP-7012-SSMAG	5/pkg
12-inch MOLTEC 2 magnetic stainless steel polishing pad (5/pkg)	MT2-7012-SSMAG	5/pkg
12-inch FELTPAD magnetic stainless steel polishing pad (5/pkg)	FP-8125-12-SSMAG	5/pkg
CMP Polishing		
12-inch Black CHEM 2 magnetic stainless steel polishing pad (5/pkg)	BC2-8012-SSMAG	5/pkg



AlN substrate with a molybdenum/ nickel, gold coating, 400X (DIC)



Zinc-Aluminum Alloy, 1000X DIC (etchant CrO₃, Na₂SO₄)

METALLOGRAPHIC POLISHING PADS (14-inch)

14-inch Polishing Pads with PSA Adhesive-Backing

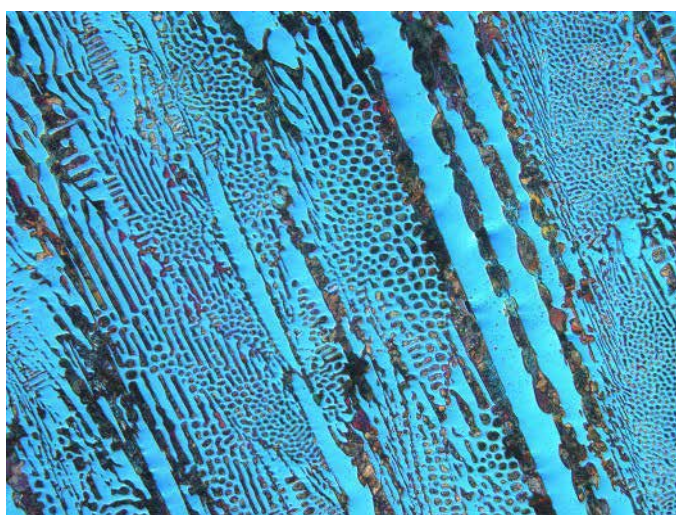
PACE Product Name	Catalog Number	Qty
Rough Polishing		
14-inch CERMESH metal mesh cloth (5/pkg)	CMESH-2014	5/pkg
14-inch POLYPAD polishing pad (10/pkg)	PP-6014	10/pkg
Intermediate Diamond Polishing		
14-inch TEXPAN polishing pad (10/pkg)	TP-5014	10/pkg
14-inch DACRON II ® polishing pad (5/pkg)	DC2-3014	5/pkg
14-inch NYPAD polishing pad (10/pkg)	NY-3014	10/pkg
14-inch GOLDPAD polishing pad (10/pkg)	GP-4014	10/pkg
14-inch ATLANTIS polishing pad (5/pkg)	ATL-3014	5/pkg
Final Polishing		
14-inch TRICOTE polishing pad (10/pkg)	TRI-4014	10/pkg
14-inch MICROPAD polishing pad (10/pkg)	MP-9014	10/pkg
14-inch NAPPAD polishing pad (10/pkg)	NP-7014	10/pkg
14-inch MOLTEC 2 polishing pad (5/pkg)	MT2-7014	5/pkg
14-inch FELTPAD polishing pad (5/pkg)	FP-8125-14	5/pkg
CMP Polishing		
14-inch Black CHEM 2 polishing pad (10/pkg)	BC2-8014	10/pkg

14-inch Polishing Pads with Magnetic Rubber-Backing

PACE Product Name	Catalog Number	Qty
Rough Polishing		
14-inch CERMESH magnetic rubber metal mesh cloth (5/pkg)	CMESH-2014-MAG	5/pkg
14-inch POLYPAD magnetic rubber polishing pad (5/pkg)	PP-6014-MAG	5/pkg
Intermediate Diamond Polishing		
14-inch TEXPAN magnetic rubber polishing pad (5/pkg)	TP-5014-MAG	5/pkg
14-inch DACRON II ® magnetic rubber polishing pad (5/pkg)	DC2-3014-MAG	5/pkg
14-inch NYPAD magnetic rubber polishing pad (5/pkg)	NY-3014-MAG	5/pkg
14-inch GOLDPAD magnetic rubber polishing pad (5/pkg)	GP-4014-MAG	5/pkg
14-inch ATLANTIS magnetic rubber polishing pad (5/pkg)	ATL-3014-MAG	5/pkg
Final Polishing		
14-inch TRICOTE magnetic rubber polishing pad (5/pkg)	TRI-4014-MAG	5/pkg
14-inch MICROPAD magnetic rubber polishing pad (5/pkg)	MP-9014-MAG	5/pkg
14-inch NAPPAD magnetic rubber polishing pad (5/pkg)	NP-7014-MAG	5/pkg
14-inch MOLTEC 2 magnetic rubber polishing pad (5/pkg)	MT2-7014-MAG	5/pkg
14-inch FELTPAD magnetic rubber polishing pad (5/pkg)	FP-8125-14-MAG	5/pkg
CMP Polishing		
14-inch Black CHEM 2 magnetic rubber polishing pad (5/pkg)	BC2-8014-MAG	5/pkg

14-inch Polishing Pads with Magnetic Stainless Steel-Backing

PACE Product Name	Catalog Number	Qty
Rough Polishing		
14-inch CERMESH magnetic stainless steel metal mesh cloth (5/pkg)	CMESH-2014-SSMAG	5/pkg
14-inch POLYPAD magnetic stainless steel polishing pad (5/pkg)	PP-6014-SSMAG	5/pkg
Intermediate Diamond Polishing		
14-inch TEXPAN magnetic stainless steel polishing pad (5/pkg)	TP-5014-SSMAG	5/pkg
14-inch DACRON II [®] magnetic stainless steel polishing pad (5/pkg)	DC2-3014-SSMAG	5/pkg
14-inch NYPAD magnetic stainless steel polishing pad (5/pkg)	NY-3014-SSMAG	5/pkg
14-inch GOLDPAD magnetic stainless steel polishing pad (5/pkg)	GP-4014-SSMAG	5/pkg
14-inch ATLANTIS magnetic stainless steel polishing pad (5/pkg)	ATL-3014-SSMAG	5/pkg
Final Polishing		
14-inch TRICOTE magnetic stainless steel polishing pad (5/pkg)	TRI-4014-SSMAG	5/pkg
14-inch MICROPAD magnetic stainless steel polishing pad (5/pkg)	MP-9014-SSMAG	5/pkg
14-inch NAPPAD magnetic stainless steel polishing pad (5/pkg)	NP-7014-SSMAG	5/pkg
14-inch MOLTEC 2 magnetic stainless steel polishing pad (5/pkg)	MT2-7014-SSMAG	5/pkg
14-inch FELTPAD magnetic stainless steel polishing pad (5/pkg)	FP-8125-14-SSMAG	5/pkg
CMP Polishing		
14-inch Black CHEM 2 magnetic stainless steel polishing pad (5/pkg)	BC2-8014-SSMAG	5/pkg



White Iron - Hyper Eutectic, 200X (DIC), etchant: Picral



Fe-Ni-Co-Al Alloy, 400X (Polarized Light)

POLYCRYSTALLINE DIAMOND (HIGH VISCOSITY)

Diamond Polishing:

The majority of specimens will use at least one, if not multiple, diamond polishing steps. For metallographic specimen preparation either a man-made synthetic polycrystalline diamond or a monocrystalline diamond is used and the diamond is either mixed into a suspending solution or is used in a paste form. For metallography, diamond is coded by the following color scheme:



Polycrystalline Diamond:

Diamond is the hardest material known to man (Mohs 10, 8000 HV). It has a cubic crystal structure and is available in either natural or an artificial product. For metallographic applications, both monocrystalline and polycrystalline diamond can be used, however, polycrystalline diamond has a number of advantages over monocrystalline diamond, especially for the finer micron sizes.



Polycrystalline Diamond



Monocrystalline Diamond

Polycrystalline Diamond Advantages:

- Higher cut rates (self- sharpening abrasive)
- Uniform surface finish
- More uniform particle size distribution
- Harder / tougher particles
- Blocky shaped
- Higher surface area (300% greater than monocrystalline diamond)
- Hexagonal microcrystallites (equally hard in all directions)

Polycrystalline Diamond Suspensions (1- liter Color Coded)

PACE Product Name	Catalog Number	Qty
1 micron (blue) DIAMAT PC diamond (1 liter)	PC-1001-1L	1-liter
3 micron (green) DIAMAT PC diamond (1 liter)	PC-1003-1L	1-liter
6 micron (yellow) DIAMAT PC diamond (1 liter)	PC-1006-1L	1-liter
9 micron (red) DIAMAT PC diamond (1 liter)	PC-1009-1L	1-liter
15 micron (brown) DIAMAT PC diamond (1 liter)	PC-1015-1L	1-liter
30 micron (orange) DIAMAT PC diamond (1 liter)	PC-1030-1L	1-liter
45 micron (purple) DIAMAT PC diamond (1 liter)	PC-1045-1L	1-liter

Polycrystalline Diamond Suspensions (1- gallon Color Coded)

PACE Product Name	Catalog Number	Qty
1 micron (blue) DIAMAT PC diamond (1 gallon)	PC-1001-1GLB	1-gallon
3 micron (green) DIAMAT PC diamond (1 gallon)	PC-1003-1GLG	1-gallon
6 micron (yellow) DIAMAT PC diamond (1 gallon)	PC-1006-1GLY	1-gallon
9 micron (red) DIAMAT PC diamond (1 gallon)	PC-1009-1GLR	1-gallon
15 micron (brown) DIAMAT PC diamond (1 gallon)	PC-1015-1GLBR	1-gallon
30 micron (orange) DIAMAT PC diamond (1 gallon)	PC-1030-1GLO	1-gallon
45 micron (purple) DIAMAT PC diamond (1 gallon)	PC-1045-1GLP	1-gallon



High Viscosity Polycrystalline Diamond Suspensions

PACE Product Name	Catalog Number	Qty
0.05 micron high viscosity DIAMAT PC diamond (250 ml)	PC-0105-250	250 ml
0.05 micron high viscosity DIAMAT PC diamond (500 ml)	PC-0105-500	500 ml
0.05 micron high viscosity DIAMAT PC diamond (1 gallon)	PC-0105-1GL	1 gallon
0.10 micron high viscosity DIAMAT PC diamond (250 ml)	PC-0105-250	250 ml
0.10 micron high viscosity DIAMAT PC diamond (500 ml)	PC-0105-500	500 ml
0.10 micron high viscosity DIAMAT PC diamond (1 gallon)	PC-0105-1GL	1 gallon
0.25 micron high viscosity DIAMAT PC diamond (250 ml)	PC-0105-250	250 ml
0.25 micron high viscosity DIAMAT PC diamond (500 ml)	PC-0105-500	500 ml
0.25 micron high viscosity DIAMAT PC diamond (1 gallon)	PC-0105-1GL	1 gallon
0.50 micron high viscosity DIAMAT PC diamond (250 ml)	PC-0150-250	250 ml
0.50 micron high viscosity DIAMAT PC diamond (500 ml)	PC-0150-500	500 ml
0.50 micron high viscosity DIAMAT PC diamond (1 gallon)	PC-0150-1GL	1 gallon
1 micron high viscosity DIAMAT PC diamond (250 ml)	PC-1001-250	250 ml
1 micron high viscosity DIAMAT PC diamond (500 ml)	PC-1001-500	500 ml
1 micron high viscosity DIAMAT PC diamond (1 gallon)	PC-1001-1GL	1 gallon
3 micron high viscosity DIAMAT PC diamond (250 ml)	PC-1003-250	250 ml
3 micron high viscosity DIAMAT PC diamond (500 ml)	PC-1003-500	500 ml
3 micron high viscosity DIAMAT PC diamond (1 gallon)	PC-1003-1GL	1 gallon
6 micron high viscosity DIAMAT PC diamond (250 ml)	PC-1006-250	250 ml
6 micron high viscosity DIAMAT PC diamond (500 ml)	PC-1006-500	500 ml
6 micron high viscosity DIAMAT PC diamond (1 gallon)	PC-1006-1GL	1 gallon
9 micron high viscosity DIAMAT PC diamond (250 ml)	PC-1009-250	250 ml
9 micron high viscosity DIAMAT PC diamond (500 ml)	PC-1009-500	500 ml
9 micron high viscosity DIAMAT PC diamond (1 gallon)	PC-1009-1GL	1 gallon
15 micron high viscosity DIAMAT PC diamond (250 ml)	PC-1015-250	250 ml
15 micron high viscosity DIAMAT PC diamond (500 ml)	PC-1015-500	500 ml
15 micron high viscosity DIAMAT PC diamond (1 gallon)	PC-1015-1GL	1 gallon
30 micron high viscosity DIAMAT PC diamond (250 ml)	PC-1030-250	250 ml
30 micron high viscosity DIAMAT PC diamond (500 ml)	PC-1030-500	500 ml
30 micron high viscosity DIAMAT PC diamond (1 gallon)	PC-1030-1GL	1 gallon
45 micron high viscosity DIAMAT PC diamond (250 ml)	PC-1045-250	250 ml
45 micron high viscosity DIAMAT PC diamond (500 ml)	PC-1045-500	500 ml
45 micron high viscosity DIAMAT PC diamond (1 gallon)	PC-1045-1GL	1 gallon

POLYCRYSTALLINE DIAMOND (LOW VISCOSITY)

Polycrystalline Diamond Suspensions (Low Viscosity)

PACE Product Name	Catalog Number	Qty
0.05 micron low viscosity DIAMAT PC diamond (250 ml)	GPC-0105-250	250 ml
0.05 micron low viscosity DIAMAT PC diamond (500 ml)	GPC-0105-500	500 ml
0.05 micron low viscosity DIAMAT PC diamond (1 gallon)	GPC-0105-1GL	1 gallon
0.10 micron low viscosity DIAMAT PC diamond (250 ml)	GPC-0105-250	250 ml
0.10 micron low viscosity DIAMAT PC diamond (500 ml)	GPC-0105-500	500 ml
0.10 micron low viscosity DIAMAT PC diamond (1 gallon)	GPC-0105-1GL	1 gallon
0.25 micron low viscosity DIAMAT PC diamond (250 ml)	GPC-0105-250	250 ml
0.25 micron low viscosity DIAMAT PC diamond (500 ml)	GPC-0105-500	500 ml
0.25 micron low viscosity DIAMAT PC diamond (1 gallon)	GPC-0105-1GL	1 gallon
0.50 micron low viscosity DIAMAT PC diamond (250 ml)	GPC-0150-250	250 ml
0.50 micron low viscosity DIAMAT PC diamond (500 ml)	GPC-0150-500	500 ml
0.50 micron low viscosity DIAMAT PC diamond (1 gallon)	GPC-0150-1GL	1 gallon
1 micron low viscosity DIAMAT PC diamond (250 ml)	GPC-1001-250	250 ml
1 micron low viscosity DIAMAT PC diamond (500 ml)	GPC-1001-500	500 ml
1 micron low viscosity DIAMAT PC diamond (1 gallon)	GPC-1001-1GL	1 gallon
3 micron low viscosity DIAMAT PC diamond (250 ml)	GPC-1003-250	250 ml
3 micron low viscosity DIAMAT PC diamond (500 ml)	GPC-1003-500	500 ml
3 micron low viscosity DIAMAT PC diamond (1 gallon)	GPC-1003-1GL	1 gallon
6 micron low viscosity DIAMAT PC diamond (250 ml)	GPC-1006-250	250 ml
6 micron low viscosity DIAMAT PC diamond (500 ml)	GPC-1006-500	500 ml
6 micron low viscosity DIAMAT PC diamond (1 gallon)	GPC-1006-1GL	1 gallon
9 micron low viscosity DIAMAT PC diamond (250 ml)	GPC-1009-250	250 ml
9 micron low viscosity DIAMAT PC diamond (500 ml)	GPC-1009-500	500 ml
9 micron low viscosity DIAMAT PC diamond (1 gallon)	GPC-1009-1GL	1 gallon
15 micron low viscosity DIAMAT PC diamond (250 ml)	GPC-1015-250	250 ml
15 micron low viscosity DIAMAT PC diamond (500 ml)	GPC-1015-500	500 ml
15 micron low viscosity DIAMAT PC diamond (1 gallon)	GPC-1015-1GL	1 gallon
30 micron low viscosity DIAMAT PC diamond (250 ml)	GPC-1030-250	250 ml
30 micron low viscosity DIAMAT PC diamond (500 ml)	GPC-1030-500	500 ml
30 micron low viscosity DIAMAT PC diamond (1 gallon)	GPC-1030-1GL	1 gallon
45 micron low viscosity DIAMAT PC diamond (250 ml)	GPC-1045-250	250 ml
45 micron low viscosity DIAMAT PC diamond (500 ml)	GPC-1045-500	500 ml
45 micron low viscosity DIAMAT PC diamond (1 gallon)	GPC-1045-1GL	1 gallon

Polycrystalline Diamond Paste (5 gram syringes)

PACE Product Name	Catalog Number	Qty
0.10 micron polycrystalline diamond paste (5 grams)	PC-0210-05	5 grams
0.25 micron polycrystalline diamond paste (5 grams)	PC-0225-05	5 grams
0.50 micron polycrystalline diamond paste (5 grams)	PC-0250-05	5 grams
1 micron polycrystalline diamond paste (5 grams)	PC-2001-05	5 grams
3 micron polycrystalline diamond paste (5 grams)	PC-2003-05	5 grams
6 micron polycrystalline diamond paste (5 grams)	PC-2006-05	5 grams
9 micron polycrystalline diamond paste (5 grams)	PC-2009-05	5 grams
15 micron polycrystalline diamond paste (5 grams)	PC-2015-05	5 grams
30 micron polycrystalline diamond paste (5 grams)	PC-2030-05	5 grams

Polycrystalline Diamond Paste (20 gram syringes)

PACE Product Name	Catalog Number	Qty
0.10 micron polycrystalline diamond paste (20 grams)	PC-0210-20	20 grams
0.25 micron polycrystalline diamond paste (20 grams)	PC-0225-20	20 grams
0.50 micron polycrystalline diamond paste (20 grams)	PC-0250-20	20 grams
1 micron polycrystalline diamond paste (20 grams)	PC-2001-20	20 grams
3 micron polycrystalline diamond paste (20 grams)	PC-2003-20	20 grams
6 micron polycrystalline diamond paste (20 grams)	PC-2006-20	20 grams
9 micron polycrystalline diamond paste (20 grams)	PC-2009-20	20 grams
15 micron polycrystalline diamond paste (20 grams)	PC-2015-20	20 grams
30 micron polycrystalline diamond paste (20 grams)	PC-2030-20	20 grams

Diamond Polishing Pastes:

Diamond pastes have been and continue to be commonly used for hand or manual polishing steps because they are easy to apply and the diamond can be better charged or fixed onto the polishing pad as compared to diamond suspensions. They are less commonly used on automated polishing machines because diamond suspensions are easier to apply and they also have a built-in lubricant. The use of diamond pastes requires the application of an additional diamond extender or lubricant, which is typically a glycol or alcohol based solution.



MONOCRYSTALLINE DIAMOND

Monocrystalline Diamond Suspensions (High Viscosity)

PACE Product Name	Catalog Number	Qty
1 micron high viscosity DIAMAT MA diamond (250 ml)	MA-1001-250	250 ml
1 micron high viscosity DIAMAT MA diamond (500 ml)	MA-1001-500	500 ml
1 micron high viscosity DIAMAT MA diamond (1 gallon)	MA-1001-1GL	1 gallon
3 micron high viscosity DIAMAT MA diamond (250 ml)	MA-1003-250	250 ml
3 micron high viscosity DIAMAT MA diamond (500 ml)	MA-1003-500	500 ml
3 micron high viscosity DIAMAT MA diamond (1 gallon)	MA-1003-1GL	1 gallon
6 micron high viscosity DIAMAT MA diamond (250 ml)	MA-1006-250	250 ml
6 micron high viscosity DIAMAT MA diamond (500 ml)	MA-1006-500	500 ml
6 micron high viscosity DIAMAT MA diamond (1 gallon)	MA-1006-1GL	1 gallon
9 micron high viscosity DIAMAT MA diamond (250 ml)	MA-1009-250	250 ml
9 micron high viscosity DIAMAT MA diamond (500 ml)	MA-1009-500	500 ml
9 micron high viscosity DIAMAT MA diamond (1 gallon)	MA-1009-1GL	1 gallon
15 micron high viscosity DIAMAT MA diamond (250 ml)	MA-1015-250	250 ml
15 micron high viscosity DIAMAT MA diamond (500 ml)	MA-1015-500	500 ml
15 micron high viscosity DIAMAT MA diamond (1 gallon)	MA-1015-1GL	1 gallon
30 micron high viscosity DIAMAT MA diamond (250 ml)	MA-1030-250	250 ml
30 micron high viscosity DIAMAT MA diamond (500 ml)	MA-1030-500	500 ml
30 micron high viscosity DIAMAT MA diamond (1 gallon)	MA-1030-1GL	1 gallon
45 micron high viscosity DIAMAT MA diamond (250 ml)	MA-1045-250	250 ml
45 micron high viscosity DIAMAT MA diamond (500 ml)	MA-1045-500	500 ml
45 micron high viscosity DIAMAT MA diamond (1 gallon)	MA-1045-1GL	1 gallon

Monocrystalline Diamond Paste (5 gram syringes)

PACE Product Name	Catalog Number	Qty
0.25 micron monocrystalline diamond paste (5 grams)	PC-0210-05	5 grams
0.50 micron monocrystalline diamond paste (5 grams)	PC-0225-05	5 grams
1 micron monocrystalline diamond paste (5 grams)	PC-0250-05	5 grams
3 micron monocrystalline diamond paste (5 grams)	PC-2001-05	5 grams
6 micron monocrystalline diamond paste (5 grams)	PC-2003-05	5 grams
9 micron monocrystalline diamond paste (5 grams)	PC-2006-05	5 grams
15 micron monocrystalline diamond paste (5 grams)	PC-2009-05	5 grams
30 micron monocrystalline diamond paste (5 grams)	PC-2015-05	5 grams
45 micron monocrystalline diamond paste (5 grams)	PC-2030-05	5 grams

Monocrystalline Diamond Paste (20 gram syringes)

PACE Product Name	Catalog Number	Qty
0.25 micron monocrystalline diamond paste (20 grams)	MA-0210-05	20 grams
0.50 micron monocrystalline diamond paste (20 grams)	MA-0225-05	20 grams
1 micron monocrystalline diamond paste (20 grams)	MA-0250-05	20 grams
3 micron monocrystalline diamond paste (20 grams)	MA-2001-05	20 grams
6 micron monocrystalline diamond paste (20 grams)	MA-2003-05	20 grams
9 micron monocrystalline diamond paste (20 grams)	MA-2006-05	20 grams
15 micron monocrystalline diamond paste (20 grams)	MA-2009-05	20 grams
30 micron monocrystalline diamond paste (20 grams)	MA-2015-05	20 grams
45 micron monocrystalline diamond paste (20 grams)	MA-2030-05	20 grams

Monocrystalline Diamond Suspensions (Low Viscosity)

PACE Product Name	Catalog Number	Qty
1 micron low viscosity DIAMAT MA diamond (250 ml)	GMA-1001-250	250 ml
1 micron low viscosity DIAMAT MA diamond (500 ml)	GMA-1001-500	500 ml
1 micron low viscosity DIAMAT MA diamond (1 gallon)	GMA-1001-1GL	1 gallon
3 micron low viscosity DIAMAT MA diamond (250 ml)	GMA-1003-250	250 ml
3 micron low viscosity DIAMAT MA diamond (500 ml)	GMA-1003-500	500 ml
3 micron low viscosity DIAMAT MA diamond (1 gallon)	GMA-1003-1GL	1 gallon
6 micron low viscosity DIAMAT MA diamond (250 ml)	GMA-1006-250	250 ml
6 micron low viscosity DIAMAT MA diamond (500 ml)	GMA-1006-500	500 ml
6 micron low viscosity DIAMAT MA diamond (1 gallon)	GMA-1006-1GL	1 gallon
9 micron low viscosity DIAMAT MA diamond (250 ml)	GMA-1009-250	250 ml
9 micron low viscosity DIAMAT MA diamond (500 ml)	GMA-1009-500	500 ml
9 micron low viscosity DIAMAT MA diamond (1 gallon)	GMA-1009-1GL	1 gallon
15 micron low viscosity DIAMAT MA diamond (250 ml)	GMA-1015-250	250 ml
15 micron low viscosity DIAMAT MA diamond (500 ml)	GMA-1015-500	500 ml
15 micron low viscosity DIAMAT MA diamond (1 gallon)	GMA-1015-1GL	1 gallon
30 micron low viscosity DIAMAT MA diamond (250 ml)	GMA-1030-250	250 ml
30 micron low viscosity DIAMAT MA diamond (500 ml)	GMA-1030-500	500 ml
30 micron low viscosity DIAMAT MA diamond (1 gallon)	GMA-1030-1GL	1 gallon
45 micron low viscosity DIAMAT MA diamond (250 ml)	GMA-1045-250	250 ml
45 micron low viscosity DIAMAT MA diamond (500 ml)	GMA-1045-500	500 ml
45 micron low viscosity DIAMAT MA diamond (1 gallon)	GMA-1045-1GL	1 gallon

DIAMOND EXTENDERS / LUBRICANTS

Extenders / Lubricants:

Diamond lubricants or extenders are required for diamond pastes; however, they are also useful for thinning diamond suspensions. By alternating between the diamond suspension and the extender the diamond can better fall out of suspension and therefore embed into the polishing surface. Extenders / lubricants are typically glycol or alcohol based products.



Diamond Extenders / Lubricants

PACE Product Name	Catalog Number	Qty
DIALUBE water based lube (16 oz)	DL-3000-16	16 oz
DIALUBE water based lube (32 oz)	DL-3000-32	32 oz
DIALUBE water based lube (1/2 gallon)	DL-3000-64	1/2 gallon
DIALUBE water based lube (1 gallon)	DL-3000-128	1 gallon
DIALUBE Blue alcohol based lube (32 oz)*	AOD-3000-32	32 oz
DIALUBE Blue alcohol based lube (1 gallon)*	AOD-3000-128	1 gallon
DIALUBE Blue alcohol based lube (5 gallons)*	AOD-3000-640	5 gallons
DIALUBE Purple alcohol based lube (32 oz)*	ADL-3000-32	32 oz
DIALUBE Purple alcohol based lube (1 gallon)*	ADL-3000-128	1 gallon
DIALUBE Purple alcohol based lube (5 gallons)*	ADL-3000-640	5 gallons
POLYLUBE non-aqueous lube (32 oz)	PDL-3000-32	32 oz
POLYLUBE non-aqueous lube (1 gallon)	PDL-3000-128	1 gallon
POLYLUBE Red (anti-corrosion lube) (32 oz)	PDL-3000R-32	32 oz
POLYLUBE Red (anti-corrosion lube) (1 gallon)	PDL-3000R-128	1 gallon

* May require dangerous goods shipping, extra charges may apply

FINAL POLISHING

Final Polishing:

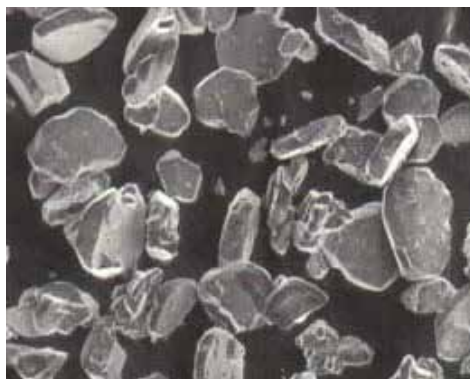
Final polishing can be accomplished with alumina, diamond, colloidal silica, ceria (cerium oxide) and rouge (iron oxide). However, the most commonly used abrasive for final polishing metals is alumina. Alumina abrasives are classified as calcined, levigated or polycrystalline based on their manufacturing process, crystal structure (hardness) and their sizing process.

Characteristics of Alumina Abrasives

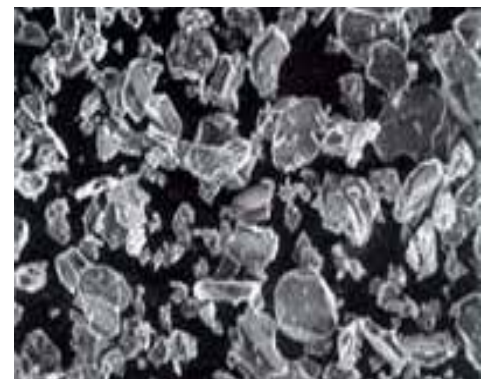
Property	Polycrystalline	Calcined	Levigated
Crystal structure	Polycrystalline alpha alumina	Monocrystalline alpha alumina	Monocrystalline gamma or alpha alumina
Shape	Rough spherical particles	Hexagonal platelets	Hexagonal platelets
Particle size	0.05-0.25 microns	0.5-15 microns	<1 micron
Specific gravity	3.95 gm/cc	3.95 gm/cc	3.95 gm/cc
Hardness	Knoop 2000 (Mohs 9)	Knoop 2000 (Mohs 9)	Mohs 8-9
Applications	Available in a slurry at either a pH 4 or pH 10, primarily for metal polishing	Available in powders, slurries or suspensions, rough polishing	More commonly known as Linde A (0.3 micron) Linde B (0.05 micron) Linde C (1 micron)



Polycrystalline Alumina



Calcined Alumina



Levigated Alumina



Polycrystalline Alumina:

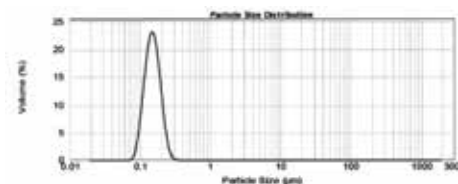
Polycrystalline or nanometer alumina is a colloidal alumina manufactured by a proprietary process. Polycrystalline abrasives are also milled at either a low or higher pH values in order to avoid agglomeration which occurs near the point of zero charge (PZC) for alumina which occurs at neutral pH values. This processing offers two significant improvements over conventional calcined alumina processes:

- Tighter, more controlled particle size distributions
- Harder alpha alumina crystal structure

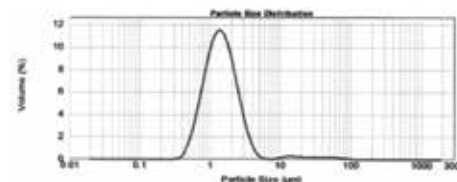
A tighter, more controlled particle size distribution is the result of less particle aggregation. For example, standard calcined 0.05 micron gamma alumina products form aggregate sizes as large as 5 microns. In some cases, these aggregates can be broken down during polishing with harder specimens; however, they are a problem when polishing softer metals (such as aluminum, tin, lead, copper and soft steels) with calcined alumina abrasives.

Nanometer polycrystalline alumina is specifically milled to produce a much smaller aggregate particle size distribution (<0.5 micron)(see PSD charts above). Polycrystalline alumina is also a harder alpha alumina particle, therefore making it a more efficient cutting abrasive. Thus, polycrystalline alumina is a much more controlled polishing abrasive compared to calcined gamma alumina abrasives.

In general, the more modern polycrystalline alumina abrasives outperform traditional calcined and levigated alumina abrasives for final polishing because they produce a much more consistent and better surface finish.



Particle size distribution for 0.05 micron
NANOMETER Alumina



Particle size distribution for 0.05 micron
Deagglomerated Alumina

Features of Polycrystalline Alumina:

- Improved surface finishes over gamma alumina
- Less random scratching
- Higher cutting rates than gamma alumina
- More uniform surface finish
- Tighter particle size distributions than gamma alumina
- Low viscosity for easier dispensing
- Semi-permanent suspensions

NANOMETER 0.05 micron Polycrystalline Alpha Alumina Slurries

PACE Product Name	Catalog Number	Qty
16 oz Nanometer alumina (pH 10)	NA-1005-16	16 oz
32 oz Nanometer alumina (pH 10)	NA-1005-32	32 oz
1/2 gallon Nanometer alumina (pH 10)	NA-1005-64	1/2 gallon
1 gallon Nanometer alumina (pH 10)	NA-1005-128	1 gallon
16 oz Acidic Nanometer alumina (pH 4)	NA-1020-16	16 oz
32 oz Acidic Nanometer alumina (pH 4)	NA-1020-32	32 oz
1/2 gallon Acidic Nanometer alumina (pH 4)	NA-1020-64	1/2 gallon
1 gallon Acidic Nanometer alumina (pH 4)	NA-1020-128	1 gallon

FINAL POLISHING (HIGH VISCOSITY ALUMINA)

Alumina Suspensions (For Electronics and Soft Materials - High Viscosity)

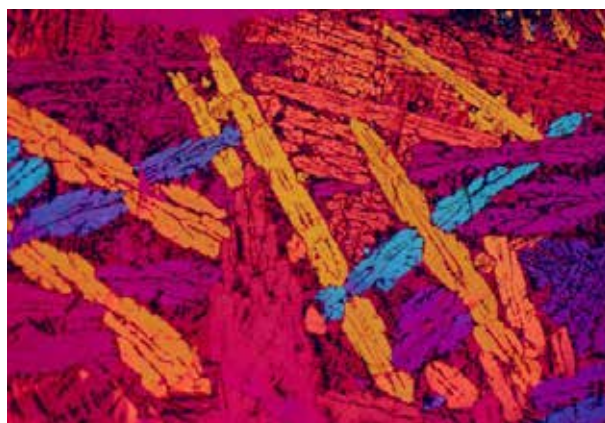
PACE Product Name	Catalog Number	Qty
0.05 micron Electronics Grade Deagglomerated Alumina (6 oz)	NANO2-1005-06E	6 oz
0.05 micron Electronics Grade Deagglomerated Alumina (16 oz)	NANO2-1005-16E	16 oz
0.05 micron Electronics Grade Deagglomerated Alumina (32 oz)	NANO2-1005-32E	32 oz
0.05 micron Electronics Grade Deagglomerated Alumina (1 gallon)	NANO2-1005-128E	1 gallon
0.3 micron Electronics Grade Deagglomerated Alumina (6 oz)	NANO2-1003-06E	6 oz
0.3 micron Electronics Grade Deagglomerated Alumina (16 oz)	NANO2-1003-16E	16 oz
0.3 micron Electronics Grade Deagglomerated Alumina (32 oz)	NANO2-1003-32E	32 oz
0.3 micron Electronics Grade Deagglomerated Alumina (1 gallon)	NANO2-1003-128E	1 gallon
1 micron Electronics Grade Deagglomerated Alumina (6 oz)	NANO2-1010-06E	6 oz
1 micron Electronics Grade Deagglomerated Alumina (16 oz)	NANO2-1010-16E	16 oz
1 micron Electronics Grade Deagglomerated Alumina (32 oz)	NANO2-1010-32E	32 oz
1 micron Electronics Grade Deagglomerated Alumina (1 gallon)	NANO2-1010-128E	1 gallon



Deagglomerated NANO2 Alumina Suspensions

Alumina Suspensions for Electronics and Soft Materials:

- Double deagglomerated processing
- Less random scratching
- More uniform surface finish
- Tighter particle size distributions
- High viscosity for manual dispensing
- Semi-permanent suspensions



Slag, 100X (Polarized light), as polished condition

High Viscosity Alumina Suspensions:

- High viscosity for manual dispensing
- Basic alumina polishing suspension ranging from 0.05 micron to 5 micron sizes
- Reasonably priced
- Traditional polishing compound



High Viscosity NANO2 Alumina Suspensions

Alumina Slurries (NANO2 High Viscosity)

PACE Product Name	NANO2-1050-06 Catalog Number	Qty
0.05 micron Alumina High Viscosity Polishing Suspension (6 oz)	NANO2-1005-06	6 oz
0.05 micron Alumina High Viscosity Polishing Suspension (16 oz)	NANO2-1005-16	16 oz
0.05 micron Alumina High Viscosity Polishing Suspension (32 oz)	NANO2-1005-32	32 oz
0.05 micron Alumina High Viscosity Polishing Suspension (1 gallon)	NANO2-1005-128	1 gallon
0.3 micron Alumina High Viscosity Polishing Suspension (6 oz)	NANO2-1003-06	6 oz
0.3 micron Alumina High Viscosity Polishing Suspension (16 oz)	NANO2-1003-16	16 oz
0.3 micron Alumina High Viscosity Polishing Suspension (32 oz)	NANO2-1003-32	32 oz
0.3 micron Alumina High Viscosity Polishing Suspension (1 gallon)	NANO2-1003-128	1 gallon
0.50 micron Alumina High Viscosity Polishing Suspension (6 oz)	NANO2-1105-06	6 oz
0.50 micron Alumina High Viscosity Polishing Suspension (16 oz)	NANO2-1105-16	16 oz
0.50 micron Alumina High Viscosity Polishing Suspension (32 oz)	NANO2-1105-32	32 oz
0.50 micron Alumina High Viscosity Polishing Suspension (1 gallon)	NANO2-1105-128	1 gallon
1 micron Alumina High Viscosity Polishing Suspension (6 oz)	NANO2-1010-06	6 oz
1 micron Alumina High Viscosity Polishing Suspension (16 oz)	NANO2-1010-16	16 oz
1 micron Alumina High Viscosity Polishing Suspension (32 oz)	NANO2-1010-32	32 oz
1 micron Alumina High Viscosity Polishing Suspension (1 gallon)	NANO2-1010-128	1 gallon
3 micron Alumina High Viscosity Polishing Suspension (6 oz)	NANO2-1030-06	6 oz
3 micron Alumina High Viscosity Polishing Suspension (16 oz)	NANO2-1030-16	16 oz
3 micron Alumina High Viscosity Polishing Suspension (32 oz)	NANO2-1030-32	32 oz
3 micron Alumina High Viscosity Polishing Suspension (1 gallon)	NANO2-1030-128	1 gallon
5 micron Alumina High Viscosity Polishing Suspension (6 oz)	NANO2-1050-06	6 oz
5 micron Alumina High Viscosity Polishing Suspension (16 oz)	NANO2-1050-16	16 oz
5 micron Alumina High Viscosity Polishing Suspension (32 oz)	NANO2-1050-32	32 oz
5 micron Alumina High Viscosity Polishing Suspension (1 gallon)	NANO2-1050-128	1 gallon

FINAL POLISHING (LOW VISCOSITY ALUMINA)



Low Viscosity NANO2 Alumina Suspensions

Low Viscosity Alumina Suspensions:

- Low viscosity for easier dispensing
- Basic alumina polishing suspension ranging from 0.05 micron to 5 micron sizes
- Reasonably priced
- Traditional polishing compound

Alumina Slurries (NANO Low Viscosity)

PACE Product Name	Catalog Number	Qty
0.05 micron Alumina Low Viscosity Polishing Suspension (6 oz)	NANO-1005-06	6 oz
0.05 micron Alumina Low Viscosity Polishing Suspension (16 oz)	NANO-1005-16	16 oz
0.05 micron Alumina Low Viscosity Polishing Suspension (32 oz)	NANO-1005-32	32 oz
0.05 micron Alumina Low Viscosity Polishing Suspension (1 gallon)	NANO-1005-128	1 gallon
0.3 micron Alumina Low Viscosity Polishing Suspension (6 oz)	NANO-1003-06	6 oz
0.3 micron Alumina Low Viscosity Polishing Suspension (16 oz)	NANO-1003-16	16 oz
0.3 micron Alumina Low Viscosity Polishing Suspension (32 oz)	NANO-1003-32	32 oz
0.3 micron Alumina Low Viscosity Polishing Suspension (1 gallon)	NANO-1003-128	1 gallon
0.50 micron Alumina Low Viscosity Polishing Suspension (6 oz)	NANO-1105-06	6 oz
0.50 micron Alumina Low Viscosity Polishing Suspension (16 oz)	NANO-1105-16	16 oz
0.50 micron Alumina Low Viscosity Polishing Suspension (32 oz)	NANO-1105-32	32 oz
0.50 micron Alumina Low Viscosity Polishing Suspension (1 gallon)	NANO-1105-128	1 gallon
1 micron Alumina Low Viscosity Polishing Suspension (6 oz)	NANO-1010-06	6 oz
1 micron Alumina Low Viscosity Polishing Suspension (16 oz)	NANO-1010-16	16 oz
1 micron Alumina Low Viscosity Polishing Suspension (32 oz)	NANO-1010-32	32 oz
1 micron Alumina Low Viscosity Polishing Suspension (1 gallon)	NANO-1010-128	1 gallon
3 micron Alumina Low Viscosity Polishing Suspension (6 oz)	NANO-1030-06	6 oz
3 micron Alumina Low Viscosity Polishing Suspension (16 oz)	NANO-1030-16	16 oz
3 micron Alumina Low Viscosity Polishing Suspension (32 oz)	NANO-1030-32	32 oz
3 micron Alumina Low Viscosity Polishing Suspension (1 gallon)	NANO-1030-128	1 gallon
5 micron Alumina Low Viscosity Polishing Suspension (6 oz)	NANO-1050-06	6 oz
5 micron Alumina Low Viscosity Polishing Suspension (16 oz)	NANO-1050-16	16 oz
5 micron Alumina Low Viscosity Polishing Suspension (32 oz)	NANO-1050-32	32 oz
5 micron Alumina Low Viscosity Polishing Suspension (1 gallon)	NANO-1050-128	1 gallon

Deagglomerated Alumina Powders (For Electronics and Soft Materials)

PACE Product Name	Catalog Number	Qty
0.05 micron electronics grade deagglomerated alumina powder (1 lb)	ALR-1005-01E	1 lb
0.05 micron electronics grade deagglomerated alumina powder (5 lbs)	ALR-1005-05E	5 lbs
0.3 micron electronics grade deagglomerated alumina powder (1 lb)	ALR-0103-01E	1 lb
0.3 micron electronics grade deagglomerated alumina powder (5 lbs)	ALR-0103-05E	5 lbs
1 micron electronics grade deagglomerated alumina powder (1 lb)	ALR-0110-01E	1 lb
1 micron electronics grade deagglomerated alumina powder (5 lbs)	ALR-0110-05E	5 lbs

Alumina Powders

PACE Product Name	Catalog Number	Qty
0.05 micron deagglomerated alumina powder (1 lb)	ALR-1005-01	1 lb
0.05 micron deagglomerated alumina powder (5 lbs)	ALR-1005-05	5 lbs
0.3 micron deagglomerated alumina powder (1 lb)	ALR-0103-01	1 lb
0.3 micron deagglomerated alumina powder (5 lbs)	ALR-0103-05	5 lbs
0.3 um alumina powder (high density) (1 lb)	ALR-0103-01	1 lb
0.3 um alumina powder (high density) (5 lbs)	ALR-0103-05	5 lbs
0.5 micron alumina powder (1 lb)	ALR-0105-01	1 lb
0.5 micron alumina powder (5 lbs)	ALR-0105-05	5 lbs
1 micron alumina powder (1 lb)	ALR-0110-01	1 lb
1 micron alumina powder (5 lbs)	ALR-0110-05	5 lbs
3 micron alumina powder (1 lb)	ALR-0130-01	1 lb
3 micron alumina powder (5 lbs)	ALR-0130-05	5 lbs
5 micron alumina powder (1 lb)	ALR-0150-01	1 lb
5 micron alumina powder (5 lbs)	ALR-0150-05	5 lbs
9 micron alumina powder (5 lbs)	ALR-0190-05	5 lbs
12 micron alumina powder (5 lbs)	ALR-1200-05	5 lbs
15 micron alumina powder (5 lbs)	ALR-1500-05	5 lbs
20 micron alumina powder (5 lbs)	ALR-2000-05	5 lbs
30 micron alumina powder (5 lbs)	ALR-3000-05	5 lbs
40 micron alumina powder (5 lbs)	ALR-4000-05	5 lbs



Deagglomerated Fine Alumina Powders



Calcined Colloidal (<1 micron) Powders



Calcined Fine Alumina Powders



Coarse Alumina Powders

FINAL POLISHING (COLLOIDAL SILICA)

Colloidal Silica Polishing:

Colloidal silica abrasives for metallographic polishing typically range in particle size from 20 nm up to 70 nm (0.02-0.07 micron). The concentration of particles typically ranges from 25-50% solids. Even at these high concentrations, colloidal silica can be maintained in a nearly perfect suspension. The electrochemical stability of colloidal silica makes it an excellent chemical mechanical polishing abrasive for polishing ceramics. The main drawback to polishing with colloidal silica is that it will crystallize as it dehydrates. This is particularly troublesome around the lid of an open bottle. One way to reduce this crystallization is to add an ingredient to the colloidal silica suspension in order to reduce the evaporation rate of the water. A comparison of the two main types of colloidal silica, SIAMAT and SIAMAT 2 Colloidal Silica are listed in the following table.

Characteristics of Colloidal Silica Abrasives

Property	SIAMAT Colloidal Silica	SIAMAT 2 Colloidal Silica	SIAMAT Blue Colloidal Silica
Particle Size	0.06 micron	0.02 micron	0.05 micron
pH	9.5-10.0	9.2-10.0	9.5-10.0
Concentration	45-50% solids	45-50% solids	45-50% solids
Specific gravity	1.39	1.25	1.39
Viscosity	15 cP	20 cP	15 cP
Applications	Precision surface finishing abrasive for ceramics and glass. Ideal as a CMP abrasive when used by itself or with diamond polishing abrasives	Precision surface finishing abrasive for metals and microelectronic materials	Similar to SIAMAT colloidal silica with blue dye added to distinguish from other abrasives suspensions

Colloidal Silica Polishing Suspensions

PACE Product Name	Catalog Number	Qty
16 oz SIAMAT colloidal silica (0.06 micron)	SI-100A-16	16 oz
32 oz SIAMAT colloidal silica (0.06 micron)	SI-100A-32	32 oz
1/2 gallon SIAMAT colloidal silica (0.06 micron)	SI-100A-64	1/2 gallon
1 gallon SIAMAT colloidal silica (0.06 micron)	SI-100A-128	1 gallon
5 gallons SIAMAT colloidal silica (0.06 micron)	SI-100A-640	5 gallons
16 oz SIAMAT Blue colloidal silica (0.05 micron)	SI-100B-16	16 oz
32 oz SIAMAT Blue colloidal silica (0.05 micron)	SI-100B-32	32 oz
1/2 gallon SIAMAT Blue colloidal silica (0.05 micron)	SI-100B-64	1/2 gallon
1 gallon SIAMAT Blue colloidal silica (0.05 micron)	SI-100B-128	1 gallon
5 gallons SIAMAT Blue colloidal silica (0.05 micron)	SI-100B-640	5 gallons
16 oz SIAMAT 2 colloidal silica (0.02 micron)	SI2-100A-16	16 oz
32 oz SIAMAT 2 colloidal silica (0.02 micron)	SI2-100A-32	32 oz
1/2 gallon SIAMAT 2 colloidal silica (0.02 micron)	SI2-100A-64	1/2 gallon
1 gallon SIAMAT 2 colloidal silica (0.02 micron)	SI2-100A-128	1 gallon
5 gallons SIAMAT 2 colloidal silica (0.02 micron)	SI2-100A-640	5 gallons



SIAMAT Colloidal Silica



SIAMAT Blue Colloidal Silica



Low Crystallizing SIAMAT Colloidal Silica

CMP Polishing Slurries:

CMP (Chemical-Mechanical Polishing) slurries are a combination of colloidal silica and polycrystalline alumina. The colloidal silica provides a chemical polishing action, whereas, the polycrystalline alumina provides a mechanical polishing action. CMP slurries, especially when used in conjunction with vibratory polishing produce flatter surface features and faster polishing rates.



CMP Polishing Slurries

CMP Slurry (Polycrystalline Alumina - Colloidal Silica Mixture)

PACE Product Name	Catalog Number	Qty
16 oz Chemical Mechanical Alumina-Silica Slurry - pH 10	CMP-1005-16	16 oz
32 oz Chemical Mechanical Alumina-Silica Slurry - pH 10	CMP-1005-32	32 oz
1/2 gallon Chemical Mechanical Alumina-Silica Slurry - pH 10	CMP-1005-64	1/2 gallon
1/2 gallon Chemical Mechanical Alumina-Silica Slurry - pH 10	CMP-1005-128	1 gallon

Colloidal Silica and CMP Polishing Procedures:

Colloidal silica polishing can be used by itself as a polishing abrasive, or in combination with other harder abrasives (CMP Polishing). For polishing hard, and oftentimes brittle materials, such as glass and ceramics, the primary polishing mechanism is chemical. For metals, composites and microelectronic components, colloidal silica functions more as a traditional abrasive and mechanically polishes the surface.

For CMP polishing with colloidal silica abrasives, the porous **BLACK CHEM 2** Polishing Pad works well because it allows for the polishing process to generate more heat and thus enhances the chemical polishing rate.

GOLDPAD and **TEXPAN** polishing pads are also useful for polishing glass, ceramics and composites utilizing a combination of colloidal silica and diamond.

Colloidal silica suspensions also have very good dispersion, thus the particles are usually very uniform and work well for polishing metals. However, for polishing metals, care must be taken so that the colloidal silica does not dry out because this can result in the colloidal silica crystallizing and producing much larger abrasive particles.

The other key to successful polishing with colloidal silica and CMP abrasive is to clean the specimen surface immediately after the polishing step. The most basic cleaning process should take place, which includes running clean distilled water on the polishing pad for the last 15-30 seconds of the polishing step.

If cleaning is not accomplished before the colloidal silica or CMP abrasive crystallizes on the specimen surface, then either the polishing process should be repeated or the sample can be cleaned with a caustic cleaning solution. A commonly used cleaning solution for most materials after polishing with colloidal silica is a mixture of ammonium hydroxide (NH₄OH) with hydrogen peroxide.

Note: This solution may adversely react and etch copper and copper alloys.

Common Stainless Steel Etchants

PACE Product Name	Applications	Catalog Number	Qty
Adlers etchant	Very effective for etching austenitic 300 series stainless steels (250 ml)	Adlers	250 ml
Carpenters	300 Series Stainless Steel Etchant (250 ml)	Carpenters	250 ml
Kalling's No. 2	Martensitic 400 series stainless steels (250 ml)	Kallings No. 2	250 ml
Frys Reagent	Precipitation hardened stainless steels (250 ml)	Frys Reagent	250 ml

Common Copper and Brass Etchants

PACE Product Name	Applications	Catalog Number	Qty
ASTM No. 30	Copper etchant (250 ml)	ASTM No. 30	250 ml
Copper No. 1	Copper & Brass (nitric acid and DI water) (250 ml)	Copper No. 1	250 ml
Copper No. 2	Copper & Brass (HCl and ferric chloride) (250 ml)	Copper No. 2	250 ml
Klemms	Stain etch for brass (250 ml)	Klemms	250 ml

Common Steel Etchants

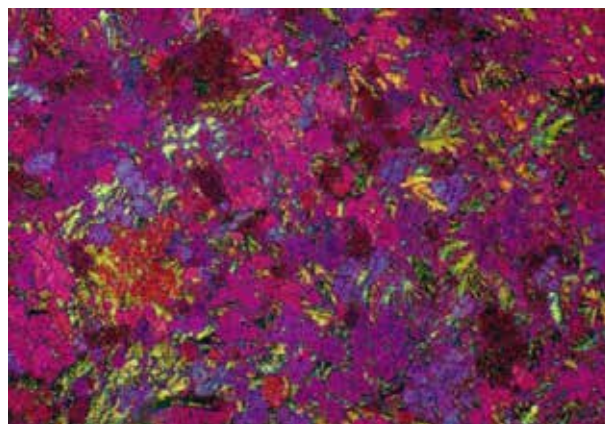
PACE Product Name	Applications	Catalog Number	Qty
2% Nital	2% is the most common etchant for non-heat treated or welded steels (250 ml)	Nital-2	250 ml
3% Nital		Nital-3	250 ml
5% Nital		Nital-5	250 ml
8% Nital		Nital-8	250 ml
Picral	Heat treated steels (250 ml)	Picral	250 ml
Vilella's	Most common etchant for carburized/heat treated steels (250 ml)	Vilella's	250 ml

Common Aluminum and Titanium Etchants

PACE Product Name	Applications	Catalog Number	Qty
Kellers	Most common etchant for aluminum alloys (250 ml)	Kellers	250 ml
Kroll's	Most common etchant for titanium (250 ml)	Krolls	250 ml
Titanium Attack Polish	Used as a CMP polishing compound for titanium (500 ml)	TI-AP-16	16 oz



Zinc-Aluminum Alloy, 200X B.F. (etchant CrO₃, Na₂SO₄)

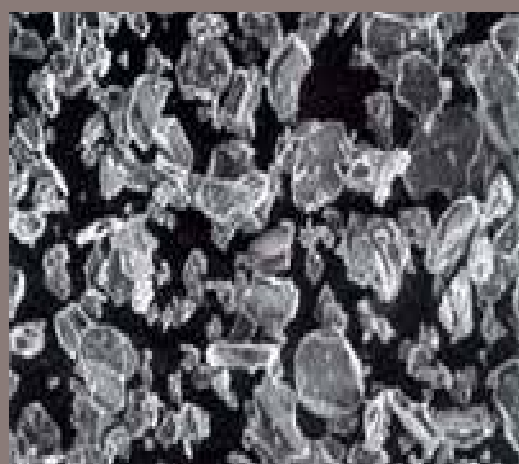
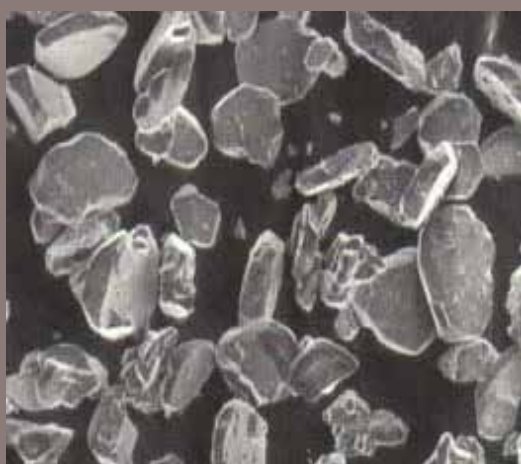
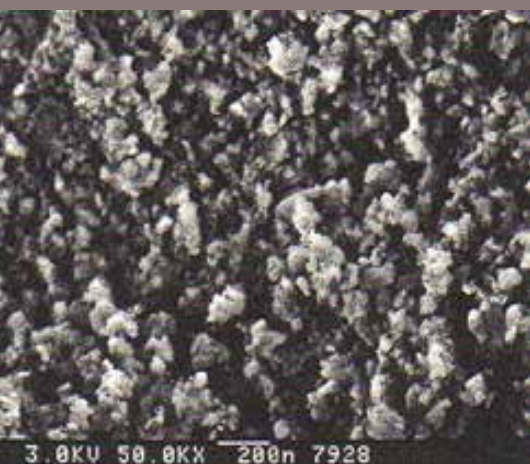


Zinc-Aluminum Alloy, 100X Polarized (etchant CrO₃, Na₂SO₄)

Common Nickel, Iron, Chromium Alloy Etchants

PACE Product Name	Applications	Catalog Number	Qty
Marble's	Nickel, nickel-iron alloys (250 ml)	Marbles	250 ml
Murakami's	Chromium alloys (250 ml)	Murakamis	250 ml
Waterless Kalling's	Iron and nickel base alloys (250 ml)	Waterless Kallings	250 ml

PACE[®]
TECHNOLOGIES



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