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Prices and part numbers are subject to change without notice.

SECTIONING

SECTIONING GUIDELINES

Metallographic sectioning is defined as obtaining a representative sample without changing the structure of the sample material. There are two requirements for achieving this goal: (1) A water-cooled sectioning machine with adequate capacity; and (2) a cut-off wheel that has been selected for this particular application. Choosing a cut-off wheel involves several factors—material type (i.e. ferrous/nonferrous), hardness, and size of the sample part. Typically, ferrous applications require an aluminum oxide wheel; nonferrous materials require a silicon carbide wheel. If the sample is hard, then a softer bond wheel is required, such as a rubber-bonded wheel. This type of blade will break down faster, but will section the sample more effectively. A softer sample material might require a resin-bonded wheel—which is harder. This allows the wheel to section the softer sample, and the blade life is increased.

Several of the choices in the 14", 16", and 17" sizes are reinforced for extra life and durability. Reinforced blades provide durability and reduce blade breakage for sample applications that have potential for movement during the sectioning process. Non-reinforced blades work well on harder materials where a radial-type cut is utilized. Correct blade selection and adequate cooling will provide excellent sample sectioning with minimal influence on the sample's microstructure.

ABRASIVE CUTTING WHEEL GUIDE

Recommended Use	Part Number						
	8-Inch (~200 mm)	9-Inch (~230 mm)	10-Inch (~250 mm)	12-Inch (~300 mm)	14-Inch (~350 mm)	16-Inch (~400 mm)	17-Inch (~430 mm)
Rc 60+ (Extremely Hard)	—	—	—	811-065-010	—	—	—
Rc 50-65 BN (Very Hard)	—	—	808-673	808-674	808-675	—	—
Rc 50-65 BR (Very Hard)	809-321	—	812-231	811-546	812-232	809-329*	809-333*
Rc 40-55 (Hard)	809-322	811-035-010	811-059-010	811-081-010	811-975-010	—	—
Rc 30-45 (Medium Hard)	—	811-043-010	811-067-010	811-089-010	811-976-010	809-330*	809-334*
Rc 20-35 (Medium Soft)	809-323	—	833-101-133	811-095-010	811-978-010	—	809-355
Rb Range (Soft)	—	811-049-010	811-073-010	811-097-010	—	809-331*	809-335*
Medium Duty	809-141	810-309-010	810-310-010	810-311-010	811-977-010	—	809-356
Medium Duty (Rubber Bond)	—	—	811-356-010	811-355-010	—	—	—
Nonferrous (Thicker Blade)	809-324	—	810-313-010	810-314-010	—	809-332*	809-336*
Nonferrous (Thinner Blade)	—	—	811-077-010	811-102-010	—	—	809-357
Cermets/Ceramics	833-101-121	811-398	811-388	811-399	811-545	—	—
Hardened Tool Steels	809-443	—	809-444	809-446	809-445	—	—

BN = Resin/Rubber

BR = Bond Resin

Rb = Rockwell "B" Hardness

Rc = Rockwell "C" Hardness

*Reinforced Wheel Construction

SECTIONING

DIAMOND BLADES

Recommended for Cermets/Ceramics

Size	Arbor Hole	Thickness	Qty.	Part No.
4-inch (~100 mm)	0.5-inch (12.7 mm)	0.012" (0.30 mm)	1	801-137
5-inch (~130 mm)	0.5-inch (12.7 mm)	0.014" (0.38 mm)	1	801-136
5-inch (~130 mm)	0.5-inch (12.7 mm)	0.025" (0.64 mm)	1	802-439
7-inch (~175 mm)	1.0-inch (25.4 mm)	0.024" (0.6 mm)	1	809-150
8-inch (~200 mm)	1.0-inch (25.4 mm)	0.025" (0.64 mm)	1	833-101-121
9-inch (~230 mm)	1.25-inch (32 mm)	0.050" (1.3 mm)	1	811-398
10-inch (~250 mm)	1.25-inch (32 mm)	0.050" (1.3 mm)	1	811-388
12-inch (~300 mm)	1.25-inch (32 mm)	0.050" (1.3 mm)	1	811-399
14-inch (~350 mm)	1.25-inch (32 mm)	0.085" (2.2 mm)	1	811-545

CUBIC BORON NITRIDE (CBN) RESIN BONDED SECTIONING BLADES

With 1.25 (32 mm) arbor hole

Recommended for very hard ferrous materials (e.g. tool steels), these bonded blades are composed of a metal core and outer rim. The rim consists of a resin mixture with abrasives cured under high temperatures and pressure to bond this material together. These blades offer long life and durability while the resin bonding creates a cool and straight cut with a superior finish.

Size	Thickness	Qty.	Part No.
8-inch (200 mm)	0.047" (1.2 mm)	1	809-443
10-inch (250 mm)	0.047" (1.2 mm)	1	809-444
12-inch (300 mm)	0.059" (1.5 mm)	1	809-446
14-inch (350 mm)	0.080" (2.0 mm)	1	809-445

MSX205M2



SECTIONING

Al₂O₃ ABRASIVE BLADES

4-inch (~100 mm) diameter with 0.5-inch (12.7 mm) arbor hole

Recommended Use	Thickness	Qty.	Part No.
General Purpose	0.010" (0.25 mm)	10	811-146

5-inch (~130 mm) diameter with 0.5-inch (12.7 mm) arbor hole

Recommended Use	Thickness	Qty.	Part No.
General Purpose	0.024" (0.61 mm)	10	812-515

SECTIONING BLADES

6-inch (~150 mm) diameter with 1.0-inch (25.4 mm) arbor hole

Recommended Use	Thickness	Bond*	Abrasive	Qty.	Part No.
HRC 50-65 (Very Hard)	0.040" (1.00 mm)	Resin	Al ₂ O ₃	10	809-313
HRC 40-55 (Hard)	0.040" (1.00 mm)	Resin	Al ₂ O ₃	10	809-314
HRC 20-35 (Medium Soft)	0.040" (1.00 mm)	Resin	Al ₂ O ₃	10	809-315
Nonferrous, Ti	0.040" (1.00 mm)	Resin	SiC	10	809-316

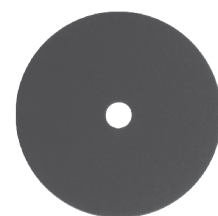
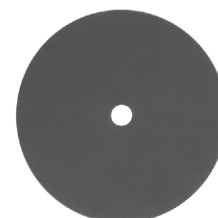
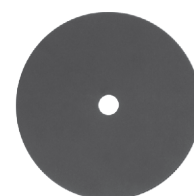
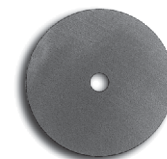
7-inch (~175 mm) diameter with 1.0-inch (25.4 mm) arbor hole

Recommended Use	Thickness	Bond*	Abrasive	Qty.	Part No.
Medium Duty	0.024" (0.6 mm)	BN	Al ₂ O ₃	10	809-136
HRC 50-65 (Very Hard)	0.047" (1.2 mm)	Resin	Al ₂ O ₃	10	809-317
HRC 40-55 (Hard)	0.047" (1.2 mm)	Resin	Al ₂ O ₃	10	809-318
HRC 20-35 (Medium Soft)	0.047" (1.2 mm)	Resin	Al ₂ O ₃	10	809-319
Nonferrous, Ti	0.047" (1.2 mm)	Resin	SiC	10	809-320

8-inch (~200 mm) diameter with 1.0-inch (25.4 mm) arbor hole

Recommended Use	Thickness	Bond*	Abrasive	Qty.	Part No.
Medium Duty	0.024" (0.6 mm)	BN	Al ₂ O ₃	10	809-141
HRC 50-65 (Very Hard)	0.059" (1.5 mm)	Resin	Al ₂ O ₃	10	809-321
HRC 40-55 (Hard)	0.059" (1.5 mm)	Resin	Al ₂ O ₃	10	809-322
HRC 20-35 (Medium Soft)	0.059" (1.5 mm)	Resin	Al ₂ O ₃	10	809-323
Nonferrous, Ti	0.059" (1.5 mm)	Resin	SiC	10	809-324

*BOND TYPE: BN - Resin/Rubber



SECTIONING

SECTIONING BLADES

9-inch (~230 mm) diameter with 1.25-inch (32 mm) arbor hole

Recommended Use	Thickness	Bond*	Abrasive	Qty.	Part No.
HRC 45-55+ (Hard)	0.062" (1.6 mm)	R	Al ₂ O ₃	10	811-035-010
HRC 30-45 (Medium Hard)	0.062" (1.6 mm)	R	Al ₂ O ₃	10	811-043-010
HRB (Soft)	0.062" (1.6 mm)	R	Al ₂ O ₃	10	811-049-010
Medium Duty	0.075" (1.9 mm)	BN	Al ₂ O ₃	10	810-309-010

10-inch (~250 mm) diameter with 1.25-inch (32 mm) arbor hole

Recommended Use	Thickness	Bond*	Abrasive	Qty.	Part No.
HRC 50-65 (Very Hard)	0.070" (1.8 mm)	BN	Al ₂ O ₃	10	808-673
HRC 50-65 (Very Hard)	0.059" (1.5 mm)	BR	Al ₂ O ₃	10	812-231
HRC 40-55+ (Hard)	0.062" (1.6 mm)	R	Al ₂ O ₃	10	811-059-010
HRC 30-45 (Medium Hard)	0.062" (1.6 mm)	R	Al ₂ O ₃	10	811-067-010
HRC 20-35 (Medium Soft)	0.087" (2.2 mm)	R	Al ₂ O ₃	10	833-101-133**
HRB (Soft)	0.062" (1.6 mm)	R	Al ₂ O ₃	10	811-073-010
Medium Duty	0.075" (1.9 mm)	BN	Al ₂ O ₃	10	810-310-010
Nonferrous, Titanium	0.075" (1.9 mm)	BN	SiC	10	810-313-010
Nonferrous, Titanium	0.040" (1.0 mm)	R	SiC	10	811-077-010
Medium Duty	0.062" (1.6 mm)	R	Al ₂ O ₃	10	811-356-010

12-inch (~300 mm) diameter with 1.25-inch (32 mm) arbor hole

Recommended Use	Thickness	Bond*	Abrasive	Qty.	Part No.
HRC 60+ (Extremely Hard)	0.062" (1.6 mm)	R	Al ₂ O ₃	10	811-065-010
HRC 50-65 (Very Hard)	0.070" (1.8 mm)	BN	Al ₂ O ₃	10	808-674
HRC 50-65 (Very Hard)	0.070" (1.8 mm)	BR	Al ₂ O ₃	10	811-546
HRC 45-55 (Hard)	0.062" (1.6 mm)	R	Al ₂ O ₃	10	811-081-010
HRC 30-45 (Medium Hard)	0.062" (1.6 mm)	R	Al ₂ O ₃	10	811-089-010
HRC 20-35 (Medium Soft)	0.062" (1.6 mm)	R	Al ₂ O ₃	10	811-095-010
HRB (Soft)	0.062" (1.6 mm)	R	Al ₂ O ₃	10	811-097-010
Medium Duty	0.075" (1.9 mm)	BN	Al ₂ O ₃	10	810-311-010
Nonferrous, Titanium	0.075" (1.9 mm)	BN	SiC	10	810-314-010
Nonferrous, Titanium	0.040" (1.0 mm)	R	SiC	10	811-102-010
Medium Duty	0.062" (1.6 mm)	R	Al ₂ O ₃	10	811-355-010

*BOND TYPE: R - Rubber; BN - Resin/Rubber; BR - Bond Resin

**Reinforced

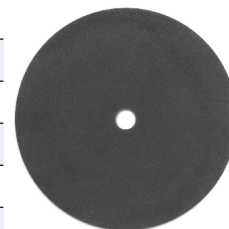
SECTIONING

SECTIONING BLADES

14-inch (~350 mm) diameter with 1.25-inch (32 mm) arbor hole

Recommended Use	Thickness	Bond	Abrasive	Qty.	Construction	Part No.
HRC 50-65 (Very Hard)	0.098" (2.5 mm)	Resin	Al ₂ O ₃	10	Reinforced	809-325
HRC 30-45 (Medium Hard)	0.098" (2.5 mm)	Resin	Al ₂ O ₃	10	Reinforced	809-326
Nonferrous, Ti	0.098" (2.5 mm)	Resin	SiC	10	Reinforced	809-328
HRC 50-65 (Very Hard)	0.098" (2.5 mm)	Resin	Al ₂ O ₃	10	Non-Reinforced	809-346
HRC 30-45 (Medium Hard)	0.098" (2.5 mm)	Resin	Al ₂ O ₃	10	Non-Reinforced	809-347
Nonferrous, Ti	0.098" (2.5 mm)	Resin	SiC	10	Non-Reinforced	809-349
HRC 50-65 (Very Hard)	0.090" (2.3 mm)	BR	Al ₂ O ₃	10	Non-Reinforced	812-232
HRC 50-65 (Very Hard)	0.090" (2.3 mm)	BN	Al ₂ O ₃	10	Non-Reinforced	808-675
HRC 50-65 (Very Hard)	0.062" (1.6 mm)	R	Al ₂ O ₃	10	Non-Reinforced	811-981-010
HRC 40-55 (Hard)	0.062" (1.6 mm)	R	Al ₂ O ₃	10	Non-Reinforced	811-975-010
HRC 30-45 (Medium Hard)	0.090" (2.3 mm)	BN	Al ₂ O ₃	10	Non-Reinforced	811-976-010
Medium Duty	0.090" (2.3 mm)	BN	Al ₂ O ₃	10	Non-Reinforced	811-977-010
HRB (Soft)	0.090" (2.3 mm)	BN	Al ₂ O ₃	10	Non-Reinforced	811-978-010

*BOND TYPE: R - Rubber; BN - Resin/Rubber; BR - Bond Resin



SECTIONING



SECTIONING



SECTIONING BLADES

16-inch (~400 mm) diameter with 1.25-inch (32 mm) arbor hole

Recommended Use	Thickness	Bond	Abrasive	Qty.	Construction	Part No.
HRC 50-65 (Very Hard)	0.118" (3.00 mm)	Resin	Al ₂ O ₃	10	Reinforced	809-329
HRC 35-45 (Medium Hard)	0.118" (3.00 mm)	Resin	Al ₂ O ₃	10	Reinforced	809-330
HRB (Soft)	0.118" (3.00 mm)	Resin	Al ₂ O ₃	10	Reinforced	809-331
Nonferrous, Ti	0.118" (3.00 mm)	Resin	SiC	10	Reinforced	809-332
HRC 50-65 (Very Hard)	0.090" (2.3 mm)	BN	Al ₂ O ₃	5	Non-Reinforced	808-676

*BOND TYPE: BN - Resin/Rubber



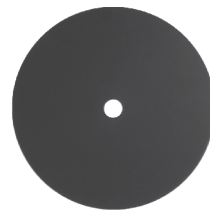
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SECTIONING

SECTIONING BLADES

17-inch (~432 mm) diameter with 1.25-inch (32 mm) arbor hole

Recommended Use	Thickness	Bond	Abrasive	Qty.	Construction	Part No.
HRC 50-65 (Very Hard)	0.118" (3.00 mm)	Resin	Al ₂ O ₃	10	Reinforced	809-333
HRC 35-45 (Medium Hard)	0.118" (3.00 mm)	Resin	Al ₂ O ₃	10	Reinforced	809-334
HRB (Soft)	0.118" (3.00 mm)	Resin	Al ₂ O ₃	10	Reinforced	809-335
Nonferrous, Ti	0.118" (3.00 mm)	Resin	SiC	10	Reinforced	809-336
HRC 50-65 (Very Hard)	0.118" (3.00 mm)	Resin	Al ₂ O ₃	10	Non-Reinforced	809-354
HRC 35-45 (Medium Hard)	0.118" (3.00 mm)	Resin	Al ₂ O ₃	10	Non-Reinforced	809-355
HRB (Soft)	0.118" (3.00 mm)	Resin	Al ₂ O ₃	10	Non-Reinforced	809-356
Nonferrous, Ti	0.118" (3.00 mm)	Resin	SiC	10	Non-Reinforced	809-357



SECTIONING



MSX432A2

SECTIONING



ACCESSORIES

Description	Qty.	Part No.
Front Vise Plate for sectioning small samples when using cam-lock vises	1	809-164
Back Vise Plate for sectioning small samples when using cam-lock vises	1	809-165
Clamping Kit for Vises	1	807-597
Spindle and Table Grease for MSX-Series Sectioning Machines	14.5 oz (411 g)	812-431
Dressing Stick for 4" or 5" diamond blades	1	801-724
Precision Diamond Saw Cutting Oil	1 pint (473 ml)	811-022
Precision Diamond Saw Cutting Oil	1 quart (946 ml)	811-023
Precision Diamond Saw Cutting Oil	1 gallon (3.78 l)	811-024
Rust Inhibitor, Low Foam Anti Microbal 20:1 Ratio	1 quart (946 ml)	812-531
Rust Inhibitor, Low Foam Anti Microbal 20:1 Ratio	1 gallon (3.78 l)	812-532
Rust Inhibitor, Low Foam Anti Microbal 20:1 Ratio	5 gallon (18.93 l)	812-532-500
Rust Inhibitor, Semi-Synthetic 20:1 Ratio	1 quart (946 ml)	812-468
Rust Inhibitor, Semi-Synthetic 20:1 Ratio	1 gallon (3.78 l)	812-469
Filter Bag Replacements (MSX-250/255/300)	10	811-651-123
Filter Fleece (MSX305-Series)	1	809-545-131
Filter Fleece (MSX432-Series)	1	809-345-892
Blotters* (Card Stock Paper Spacers) are free upon request with each cut-off wheel purchase (Fits 32 mm Arbor Hole)		168-097

*Blotters (card stock spacers) may be used between the sectioning blade and each sectioning saw flange to act as both a spacer and a cushion. Please consult ANSI B 7.1 for details concerning their use.

MOUNTING

MOUNTING SYSTEM GUIDELINES—COMPRESSION MOUNTS

COMPRESSION MOUNTS (Hot Mounting)—for higher volume labs analyzing non-temperature sensitive materials or components

BAKELITES (Phenolics) are cost-effective and come in a variety of colors. They exhibit good edge retention and hardness properties.

EPOXIES have high hardness and chemical resistance. Epoxy is typically chosen for mounting the hardest materials. Edge retention is excellent and edge separation from the sample is minimal.

DIALLYL PHTHALATES have high hardness and superior chemical resistance. They are excellent for applications where edge retention is a concern. Excellent for tungsten carbide. Copper diallyl phthalate is electrically conductive for SEM and spectrometer applications.

THERMOPLASTIC (Lucite) provides an economical, transparent mount for specimens. The transparent properties allow the operator to see areas of interest in the mount. If a specific area is to be examined, then grinding can occur until that area is reached.

MOUNTS PER PACKAGE GUIDE

Bakelite	Part #	Package	Approximate Number of Mounts*				Edge Retention
			1"	1.25"	1.50"	2"	
All Colors	811-110	1 lb.	41	26	18	10	Good
All Colors	811-111	5 lb.	206	132	91	51	Good
All Colors	812-122	20 lb.	827	529	367	206	Good
Colors	811-153-250	250 lb.	10,348	6,623	4,599	2,587	Good
Black	811-111-275	275 lb.	11,383	7,285	5,059	2,846	Good
Epoxy							
Mineral	811-144	1 lb.	28	18	12	7	Good
Mineral	811-145	5 lb.	142	91	63	35	Good
Mineral (Fine)	811-145-120	5 lb.	142	91	63	35	Excellent
Glass	811-141	5 lb.	129	82	57	32	Excellent
Mineral (PR4X/PR36)	811-645	5 lb.	142	91	63	35	Good
Diallyl Phthalate							
Mineral	811-134	1 lb.	31	20	14	7	Excellent
Mineral	811-135	5 lb.	157	100	70	39	Excellent
Mineral	811-633	50 lb.	1,577	1,009	700	394	Excellent
Glass	811-137	5 lb.	147	94	65	36	Excellent
Glass	811-277	50 lb.	1,476	944	656	369	Excellent
Copper	811-138	1 lb.	13	8	6	3	Good
Copper	811-139	5 lb.	69	44	31	17	Good
Thermoplastic							
Lucite	811-132	1 lb.	49	31	21	12	Fair
Lucite	811-133	5 lb.	247	158	109	61	Fair
Lucite	811-625	50 lb.	2,470	1,581	1,098	617	Fair

*Number of mounts were estimated using a 5/8-inch tall mount. Exact number will vary due to differences in material waste and mount height.

MOUNTING

MOUNTING SYSTEM GUIDELINES—CASTABLE MOUNTS

CASTABLE MOUNTS (Cold Mounting)—for low volume laboratories and materials sensitive to higher temperatures and pressures

POLYESTERS are an economical choice for labs with low sample volume and less concern about specimen edge retention. They provide an excellent way to make a mount quickly and easily.

ACRYLICS will cure faster than most other mounting media. They have excellent abrasion characteristics and fair edge retention. Acrylic is typically used for making multiple mounts where hot-mounting is not practical. A pressure vessel—such as LECOMAT—used during curing will provide a semi-clear mounting material.

EPOXIES provide a hard, chemical and abrasion-resistant mount. They generally take longer to set up than other castable materials, but have superior flow and shrinkage properties. Long cure epoxies are used to mount the most difficult samples and can be placed in a vacuum to remove entrapped air and fill voids. Epoxies are available in quick-cure formulations that will cure in less than an hour.

MOUNTS PER PACKAGE GUIDE

Polyester	Part #	Package	Approximate Number of Mounts*				Edge Retention
			1"	1.25"	1.50"	2"	
Castolite	811-187-HAZ	Med Kit	76	47	32	19	Good
Castolite	811-188-HAZ	Lg Kit	341	213	145	85	Good
Lecoset 7000	813-005-HAZ	Med Kit	127	81	56	31	Excellent
Lecoset 7000	813-056-HAZ	Lg Kit	254	162	113	63	Excellent
Acrylic							
Basic	811-201-HAZ	Sm kit	72	46	32	15	Fair
Lecoset 7007	813-091-HAZ	Med Kit	160	103	71	40	Fair
Lecoset 7007	813-106-HAZ	Lg Kit	321	205	142	80	Fair
Lecoset 100	812-129-HAZ	Sm kit	158	101	70	39	Fair
Lecoset 100	812-130-HAZ	Med Kit	317	203	141	79	Fair
Lecoset 100	812-132-HAZ	Xlg Kit	952	609	423	238	Fair
Epoxy							
Quick Cure	812-524-HAZ	Sm Kit	111	71	49	27	Excellent
Quick Cure	812-525-HAZ	Lg Kit	441	282	196	110	Excellent
Long Cure	812-522-HAZ	Sm Kit	111	71	49	27	Excellent
Long Cure	812-523-HAZ	Lg Kit	441	282	196	110	Excellent

*Number of mounts were estimated using a 5/8-inch tall mount. Exact number will vary due to differences in material waste, curing conditions and mount height.

MOUNTING SUPPLIES—COMPRESSION

PREFORMS • THERMOSETTING

Mold Size	Color	Qty.	Part No.
1-inch	Black	100	811-301
1.25-inch	Black	100	811-305
1.25-inch	Red	100	811-317
1.25-inch	Green	100	811-329
1.50-inch	Black	100	811-309
1.50-inch	Red	100	811-321
1.50-inch	Green	100	811-333
2-inch	Black	100	811-316



BAKELITE THERMOSETTING POWDER

Description	Color	Qty.	Part No.
Powder	Black	1 lb. (0.454 kg)	811-110
Powder	Black	5 lb. (2.27 kg)	811-111
Powder	Black	20 lb. (9.07 kg)	812-122
Powder	Black	275 lb. drum (125 kg)	811-111-275
Powder	Red	1 lb. (0.454 kg)	811-117
Powder	Red	5 lb. (2.27 kg)	811-118
Powder	Red	50 lb. (23 kg)	811-651-391
Powder	Red	250 lb. drum (113 kg)	811-153-250
Powder	Green	1 lb. (0.454 kg)	811-122
Powder	Green	5 lb. (2.27 kg)	811-123
Powder	Green	250 lb. drum (113 kg)	811-154-110
Powder	Mottled*	5 lb. (2.27 kg)	811-128

*Green/Brown



EPOXY THERMOSETTING POWDER

Color	Filler	Qty.	Part No.
Black	Mineral	1 lb. (0.454 kg)	811-144
Black	Mineral	5 lb. (2.27 kg)	811-145
Black	Mineral (Fine)	5 lb. (2.27 kg)	811-145-120
Green	Glass	5 lb. (2.27 kg)	811-141
*Black	Mineral	5 lb. (2.27 kg)	811-645

*Use with LECO PR4X and PR36 Mounting Presses



PR-36

MOUNTING SUPPLIES—COMPRESSION



DIALLYL PHTHALATE THERMOSETTING POWDER

Color	Filler	Qty.	Part No.
Blue	Mineral	1 lb. (0.454 kg)	811-134
Blue	Mineral	5 lb. (2.27 kg)	811-135
Blue	Mineral	50 lb. (22.7 kg)	811-633
Blue	Glass Fiber	5 lb. (2.27 kg)	811-137
Blue	Glass Fiber	50 lb. (22.7 kg)	811-277
Copper*	Copper	1 lb. (0.454 kg)	811-138
Copper*	Copper	5 lb. (2.27 kg)	811-139

*Conductive

LUCITE® THERMOPLASTIC POWDER

Color	Qty.	Part No.
Clear	1 lb. (0.454 kg)	811-132
Clear	5 lb. (2.27 kg)	811-133
Clear	50 lb. (22.7 kg)	811-625

Lucite is a registered trademark of Lucite International.

ACCESSORIES

Description	Qty.	Part No.
Release Agent - Silicone (aerosol)	6 oz. (170 g)	811-271-HAZ
Release Agent - Wax (powder)	2 oz. (57 g)	811-272
Release Agent - Wax (aerosol)	16 oz. (454 g)	811-273-HAZ
Release Agent - (similar to paste wax)	32 oz. (946 ml)	811-269-HAZ
Electric Engraver (for marking specimens)	1	804-120
Replacement Carbide Point (for engraver)	1	804-099
Cotton Gloves (fit either hand)	pair	800-635
Corrosion Inhibitor for PR36 Recirculation Tank	11 oz. (325 ml)	811-651-424-HAZ



PR-25

MOUNTING SUPPLIES—CASTABLE



LECOSET™ 100 KITS/ACRYLIC

Cure Time: (Air or Pressure Vessel) 10 to 12 minutes

Peak Cure Temperature: 190° to 210°F (88° to 99°C)

Edge Retention: (Air Cure) Fair (Pressure Vessel) Good

System: 2 parts

Color: (Air Cure) Opaque White (Pressure Vessel) Transparent (Clear)

Kit Size	Resin (powder)	Hardener (liquid)	Kit Part No.
Small	2.2 lb. (1000 g) (812-125)	16.9 oz. (500 ml) (812-123-HAZ)	812-129-HAZ
Medium	4.4 lb. (2000 g) (812-126)	33.8 oz. (1000 ml) (812-124-HAZ)	812-130-HAZ
Extra Large	13.2 lb. (6000 g) (812-128)	101.4 oz. (3 l) (three 812-124-HAZ)	812-132-HAZ

LECOSET™ 7007 KITS/ACRYLIC

Cure Time: (Air) 10 to 12 minutes (Pressure Vessel) 10 minutes

Peak Cure Temperature: 190° to 210°F (88° to 99°C)

Edge Retention: (Air Cure) Fair (Pressure Vessel) Good

System: 2 parts

Color: (Air Cure) Opaque White (Pressure Vessel) Transparent (Clear)

Kit Size	Resin (powder)	Hardener (liquid)	Kit Part No.
Medium	2.2 lb. (1000 g) (813-002)	16.9 oz. (500 ml) (813-003-HAZ)	813-091-HAZ
Large	4.4 lb. (2000 g) (813-054)	33.8 oz. (1000 ml) (813-055-HAZ)	813-106-HAZ

BASIC ACRYLIC KITS

Cure Time: (Air) 8 to 10 minutes

Peak Cure Temperature: 190° to 210°F (88° to 99°C)

Edge Retention: Fair

Color: Opaque Pink

System: 2 parts

Kit Size	Resin (powder)	Hardener	Kit Part No.
Small	1 lb. (454 g) (811-202)	16 oz. (473 ml) (811-203-HAZ)	811-201-HAZ

MOUNTING SUPPLIES—CASTABLE



LONG-CURE EPOXY KITS*

Cure Time: (Air) 4 to 8 hours **Working Time:** 30 to 60 minutes **Peak Cure Temperature:** 165° to 175°F (74° to 79°C)
Edge Retention: Excellent **System:** 2 parts
Color: Transparent (Clear) **Optional Oven Cure Temperature/Time:** 150° to 180°F (65° to 82°C) 30 to 60 minutes

Kit Size	Resin (liquid)	Hardener	Kit Part No.
Small	2 lb. (907 g) (811-563-101)	4.7 oz. (133 g) (812-518-HAZ)	812-522-HAZ
Large	8 lb. (3629 g) (811-563-103)	1 lb. 2 oz. (508 g) (812-519-HAZ)	812-523-HAZ

*Applicable for vacuum cure

QUICK-CURE EPOXY KITS*

Cure Time: (Air) 30 to 60 minutes **Peak Cure Temperature:** 180° to 200°F (82° to 93°C)
Edge Retention: Excellent
Color: Transparent (Clear) **System:** 2 parts

Kit Size	Resin (liquid)	Hardener	Kit Part No.
Small	2 lb. (907 g)	6.4 oz. (182 g)	812-524-HAZ
Large	8 lb. (3629 g) (811-563-107)	1 lb. 10 oz. (737 g) (812-521-HAZ)	812-525-HAZ

*Not applicable for vacuum cure

LECOSET™ 7000 KITS/Polyester

Cure Time: (Air) 6 to 10 minutes **Peak Cure Temperature:** 190° to 210°F (88° to 99°C)
Edge Retention: Excellent
Color: Opaque White **System:** 3 parts

Kit Size	Resin (powder)	Liquid 1	Liquid 2	Kit Part No.
Medium	1 lb. 10 oz. (750 g) (813-086)	16.9 oz. (500 ml) (813-088-HAZ)	8.5 oz. (250 ml) (813-087-HAZ)	813-005-HAZ
Large	3 lb. 5 oz. (1500 g)	33.8 oz. (1000 ml)	16.9 oz. (500 ml)	813-056-HAZ

CASTOLITE KITS/Polyester

Cure Time: (Air) 4 to 8 hours **Peak Cure Temperature:** 170° to 190°F (77° to 88°C) **System:** 2 parts
Edge Retention: Good
Color: Transparent (Clear) **Optional Oven Cure (Temperature/Time):** 150° to 180°F (65° to 82°C) 20 to 30 minutes

Kit Size	Resin (liquid)	Hardener	Kit Part No.
Medium	2 lb. (0.91 kg) (811-190-HAZ)	0.40 oz. (11.8 ml) (811-193-HAZ)	811-187-HAZ
Large	9 lb. (4.1 kg) (811-191-HAZ)	2.0 oz. (60 ml) (811-194-HAZ)	811-188-HAZ

MOUNTING SUPPLIES—MISCELLANEOUS

RING MOLDS

Nominal Diameter Dimensions

Material	Size	Qty.	Part No.
Phenolic	1.00-inch (25 mm) OD	100	811-221
Phenolic	1.25-inch (32 mm) OD	100	811-225
Phenolic	1.50-inch (38 mm) OD	100	811-229
Phenolic	2.00-inch (51 mm) OD	100	811-223



SILICONE RUBBER MOLDS

Reusable Rubber Molds

Size	Qty.	Part No.
25 mm (0.98 inch) Round	5	811-651-230
30 mm (1.18 inch) Round	5	811-651-231
32 mm (1.26 inch) Round	5	811-651-232
40 mm (1.57 inch) Round	5	811-651-233
50 mm (1.97 inch) Round	5	811-651-234
25, 30, 32, 40, 50 mm Round	5	811-651-235
70 mm x 30 mm Rectangle (2.76 inch x 1.18 inch)	5	811-651-236
100 mm x 42 mm Rectangle (3.94 inch x 1.65 inch)	5	811-651-237
1.25 inch Round (32 mm)	5	811-651-340
1.50 inch Round (38 mm)	5	811-651-341



MOLD CUPS

Reusable Plastic Molds

Size	Color	Qty.	Part No.
1-inch ID (25 mm)	Blue	12	810-990-012
1.25-inch ID (32 mm)	Blue	12	810-991-012
1.50-inch ID (38 mm)	Blue	12	810-992-012
25 mm ID (0.98 inch)	White	12	813-018-012
30 mm ID (1.18 inch)	White	12	813-019-012
40 mm ID (1.57 inch)	White	12	813-020-012



MOUNTING SUPPLIES—MISCELLANEOUS

REPLICATING KIT

Description	Qty.	Part No.
Allows user to replicate a surface by applying the material and allowing it to cure; material is black and cures in 10 to 15 minutes	2-Part Kit 1000 g powder/500 ml liquid	813-045-HAZ

ACCESSORIES

Description	Qty.	Part No.
Sample Clips (stainless steel)	100	810-485
Sample Clips (plastic/color coded)	100	810-815-310
Protective Specimen Caps 1.00-inch ID	25	811-045
Protective Specimen Caps 1.25-inch ID	25	811-046
Protective Specimen Caps 1.50-inch ID	25	811-047
Graduated Paper Cups 3.5 oz. (100 ml)	100	811-275
Graduated Plastic Mixing Cups 10 oz. (296 ml)	100	811-279
Wooden Spatulas	500	813-090
Mixing Kit including: 20 Paper Cups, 20 Wooden Spatulas, 1 Spoon, 12 ea. Mold Cups—1-inch diameter, 12 ea. Mold Cups—1.25-inch diameter	1	813-025
Clear Specimen Lacquer Spray: Applied to samples via spray to protect the surface from environmental conditions	15 oz.	811-015-HAZ
Storage Cabinet	1	841-100



LECO Storage Cabinet



GRINDING

GRINDING GUIDELINES

Most materials can be ground using silicon carbide papers. Other materials need special grinding media such as aluminum oxide, ceramics, or even diamond grinding.

One option is to use fixed diamond grinding discs such as those in the CAMEO® system. These discs have resin-bonded diamonds that provide excellent material removal and a uniform surface finish. The discs are used with a magnetic disc that allows for easy removal and replacement during the preparation process. The CAMEO system can help reduce the number of steps and improve sample quality, while reducing the overall cost of preparing samples.

The hardest materials may need a diamond-grinding disc to effectively remove an adequate amount of material. Tungsten carbide, cermets, ceramics, and some tool steels require such grinding.

Silicon carbide is used for most other applications, such as aluminum, copper, steel, and cast iron. Silicon carbide is an economical abrasive that has been proven over many years to be effective and reliable.

The grinding media mentioned above come in a variety of discs and belts.

CAMEO is a registered trademark of LAM-PLAN

GRIT COMPARISON GUIDE

CAMI Designation (USA)	FEPA Designation (Europe)	Average Particle Size in Inches	Average Particle Size in Microns	CAMI Designation (USA)	FEPA Designation (Europe)	Average Particle Size in Inches	Average Particle Size in Microns
—	P24	0.02913	740	—	P320	0.00182	46.2
24	—	0.02815	715	—	P360	0.00159	40.5
30	—	0.02512	638	320	—	0.00142	36
—	P30	0.02449	622	—	P400	0.00138	35
36	—	0.02106	535	—	P500	0.00119	30.2
—	P36	0.02063	524	360	—	0.00113	28.8
40	—	0.01685	428	—	P600	0.00101	25.75
—	P40	0.01622	412	400	—	0.00093	23.6
50	—	0.01382	351	—	P800	0.00086	21.8
—	P50	0.01283	326	500	—	0.00078	19.7
60	—	0.01055	268	—	P1000	0.00072	18.3
—	P60	0.01024	260	600	—	0.00063	16
—	P80	0.00776	197	—	P1200	0.00060	15.3
80	—	0.00756	192	—	P1500	0.00050	12.6
—	P100	0.00614	156	800	—	0.00048	12.2
100	—	0.00555	141	—	P2000	0.00041	10.3
—	P120	0.00500	127	1000	—	0.00036	9.2
120	—	0.00457	116	—	P2500	0.00033	8.4
—	P150	0.00382	97	1200	—	0.00026	6.5
150	—	0.00366	93	1500	—	0.00012	3.0
180	P180	0.00307	78				
220	—	0.00260	66				
—	P220	0.00256	65				
—	P240	0.00230	58.5				
240	—	0.00211	53.5				
—	P280	0.00207	52.5				

ABRASIVE DISCS

PRODUCTION GRADE • SILICON CARBIDE • PLAIN BACK

8-inch (~200 mm) diameter

Abrasive Size	Qty.	Part No.
60 grit	100	810-217-300
120 grit	100	810-219-300
180 grit	100	810-221-300
240 grit	100	810-223-300
320 grit	100	810-225-300
400 grit	100	810-227-300
600 grit	100	810-229-300

10-inch (~250 mm) diameter

Abrasive Size	Qty.	Part No.
60 grit	100	812-374-300
120 grit	100	812-375-300
180 grit	100	812-376-300
240 grit	100	812-377-300
320 grit	100	812-378-300
400 grit	100	812-379-300
600 grit	100	812-380-300

12-inch (~300 mm) diameter

Abrasive Size	Qty.	Part No.
60 grit	100	810-291-300
120 grit	100	810-292-300
180 grit	100	810-293-300
240 grit	100	810-294-300
320 grit	100	810-295-300
400 grit	100	810-296-300
600 grit	100	810-297-300

ABRASIVE DISCS

PRODUCTION GRADE • SILICON CARBIDE • ADHESIVE BACK

8-inch (~200 mm) diameter

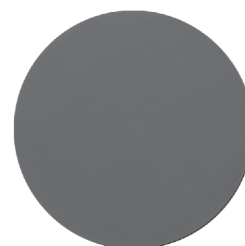
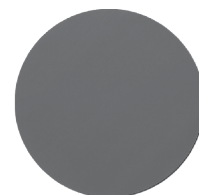
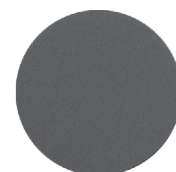
Abrasive Size	Qty.	Part No.
60 grit	100	810-285-300
120 grit	100	810-259-300
180 grit	100	810-261-300
240 grit	100	810-263-300
320 grit	100	810-265-300
400 grit	100	810-267-300
600 grit	100	810-269-300

10-inch (~250 mm) diameter

Abrasive Size	Qty.	Part No.
60 grit	100	812-367-300
120 grit	100	812-368-300
180 grit	100	812-369-300
240 grit	100	812-370-300
320 grit	100	812-371-300
400 grit	100	812-372-300
600 grit	100	812-373-300

12-inch (~300 mm) diameter

Abrasive Size	Qty.	Part No.
60 grit	100	810-245-300
120 grit	100	810-247-300
180 grit	100	810-249-300
240 grit	100	810-251-300
320 grit	100	810-253-300
400 grit	100	810-255-300
600 grit	100	810-257-300



GRINDING



SS1000

ABRASIVE DISCS



PREMIUM GRADE • SILICON CARBIDE • PLAIN BACK

8-inch (~200 mm) diameter

Abrasive Size	Qty.	Part No.
60 grit	100	810-217-PRM
120 grit	100	810-219-PRM
180 grit	100	810-221-PRM
240 grit	100	810-223-PRM
320 grit	100	810-225-PRM
400 grit	100	810-227-PRM
600 grit	100	810-229-PRM
800 grit	100	810-035-100
1200 grit	100	810-036-100
1200 Fine grit*	100	810-036-500



8-inch (~200 mm) diameter with 0.5-inch (13 mm) center hole

Abrasive Size	Qty.	Part No.
180 grit	100	810-235-PRM
240 grit	100	810-237-PRM
320 grit	100	810-239-PRM
400 grit	100	810-241-PRM
600 grit	100	810-243-PRM

*1200 Fine grit—Slurry coat, with a narrower range of abrasive particle size, superior surface finish

ABRASIVE DISCS

PREMIUM GRADE • SILICON CARBIDE • PLAIN BACK

10-inch (~250 mm) diameter

Abrasive Size	Qty.	Part No.
60 grit	100	812-201-PRM
120 grit	100	812-203-PRM
180 grit	100	812-205-PRM
240 grit	100	812-207-PRM
320 grit	100	812-209-PRM
400 grit	100	812-211-PRM
600 grit	100	812-213-PRM
800 grit	100	812-217-200
1200 grit	100	812-219-200
1200 Fine grit*	100	812-221

12-inch (~300 mm) diameter

Abrasive Size	Qty.	Part No.
60 grit	100	810-291-PRM
120 grit	100	810-292-PRM
180 grit	100	810-293-PRM
240 grit	100	810-294-PRM
320 grit	100	810-295-PRM
400 grit	100	810-296-PRM
600 grit	100	810-297-PRM
800 grit	100	810-856-100
1200 grit	100	810-857-100
1200 Fine grit*	100	810-857-500

*1200 Fine grit—Slurry coat, with a narrower range of abrasive particle size, superior surface finish



GRINDING

SS-200



ABRASIVE DISCS



PREMIUM GRADE • SILICON CARBIDE • ADHESIVE BACK

8-inch (~200 mm) diameter

Abrasive Size	Qty.	Part No.
120 grit	100	810-259-PRM
180 grit	100	810-261-PRM
240 grit	100	810-263-PRM
320 grit	100	810-265-PRM
400 grit	100	810-267-PRM
600 grit	100	810-269-PRM
800 grit	100	810-033-100
1200 grit	100	810-034-100
1200 Fine grit*	100	810-034-500

10-inch (~250 mm) diameter

Abrasive Size	Qty.	Part No.
60 grit	100	812-202-PRM
120 grit	100	812-204-PRM
180 grit	100	812-206-PRM
240 grit	100	812-208-PRM`
320 grit	100	812-210-PRM
400 grit	100	812-212-PRM
600 grit	100	812-214-PRM
800 grit	100	812-218-200
1200 grit	100	812-220-200
1200 Fine grit*	100	812-222

*1200 Fine grit—Slurry coat, with a narrower range of abrasive particle size, superior surface finish

ABRASIVE DISCS

PREMIUM GRADE • SILICON CARBIDE • ADHESIVE BACK

12-inch (~300 mm) diameter

Abrasive Size	Qty.	Part No.
60 grit	100	810-245-PRM
120 grit	100	810-247-PRM
180 grit	100	810-249-PRM
240 grit	100	810-251-PRM
320 grit	100	810-253-PRM
400 grit	100	810-255-PRM
600 grit	100	810-257-PRM
800 grit	100	810-858-100
1200 grit	100	810-859-100
1200 Fine grit*	100	810-859-500

14-inch (~350 mm) diameter

Abrasive Size	Qty.	Part No.
120 grit	100	810-425-PRM
180 grit	100	810-426-PRM
240 grit	100	810-427-PRM
320 grit	100	810-428-PRM
400 grit	100	810-429-PRM
600 grit	100	810-430-PRM

*1200 Fine grit—Slurry coat, with a narrower range of abrasive particle size, superior surface finish



GRINDING

**GPX200 with
Auto Dispenser**



ABRASIVE DISCS

CAMEO® MAGNETIC DISC SYSTEM

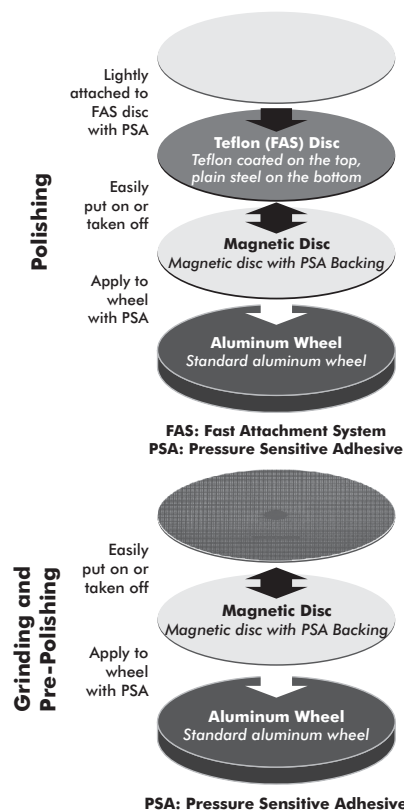
CAMEO Discs

Description	Size	Qty.	Part No.
Platinum 0 Brown (comparable to 60 to 120 grit)*	200 mm (~8-inch)	1	812-421
Platinum 1 Blue (comparable to 120 to 180 grit)*	200 mm (~8-inch)	1	812-341
Platinum 2 Green (comparable to 220 to 280 grit)*	200 mm (~8-inch)	1	812-342
Platinum 3 Yellow (comparable to 400 grit)*	200 mm (~8-inch)	1	811-651-103
Platinum 4 Red (comparable to 600 grit)*	200 mm (~8-inch)	1	811-651-106
Gold Pre-Polish Disc** [Cu and Al Alloys]	200 mm (~8-inch)	1	812-343
Silver Pre-Polish Disc** [Ferrous Alloys]	200 mm (~8-inch)	1	812-344
Platinum 0 Brown (comparable to 60 to 120 grit)*	250 mm (~10-inch)	1	812-420
Platinum 1 Blue (comparable to 120 to 180 grit)*	250 mm (~10-inch)	1	812-337
Platinum 2 Green (comparable to 220 to 280)*	250 mm (~10-inch)	1	812-338
Platinum 3 Yellow (comparable to 400 grit)*	250 mm (~10-inch)	1	811-651-104
Platinum 4 Red (comparable to 600 grit)*	250 mm (~10-inch)	1	811-651-107
Gold Pre-Polish Disc** [Cu and Al Alloys]	250 mm (~10-inch)	1	812-339
Silver Pre-Polish Disc** [Ferrous Alloys]	250 mm (~10-inch)	1	812-340
Platinum 0 Brown (comparable to 60 to 120 grit)*	300 mm (~12-inch)	1	812-419
Platinum 1 Blue (comparable to 120 to 180 grit)*	300 mm (~12-inch)	1	812-333
Platinum 2 Green (comparable to 220 to 280 grit)*	300 mm (~12-inch)	1	812-334
Platinum 3 Yellow (comparable to 400 grit)*	300 mm (~12-inch)	1	811-651-105
Platinum 4 Red (comparable to 600 grit)*	300 mm (~12-inch)	1	811-651-108
Gold Pre-Polish Disc** [Cu and Al Alloys]	300 mm (~12-inch)	1	812-335
Silver Pre-Polish Disc** [Ferrous Alloys]	300 mm (~12-inch)	1	812-336

NOTE: Must have FAS Magnetic Disc to use CAMEO Discs.

*CAMI Grade Papers

**Gold and silver discs require the use of CAMEO diamond suspensions for pre-polishing. There are no diamond abrasives in the Gold and Silver matrix structure.



Teflon Discs (FAS Disc)** • A reusable disc that allows a polishing cloth to be used with the magnetic system. PSA cloths are easily removed from the FAS Disc.

Size	Qty.	Part No.
200 mm (~8-inch)	1	812-364
250 mm (~10-inch)	1	812-363
300 mm (~12-inch)	1	812-362

FAS Magnetic Disc** • A reusable magnetic disc that allows convenient changing of the CAMEO discs.

Size	Qty.	Part No.
200 mm (~8-inch)	1	812-381
250 mm (~10-inch)	1	812-382
300 mm (~12-inch)	1	812-383

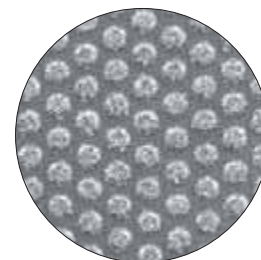
**Fast Attachment System

ABRASIVE DISCS

DIAMOND SPOT PATTERN • ADHESIVE BACK

8-inch (~200 mm) diameter

Abrasive Size	Bond	Qty.	Part No.
250 micron	Metal	1	811-507
125 micron	Metal	1	811-508
74 micron	Metal	1	811-509
40 micron	Metal	1	811-510
20 micron	Metal	1	811-511
10 micron	Metal	1	811-512
30 micron	Resin	1	811-513



DIAMOND PATTERN
CLOSE-UP

12-inch (~300 mm) diameter

Abrasive Size	Bond	Qty.	Part No.
250 micron	Metal	1	811-516
125 micron	Metal	1	811-517
74 micron	Metal	1	811-518
40 micron	Metal	1	811-519
20 micron	Metal	1	811-520
10 micron	Metal	1	811-521



CAMEO ACCESSORIES

Description	Qty.	Part No.
BOXLAM® Storage Cabinet	1	812-365

CAMEO and BOXLAM are registered trademarks of LAM-PLAN



GRINDING

GPX300 with
Auto Dispenser



ABRASIVE DISCS



ALUMINUM OXIDE • PLAIN BACK

12-inch (~300 mm) diameter with 0.5-inch (13 mm) center hole

Abrasive Size	Qty.	Part No.
60 grit	100	812-002



CERAMIC ABRASIVE • ADHESIVE BACK

12-inch (~300 mm) diameter

Abrasive Size	Qty.	Part No.
120 grit	10	808-665



ZIRCONIUM OXIDE • ADHESIVE BACK

8-inch (~200 mm) diameter

Abrasive Size	Qty.	Part No.
60 grit	25	812-021
220 grit	25	812-024



12-inch (~300 mm) diameter

Abrasive Size	Qty.	Part No.
60 grit	25	812-045
120 grit	25	812-046

ACCESSORIES

Description	Size	Qty.	Part No.
Grinding Disc Holding Bands	8-inch (~200 mm) dia.	1	800-458
Grinding Disc Holding Bands	10-inch (~250 mm) dia.	1	808-364
Grinding Disc Holding Bands	12-inch (~300 mm) dia.	1	800-624
Grit Grabbers*	8-inch (~200 mm) dia.	10	811-634
Grit Grabbers*	10-inch (~250 mm) dia.	10	811-637
Grit Grabbers*	12-inch (~300 mm) dia.	10	811-635

*Double-sided adhesive discs for use with plain-backed papers; can be reused up to ten times.

ABRASIVE BELTS

SILICON CARBIDE

4-inch (~100 mm) x 36-inch (~915 mm) • For use with BG30 and BG32

Abrasive Size	Qty.	Part No.
50 grit	10	810-001
80 grit	10	810-002
120 grit	10	810-003
180 grit	10	810-004
240 grit	10	810-005
320 grit	10	810-006
400 grit	10	810-007
600 grit	10	810-008



ZIRCONIUM OXIDE

4-inch (~100 mm) x 36-inch (~915 mm) • For use with BG30 and BG32

Abrasive Size	Qty.	Part No.
60 grit	5	810-487
120 grit	5	810-499
180 grit	5	810-489
220 grit	5	810-493



ALUMINUM OXIDE

4-inch (~100 mm) x 36-inch (~915 mm) • For use with BG30 and BG32

Abrasive Size	Qty.	Part No.
50 grit	10	810-021
80 grit	10	810-022
120 grit	10	810-023
180 grit	10	810-024
240 grit	10	810-025
320 grit	10	810-026



GRINDING

BG-30



ABRASIVE STRIPS/ROLLS



SILICON CARBIDE STRIPS • ADHESIVE BACK

3-inch (~75 mm) x 11-inch (~280 mm)

Abrasive Size	Qty.	Part No.
240 grit	100	810-161-PRM
320 grit	100	810-162-PRM
400 grit	100	810-163-PRM
600 grit	100	810-164-PRM

SILICON CARBIDE ROLLS

3-inch (~75 mm) width • For use with the DS-20

Abrasive Size	Length	Part No.
120 grit	50 ft.	810-086
180 grit	60 ft.	810-087
240 grit	60 ft.	810-088
320 grit	75 ft.	810-089
400 grit	75 ft.	810-090
600 grit	75 ft.	810-091



3 7/16-inch (~90 mm) width

Abrasive Size	Length	Part No.
240 grit	60 ft.	810-734
320 grit	75 ft.	810-735
400 grit	75 ft.	810-736
600 grit	75 ft.	810-737



DS-20

POLISHING

POLISHING CLOTH GUIDE

Intermediate Polishing • 3 micron, 6 micron, 9 micron, 15 micron

Gold Technotron • A very durable, satin woven, waterproof cloth for 1 to 9 micron diamond sizes. Excellent intermediate polishing cloth for hard materials.

Crème Silk • A rigid backed, satin woven polishing cloth for intermediate polishing. The cloth is waterproof and the rigid backing allows the cloth to be removed and used again.

Silk • Highly recommended where edge retention is desired. Silk is hard and can be used with 9, 6, 3, or 1 micron diamond compounds. Available in Plain Back only.

Ultra Silk • This cloth is a woven, artificial silk polishing cloth with an internal barrier film. It consists of a very thin layer of silk on a rigid backing that will transmit the flatness of the polishing wheel. Excellent for medium size diamond suspensions and pastes.

White Technotron • An excellent alternative to Plain Back Silk if the operator desires a PSA cloth. Flatness and durability are desirable features of this polishing cloth.

PAN-W • Inexpensive and versatile, this flocked cloth is outstanding for intermediate diamond polishing (3 to 9 micron). Excellent for automatic procedures and especially for manual preparation. Very forgiving cloth that provides good sample flatness and economic results.

White CAMEO • A satin woven silk cloth for intermediate polishing of all materials. It is generally used with 3 micron diamond suspension. Its rigid backing allows for easy removal and re-installation. With proper care, it will provide a long service life.

Final Polishing • 3 micron, 1 micron, 0.5 micron, 0.25 micron, 0.05 micron

Imperial • A final polishing cloth that works extremely well with colloidal silica on many different types of materials. Available in PSA only.

Lecloth • This cloth is a most versatile polishing cloth. It has a medium nap that is excellent for final polishing but can also be used for intermediate polishing with most any polishing compound. Can also be used for attack polishing where acidic polishing solutions are used.

Le-Vel • Medium-nap final polishing cloths perfect for ferrous and nonferrous metals, ceramics, carbides, printed circuit boards, and composites.

Multi-Purpose Polishing

Brown Technotron • This cloth has a flocked, semi-hard surface for polishing in a wide range of applications. Provides a superior finish for sample preparation. Highly durable cloth that can perform intermediate operations and also final polishing steps.

Nylon • Hard polishing cloth excellent for intermediate and fine polishing steps using diamond compounds or suspensions.

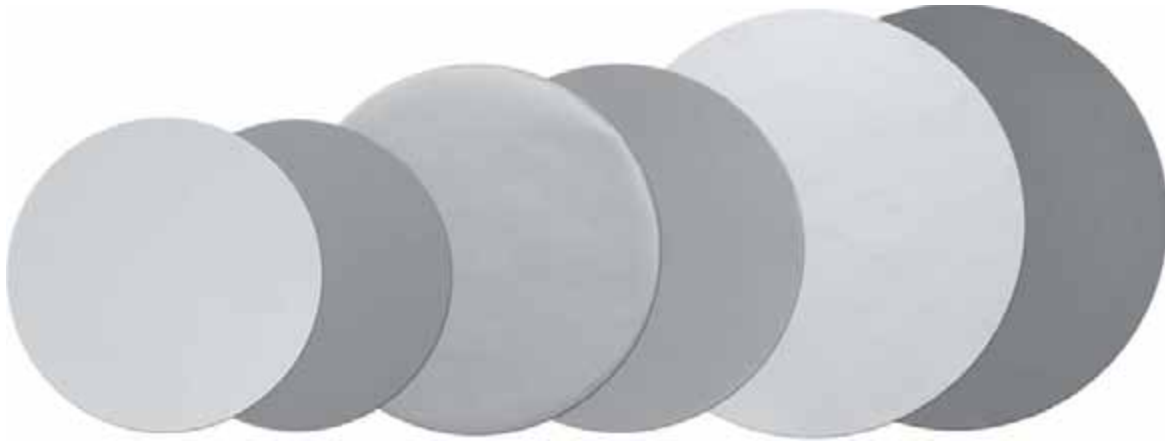
Red Felt • This cloth can also be used in many applications, but is best suited when used with an intermediate diamond compound (6, 3, or 1 micron). It is a hard, durable cloth that can be used on a wide variety of materials.

Diamond Polishing Films

FeStar • A diamond film for polishing soft to very-hard carbon steel samples. Hollow spheres of nano-sized diamond particles cover the Mylar surface of the FeStar film, giving long life and a finish comparable (or superior) to a standard one-micron diamond polish. The FeStar film is used with water as a lubricant.

LeStar • A diamond film for superior finishing of tungsten carbide and other high hardness cermets. Hollow spheres of nano-sized diamond particles cover the Mylar surface of the LeStar film, giving long life and a finish comparable (or superior) to a standard one-micron diamond polish. The LeStar film is used with water as a lubricant.

POLISHING



POLISHING CLOTHS • 8-Inch (~200 mm) diameter • ADHESIVE BACK

Intermediate Polishing

Description	Recommended Use	Qty.	Part No.
Gold Technotron	Intermediate Polish/Hard Materials	10	812-446
Crème Silk	Intermediate Polish/All Materials	10	812-449
Ultra Silk	Intermediate Polish/All Materials	10	812-437
White Technotron	Intermediate Polish/Ceramics, WC, Etc.	10	812-452
PAN-W	Diamond Polish/All Materials	10	809-501
White CAMEO	Intermediate Polish/All Materials	5	812-351

Final Polishing

Description	Recommended Use	Qty.	Part No.
Imperial	Final Polish/All Materials	10	810-545-010
Lecloth™	Final Polish/All Materials	10	810-497
Le-Vel	Final Polish/All Materials	10	812-484

Multi-Purpose Polishing

Description	Recommended Use	Qty.	Part No.
Brown Technotron	Final Polish/Soft Materials	10	812-455
Nylon	Diamond Polish/All Materials	10	810-648
Red Felt	Diamond Polish/All Materials	10	810-647

POLISHING

POLISHING CLOTHS • 10-Inch (~250 mm) diameter • ADHESIVE BACK

Intermediate Polishing

Description	Recommended Use	Qty.	Part No.
Gold Technotron	Intermediate Polish/Hard Materials	10	812-447
Crème Silk	Intermediate Polish/All Materials	10	812-450
Ultra Silk	Intermediate Polish/All Materials	10	812-438
White Technotron	Intermediate Polish/Ceramics, WC, Etc.	10	812-453
PAN-W	Diamond Polish/All Materials	10	809-504
White CAMEO	Intermediate Polish/All Materials	5	812-348

Final Polishing

Description	Recommended Use	Qty.	Part No.
Imperial	Final Polish/All Materials	10	812-226-010
Lecloth™	Final Polish/All Materials	10	812-224
Le-Vel	Final Polish/All Materials	10	812-485

Multi-Purpose Polishing

Description	Recommended Use	Qty.	Part No.
Brown Technotron	Final Polish/Soft Materials	10	812-456
Nylon	Diamond Polish/Soft Materials	10	812-223
Red Felt	Diamond Polish/All Materials	10	812-225

POLISHING CLOTHS • 12-Inch (~300 mm) diameter • ADHESIVE BACK

Intermediate Polishing

Description	Recommended Use	Qty.	Part No.
Gold Technotron	Intermediate Polish/Hard Materials	10	812-448
Crème Silk	Intermediate Polish/All Materials	10	812-451
Ultra Silk	Intermediate Polish/All Materials	10	812-439
White Technotron	Diamond Polish/Ceramics, WC, Etc.	10	812-454
PAN-W	Diamond Polish/All Materials	10	809-505
White CAMEO	Intermediate Polish/All Materials	5	812-345

continued on next page

POLISHING

POLISHING CLOTHS • 12-Inch (continued from page 31)

Final Polishing

Description	Recommended Use	Qty.	Part No.
Imperial	Final Polish/All Materials	10	810-546-010
Lecloth™	Final Polish/All Materials	10	810-543
Red Technotron	Diamond and Final Polish/Soft Materials	10	812-445
Grey CAMEO	Final Polish/All Materials	5	812-346
Le-Vel	Final Polish/All Materials	10	812-486

Multi-Purpose Polishing

Description	Recommended Use	Qty.	Part No.
Brown Technotron	Final Polish/Soft Materials	10	812-457
Nylon	Diamond Polish/All Materials	10	810-645
Red Felt	Diamond Polish/All Materials	10	810-644

POLISHING CLOTHS • PLAIN BACK

For 8-inch (~200 mm) diameter Wheel

Description	Recommended Use	Qty.	Part No.
Nylon	Diamond Polish/All Materials	10	810-462
Silk	Diamond Polish/All Materials	10	810-467
Lecloth™	Final Polish/All Materials	10	810-470
Red Felt	Diamond Polish/All Materials	10	810-466
Billiard	Diamond Polish/All Materials	10	810-465
Canvas	Diamond Polish/All Materials	10	810-469

For 12-inch (~300 mm) diameter Wheel

Description	Recommended Use	Qty.	Part No.
Nylon	Diamond Polish/All Materials	10	810-511
Silk	Diamond Polish/All Materials	10	810-516
Lecloth™	Final Polish/All Materials	10	810-520
Red Felt	Diamond Polish/All Materials	10	810-515

DIAMOND POLISHING FILMS • ADHESIVE BACK

FeStar

Description	Recommended Use	Qty.	Part No.
200 mm (8-Inch)	Steels	1	812-490
250 mm (10-Inch)	Steels	1	812-491
300 mm (12-Inch)	Steels	1	812-492

LeStar

Description	Recommended Use	Qty.	Part No.
200 mm (8-Inch)	Tungsten Carbide	1	812-487
250 mm (10-Inch)	Tungsten Carbide	1	812-488
300 mm (12-Inch)	Tungsten Carbide	1	812-489

POLISHING

FASTICK™ Easy Attachment Polishing System

Base Disc • PSA-backed disc that is the foundation of the Fastick System (for use with Fastick polishing cloths and plain-backed SiC papers)

Description	Part No.
8-inch (~200 mm)	812-555-101
10-inch (~250 mm)	812-555-107
12-inch (~300 mm)	812-555-113

Flat Cloth • Intermediate Polishing • Woven acetate cloth for polishing primarily ferrous materials, with excellent flatness

Description	Part No.
8-inch (~200 mm)	812-555-102
10-inch (~250 mm)	812-555-108
12-inch (~300 mm)	812-555-114

Mix Cloth • Intermediate Polishing • Non-woven polyurethane suitable intermediate polishing of nonferrous samples

Description	Part No.
8-inch (~200 mm)	812-555-103
10-inch (~250 mm)	812-555-109
12-inch (~300 mm)	812-555-115

Step Cloth • Intermediate Polishing • Woven taffeta cloth for intermediate polishing of ferrous materials

Description	Part No.
8-inch (~200 mm)	812-555-104
10-inch (~250 mm)	812-555-110
12-inch (~300 mm)	812-555-116

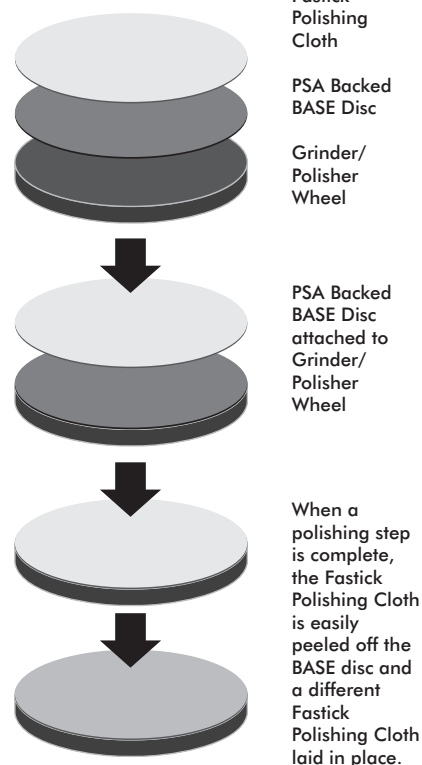
Red Cloth • Final Polishing • Durable soft cloth for final polishing using diamond compounds and suspensions

Description	Part No.
8-inch (~200 mm)	812-555-105
10-inch (~250 mm)	812-555-111
12-inch (~300 mm)	812-555-117

Opto Cloth • Final Polishing • Flocked synthetic cloth for sub-micron polishing of a variety of materials

Description	Part No.
8-inch (~200 mm)	812-555-106
10-inch (~250 mm)	812-555-112
12-inch (~300 mm)	812-555-118

FASTICK™ Polishing System



POLISHING

POLISHING

POLISHING COMPOUND GUIDELINES

Aluminum Oxide or Alumina

Aluminum oxide or alumina exists in two allotropic forms—(1) alpha, which has a hexagonal crystal structure, and (2) gamma, which has a cubic crystal structure. Alpha alumina removes metal faster and is more suitable for rough polishing, while gamma alumina has slower metal removal rates but produces a better finish. Gamma B (0.05 micron) used for final polishing steps, typically on a Lecloth Polishing Cloth. Aluminum oxide is excellent for most etch-attack polishing methods

Deagglomerated Aluminum Oxide

Alumina which has undergone a process which separates the particles so that they do not form chains or a large mass of particles.

Magnesium Oxide

Excellent for polishing aluminum alloys. Extended polishing times should be avoided as the particles will agglomerate over time and cause large scratches. Flush the wheel with water to reduce the chances of agglomerates forming.

Finish-Pol (Cesium Oxide, Cerium Oxide, and Other Rare Earth Oxides)

Most commonly used for polishing glass and silica using a medium nap cloth.

Colloidal Silica

A silica solution that is used for final polishing usually on an Imperial Cloth. Nominal particle size is 0.08 microns. Colloidal silica is convenient to use, works on many different alloys, and the abrasive does not settle over time. Colloidal silica is not conducive to etch-attack polishing.

Diamond Compounds and Suspensions

Two types of diamonds are offered: monocrystalline and polycrystalline. The most commonly used is monocrystalline. The polycrystalline is typically used on hard-to-polish materials such as ceramics, tool steels, and super alloys. It has more facets or cutting edges and keeps its cutting ability by being less friable than the monocrystalline. Some of the diamond suspensions are water-based. The compounds, aerosol sprays, and the alcohol-based/water-free suspensions contain no water.

Chromium Oxide

Often used for intermediate and final polishing of brass. Sometimes utilized in polishing aluminum alloys and in petrographic preparations.

For more information on Polishing, request Met-Tip #13 (see page 48)



POLISHING

ABRASIVE POWDERS

Aluminum Oxide • Powder

Abrasive Size	Qty.	Part No.
0.3 micron	8 oz. (0.23 kg)	810-781
5 micron	1 lb. (0.45 kg)	810-707
5 micron	5 lb. (2.27 kg)	810-708
15 micron	5 lb. (2.27 kg)	810-706



POLISHING POWDERS & SUSPENSIONS

Aluminum Oxide • Deagglomerated • Powder

Description	Abrasive Size	Qty.	Part No.
Gamma B Alumina	0.05 micron	1 lb. (0.45 kg)	810-778
Gamma B Alumina	0.05 micron	5 lb. (2.27 kg)	810-779
Alpha A Alumina	0.3 micron	1 lb. (0.45 kg)	810-782
Alpha A Alumina	0.3 micron	5 lb. (2.27 kg)	810-783
Alpha C Alumina	1.0 micron	1 lb. (0.45 kg)	810-786
Alpha C Alumina	1.0 micron	5 lb. (2.27 kg)	810-787

Magnesium Oxide • Powder

Description	Abrasive Size	Qty.	Part No.
MgO	<2.0 micron	1 lb. (0.45 kg)	810-788

Aluminum Oxide Slurry • Deagglomerated • Remains in suspension

Description	Abrasive Size	Qty.	Part No.
Gamma B Alumina	0.05 micron	6 oz. (0.18 l)	810-826
Gamma B Alumina	0.05 micron	1 gal. (3.8 l)	810-665
Alpha A Alumina	0.3 micron	6 oz. (0.18 l)	810-827
Alpha A Alumina	0.3 micron	1 gal. (3.8 l)	810-832
Alpha C Alumina	1.0 micron	6 oz. (0.18 l)	810-819
Alpha C Alumina	1.0 micron	1 gal. (3.8 l)	810-818
Levigated Alumina	5.0 micron	6 oz. (0.18 l)	810-825
Levigated Alumina	5.0 micron	1 gal. (3.8 l)	810-842



ACCESSORIES

Description	Qty.	Part No.
FD100 Dispenser Bottle	1	809-782



FD100 Dispenser

POLISHING



POLISHING POWDERS & SUSPENSIONS

Chromium Oxide Slurry

Description	Abrasive Size	Qty.	Part No.
Chrome Oxide	0.05 micron	6 oz. (0.18 l)	810-829
Chrome Oxide	1.0 micron	6 oz. (0.18 l)	810-828

Finish-Pol® Slurry

Description	Abrasive Size	Qty.	Part No.
CeO blended with other oxides	<0.05 micron	6 oz. (0.18 l)	810-831

Colloidal Silica Slurry

Description	Abrasive Size	Qty.	Part No.
Colloidal Silica	~0.08 micron	1 qt. (0.95 l)	812-110-300
Colloidal Silica	~0.08 micron	1 gal. (3.8 l)	812-121-300

Diamond Suspension • Monocrystalline • Alcohol-Base, Water-Free • Low Odor

Description	Abrasive Size	Qty.	Part No.
Diamond Suspension	0.25 micron	8 oz. (0.24 l)	810-946-002-HAZ
Diamond Suspension	0.25 micron	16 oz. (0.47 l)	810-946-003-HAZ
Diamond Suspension	0.25 micron	1 gal. (3.81 l)	810-946-001-HAZ
Diamond Suspension	1 micron	8 oz. (0.24 l)	810-946-005-HAZ
Diamond Suspension	1 micron	16 oz. (0.47 l)	810-946-006-HAZ
Diamond Suspension	1 micron	1 gal. (3.81 l)	810-946-004-HAZ
Diamond Suspension	3 micron	8 oz. (0.24 l)	810-946-008-HAZ
Diamond Suspension	3 micron	16 oz. (0.47 l)	810-946-009-HAZ
Diamond Suspension	3 micron	1 gal. (3.81 l)	810-946-007-HAZ
Diamond Suspension	6 micron	8 oz. (0.24 l)	810-946-011-HAZ
Diamond Suspension	6 micron	16 oz. (0.47 l)	810-946-012-HAZ
Diamond Suspension	6 micron	1 gal. (3.81 l)	810-946-010-HAZ
Diamond Suspension	9 micron	8 oz. (0.24 l)	810-946-014-HAZ
Diamond Suspension	9 micron	16 oz. (0.47 l)	810-946-015-HAZ
Diamond Suspension	9 micron	1 gal. (3.81 l)	810-946-013-HAZ
Diamond Suspension	15 micron	8 oz. (0.24 l)	810-946-017-HAZ
Diamond Suspension	15 micron	16 oz. (0.47 l)	810-946-018-HAZ
Diamond Suspension	15 micron	1 gal. (3.81 l)	810-946-016-HAZ

DIAMOND POLISHING

Premium Grade Spray • Monocrystalline Heavy Concentration • Ozone Safe

Abrasive Size	Qty.	Part No.
0.25 micron	127 ml (87 grams)	810-945-HAZ
1 micron	127 ml (87 grams)	810-944-HAZ
3 micron	127 ml (87 grams)	810-943-HAZ
6 micron	127 ml (87 grams)	810-942-HAZ
9 micron	127 ml (87 grams)	810-941-HAZ
15 micron	127 ml (87 grams)	810-940-HAZ



POLISHING

DIAMOND POLISHING

Ultra Polishing Suspension • Polycrystalline

Abrasive Size	Qty.	Part No.
0.5 micron	8 oz. (0.24 l)	811-506-008
1 micron	8 oz. (0.24 l)	811-505-008
1 micron	1 gal. refill (3.8 l)	812-506
3 micron	8 oz. (0.24 l)	811-504-008
3 micron	1 gal. refill (3.8 l)	812-507
6 micron	8 oz. (0.24 l)	811-503-008
6 micron	1 gal. refill (3.8 l)	812-508
9 micron	8 oz. (0.24 l)	811-502-008
9 micron	1 gal. refill (3.8 l)	812-509
15 micron	8 oz. (0.24 l)	811-501-008
15 micron	1 gal. refill (3.8 l)	812-510



Premium Polishing Suspension • Monocrystalline

Abrasive Size	Qty.	Part No.
0.5 micron	8 oz. (0.24 l)	810-999-008
0.5 micron	16 oz. (0.47 l)	810-999-016
1 micron	8 oz. (0.24 l)	810-998-008
1 micron	16 oz. (0.47 l)	810-998-016
1 micron	1 gal. refill (3.8 l)	812-501
3 micron	8 oz. (0.24 l)	810-997-008
3 micron	16 oz. (0.47 l)	810-997-016
3 micron	1 gal. refill (3.8 l)	812-502
6 micron	8 oz. (0.24 l)	810-996-008
6 micron	16 oz. (0.47 l)	810-996-016
6 micron	1 gal. refill (3.8 l)	812-503
9 micron	8 oz. (0.24 l)	810-995-008
9 micron	16 oz. (0.47 l)	810-995-016
9 micron	1 gal. refill (3.8 l)	812-504
15 micron	8 oz. (0.24 l)	810-994-008
15 micron	16 oz. (0.47 l)	810-994-016
15 micron	1 gal. refill (3.8 l)	812-505



Diamond Dosage Stick • High Concentration • Monocrystalline

Abrasive Size	Qty.	Part No.
1 micron	20 grams (0.7 oz.)	812-137
3 micron	20 grams (0.7 oz.)	812-138
6 micron	20 grams (0.7 oz.)	812-139
9 micron	20 grams (0.7 oz.)	812-140
15 micron	20 grams (0.7 oz.)	812-141



CAMEO Diamond Suspension • Monocrystalline • Water Soluble

Abrasive Size	Qty.	Part No.
1 micron	250 ml (8.5 oz.)	812-354
1 micron	1 gal. refill (3.8 l)	812-514
3 micron	250 ml (8.5 oz.)	812-355
3 micron	1 gal. refill (3.8 l)	812-513
6 micron	250 ml (8.5 oz.)	812-356
6 micron	1 gal. refill (3.8 l)	812-512
9 micron	250 ml (8.5 oz.)	812-357
9 micron	1 gal. refill (3.8 l)	812-511



POLISHING

POLISHING

DIAMOND POLISHING COMPOUNDS

**Premium Grade Compound • Monocrystalline • Medium Concentration •
5 and 15 gram Syringes**

Abrasive Size (range)	Color	Syringe Size	Part No.
0.1 micron	Gray	5 g	810-865
0.1 micron	Gray	15 g	810-866
0.5 micron	Gray	5 g	810-867
0.5 micron	Gray	15 g	810-868
1 micron	Ivory	5 g	810-869
1 micron	Ivory	15 g	810-870
3 micron	Yellow	5 g	810-871
3 micron	Yellow	15 g	810-872
6 micron	Orange	5 g	810-873
6 micron	Orange	15 g	810-874
9 micron	Green	5 g	810-912
9 micron	Green	15 g	810-913
15 micron	Blue	5 g	810-914
15 micron	Blue	15 g	810-915
30 micron	Red	15 g	810-880
45 micron	Brown	15 g	810-882

DIAMOND LAPPING OIL (MICROID EXTENDER)

For Use With All Diamond Compounds and Suspensions

Description	Qty.	Part No.
H ₂ O Soluble	4 oz. (0.12 l)	811-001
H ₂ O Soluble	1 qt. (0.95 l)	811-003
H ₂ O Soluble	1 gal. (3.8 l)	811-004

ULTRALAP DIAMOND EXTENDER

Alcohol-Based Extender for Improved Material Removal

Description	Qty.	Part No.
For use with all diamond compounds	4 oz. (0.12 l)	812-433-HAZ
For use with all diamond compounds	1 pt. (0.47 l)	812-434-HAZ
For use with all diamond compounds	1 qt. (0.95 l)	812-435-HAZ
For use with all diamond compounds	1 gal. (3.8 l)	812-436-HAZ

AQUA LUBE

Water Soluble Lubricant • Environmentally-Friendly

Description	Qty.	Part No.
H ₂ O Soluble	1 gal. (3.8 l)	812-527
H ₂ O Soluble	1 pt. (0.47 l)	812-528

AI-BLUE LUBE

**Water-Free, Alcohol-Based Lubricant • Low Odor • Specifically formulated for use
with water-free diamond suspensions**

Description	Qty.	Part No.
Water Free	1 gal. (3.8 l)	810-946-019-HAZ
Water Free	1 qt. (0.95 l)	810-946-020-HAZ
Water Free	1 pt. (0.47 l)	810-946-021-HAZ

SPECIMEN HOLDERS

SPECIMEN HOLDERS

for AP-60 Grinder/Polisher and Spectrum System 1000® Grinder/Polisher

Shape	Holder Diameter	Sample Size	Sample Capacity	Assy. No.
	5.44"	1.00"	8	804-085
	5.44"	1.25"	6	804-088
	5.44"	1.50"	4	804-091
	5.44"	2.00"	2	806-793
Blank	5.44"	—	—	806-512

for AP-300 Grinder/Polisher and Spectrum System 2000® Grinder/Polisher

Shape	Holder Diameter	Sample Size	Sample Capacity	Assy. No.
	6.94"	1.00"	12	805-014
	6.94"	1.25"	9	805-002
	6.94"	1.50"	6	805-004
	6.94"	2.00"	4	805-012
	8.94"	4.0 x 1.87"	4	805-586
Blank	6.94"	—	—	805-663

for GPX200 Grinder/Polisher

Shape	Holder Diameter	Sample Size	Sample Capacity	Assy. No.
	5.44"	1.00"	8	809-903
	5.44"	1.25"	6	809-902
	5.44"	1.50"	4	809-901
Blank	5.44"	—	—	809-909

SPECIMEN HOLDERS

for GPX300 Grinder/Polisher

Shape	Holder Diameter	Sample Size	Sample Capacity	Assy. No.
	6.94"	1.00"	12	809-767
	6.94"	1.25"	9	809-762
	6.94"	1.50"	6	809-763
	6.94"	2.00"	4	809-766
Blank	6.94"	—	—	809-771
Blank	8.94"	—	—	809-975

Individual Specimen Holders for the GPX-Series Grinder/Polisher

Shape	Holder Diameter	Sample Size	Sample Capacity	Assy. No.
	5.44"	1.00"	6	809-759
	5.44"	1.25"	6	809-838
	5.44"	1.50"	6	809-760
	5.44"	2.00"	3	809-761
	5.44"	30 mm	6	809-944
	5.44"	40 mm	6	809-945
Blank	5.44"	—	—	811-651-122

Note: LECO offers blank holders for customer modification

POLISHING

OPTICAL REPLACEMENT PARTS & SUPPLIES

BULBS

Used With	Description	Part No.
GX51/71, BX51/61, BX60, LIM50/70	12V 100W Halogen	861-111 [†]
GX41, BX41, CK40M	6V 30W Lamp	910-040-086 [†]
Schott Fostec EJA, H3000 Light Source	21V 150W EJA 40 Hours	860-899 [†]
Schott Fostec EKE, H3000 Light Source	21V 150W EKE 200 Hours	910-000-907
Schott Fostec DDL, H3000 Light Source	20V 150W DDL 500 Hours	861-250-123
M-400	12V 10W Frosted	861-801
M-400G-Series/M-400FF/M-400 CCTV	6V 15W Clear	861-824
M400 H-Series	6V 10W Halogen	861-659
MG	6V 12W	860-135 [†]
GX-Series/BX-Series	75W Xenon (ozone-free)	861-179 [†]
PME-3*, PMG-3, BHM, LX-31	12V 50W	860-564
PME-3, PMG-3*, BHM	12V 100W Halogen	861-111 [†]
PME-100*	6V 30W	860-132 [†]
LM/LV-Series/LMV-50V	6V 18W	863-280
HIROX LDC1300 Halogen	12V 100W	863-783-638

*Standard Bulb

[†]Only available in USA



DSX100



BX51

OPTICAL REPLACEMENT PARTS & SUPPLIES

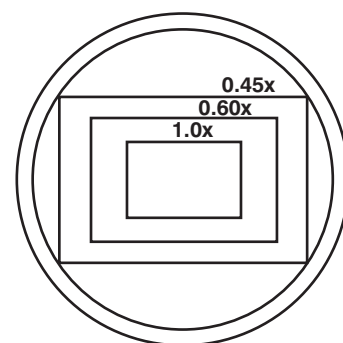
CAMERA ADAPTERS

Used With	Description	Part No.
GX51/71 (front port)	0.5X Front Port "C" Mount Adapter	863-807
GX51/71 (front port)	0.7X Front Port "C" Mount Adapter	863-808 [†]
GX51/71 (side port)	0.35X Side Port "C" Mount Adapter	863-702 [†]
GX51/71 (side port)	0.50X Side Port "C" Mount Adapter	863-703
GX41	0.50X "C" Mount Adapter	863-703
BX60	0.50X "C" Mount Adapter	861-243
PME-3 Simple (no lens)	"C" Mount Adapter	866-200-128
PME-3 Photo Unit	1.0X "C" Mount Adapter	863-399
SZX7/10/16	0.5X "C" Mount Adapter	863-703
BX41/51	0.5X "C" Mount Adapter	863-703

[†]Only available in USA

CAMERA ADAPTERS

Camera Chip Size	Coupler Magnifications
1/3-inch	0.35X to 1.0X
1/2-inch	0.45X to 1.0X
2/3-inch	0.63X to 1.0X
1-inch	1.0X



Example field of view, 1/2-inch format camera at different optical coupler magnifications, (i.e. Small chip camera and high mag couplers yield smaller fields of view).



DSX500

HARDNESS TESTING ACCESSORIES

LM-SERIES MICROINDENTATION HARDNESS TESTER ACCESSORIES

Description	Part No.
Vickers Indenter	863-230
Knoop Indenter	863-231
Objective Lens, 100X	863-221-110
Objective Lens, 50X	863-222-110
Objective Lens, 40X	863-223-110
Objective Lens, 20X	863-224-110
Objective Lens, 10X	863-225-110
Objective Lens, 5X	863-226-110
Objective Lens, 2.5X	863-220-110
Eyepiece, 15X	863-227
Color Filter (20 mm, green)	863-287
Precision Vise, 50 mm	863-248
Precision Vise, 100 mm	863-249
Thin Specimen Sample Holder	863-391
Fine Specimen Sample Holder, Vertical	863-392
Fine Specimen Sample Holder, Horizontal	863-393
Micro Specimen Sample Holder (AMH-style)	863-460-120
Specimen Self-Leveling Device	862-690
Kit Sample Holder 1.25-inch AMH	863-783-216
Kit Sample Holder 1.50-inch AMH	863-783-217
Kit Sample Holder 2.00-inch AMH	863-783-218
Universal Inclining Device	863-251
Dust Cover	863-276
Bulb (6V/18W)	863-280
Digital Stage Micrometer Handle (Eng./Metric)	861-722-340
Metric Stage Micrometer Handle (Analog)	863-295
English Stage Micrometer Handle (Analog)	863-296
Specimen Leveling Press Package	861-157



Multi Sample Holders



LM248AT

HARDNESS TESTING ACCESSORIES

LV-SERIES MACROINDENTATION HARDNESS TESTER ACCESSORIES

Description	Part No.
Vickers Indenter	863-357
Knoop Indenter	863-358
Objective Lens, 100X	863-221-110
Objective Lens, 50X	863-222-110
Objective Lens, 40X	863-223-110
Objective Lens, 20X	863-224-110
Objective Lens, 10X	863-225-110
Objective Lens, 5X	863-226-110
Objective Lens, 2.5X	863-220-110
Eyepiece, 15X	863-227
Color Filter (20 mm, green, std.)	863-287
Vise, 50 mm	863-388
Vise, 100 mm	863-389
Round Table, 200 mm	863-398
Digital Stage Micrometer Handle (Eng./Metric)	861-722-340
Metric Stage Micrometer Handle (Analog)	863-386
English Stage Micrometer Handle (Analog)	863-387
Metric 50x50 Stage	863-362
Thin Specimen Sample Holder	863-391
Fine Specimen Sample Holder, Vertical	863-392
Fine Specimen Sample Holder, Horizontal	863-393
Universal Inclining Device, 30 mm	863-250
Anvil, 64 mm Flat	862-503
Anvil, Large V	862-504
Anvil, Small V	862-518
Bulb (6V/18W)	863-280



HARDNESS TESTING ACCESSORIES

LR/LCR-SERIES ROCKWELL-TYPE HARDNESS TESTER ACCESSORIES

Description	Part No.
Anvil, 60 mm Flat	863-242
Anvil, Large "V"	863-243
Anvil, Small "V"	863-244
Anvil, 9 mm Spot	863-245
Table Round, 200 mm	863-253
Sample Clamping Fixture	863-493
Jominy Test Table	863-254

R/RT-SERIES ROCKWELL-TYPE HARDNESS TESTER ACCESSORIES

Description	Part No.
Anvil, Large "V"	862-504
Anvil, Small "V"	862-518
Anvil, 64 mm Flat	862-503
Anvil, 12 mm Spot	862-520
Anvil, 6.5 mm Spot	862-561
Bulb, 120V-7W	862-512

M-400-SERIES MICROHARDNESS TESTER ACCESSORIES

Description	Hardness Testers Used With	Part No.
Knoop Diamond Indenter	Any M-400-Series	860-538
Vickers Diamond Indenter	Any M-400-Series	860-539
Specimen Self-Leveling Device for X-Y Stage	Any Microindentation Tester	862-690
Micro Specimen Sample Holder (AMH-style)	Any M-400-Series	863-460-120
Bulb, 6V/15W, Clear	M-400A, M-400F, M-400G, some M-400H	861-824
Bulb, 6V/10W, Halogen	M400H-Series	861-659
Bulb, 12V/10W, Frosted	M-400 only	861-801

V-100-SERIES MACRO-VICKERS ACCESSORIES

Description	Hardness Testers Used With	Part No.
Vickers Indenter	Any V-100-Type Tester	862-592-110
Bulb, 6V/15W, Clear	V-100A1, V-100A2, V-100C1, V-100C2	861-824
Bulb, 12V/10W, Frosted	V-100	861-801

**Sample Clamping Fixture
for Rockwell Testers**



HARDNESS TESTING ACCESSORIES

All LECO test blocks are ASTM compliant and meet the traceability requirements of ISO 17025.

ROCKWELL-TYPE INDENTERS

Compliant with ASTM E-18-current*

Description	Part No.
Indenter Diamond Combo (N C) Grade B	863-783-832
Indenter Diamond C Scale Grade B	863-783-833
Indenter Diamond N Scale Grade B	863-783-834
Indenter Holder 1/16 Ball Grade B	863-783-835
1/16-inch Carbide Ball Indenter	862-413
1/16-inch Carbide Ball	862-414
1/16-inch Carbide Balls, Set of 12	862-414-012
1/16-inch Carbide Balls, Set of 25	862-414-025
1/8-inch Carbide Ball	862-415
1/4-inch Carbide Ball	862-416
1/2-inch Carbide Ball	862-417

ROCKWELL-TYPE HARDNESS TEST BLOCKS

Compliant with ASTM E-18-current*

Description	Part No.
HRC Low-Range Test Block 20-30	861-870
HRC Mid-Range Test Block 35-55	861-872
HRC High-Range Test Block 59-65	861-873
HRBW Test Block 40-59	862-407
HRBW Test Block 60-79	862-408
HRBW Test Block 80-100	862-409
HR30N Low-Range Test Block 40-50	862-597
HR30N Mid-Range Test Block 55-73	861-837
HR30N High-Range Test Block 75-80	862-557
HR30TW Test Block 43-56	862-410
HR30TW Test Block 57-70	862-411
HR30TW Test Block 70.1-82	862-412

Other test blocks are available; consult your LECO representative. Part numbers, specifications, and prices are subject to change.

*The current version of ASTM E-18 mandates the usage of graded diamond indenters and graded carbide balls (W) for compliance. Ungraded diamond or ball indenters DO NOT meet the requirements of the current standard.



LCR-500 Rockwell-Type Tester

HARDNESS TESTING ACCESSORIES

All LECO test blocks are ASTM compliant and meet the traceability requirements of ISO 17025.

MICROINDENTATION HARDNESS TEST BLOCKS

Description	Part No.
Test Block, Vickers (500 gf, 700 HV range)	862-528-105
Test Block, Knoop (500 gf, 700 HK range)	862-528-104
Test Block, Vickers (300 gf, 700 HV range)	862-535
Test Block, Knoop (300 gf, 700 HK range)	862-528
Test Block, Vickers (500 gf, 500 HV range)	862-406
Test Block, Knoop (500 gf, 500 HK range)	862-405
Test Block, Vickers & Knoop (300 gf, 500 HV & 500 HK range)	863-783-852
Test Block, Vickers & Knoop (500 g, 500 HV & 500 HK range)	863-783-853

Other test blocks are available; consult your LECO representative. Part numbers, specifications, and prices are subject to change.

MACRO-VICKERS HARDNESS TEST BLOCKS

Description	Part No.
Test Block, 10 kg (HV 175-240)	863-359
Test Block, 10 kg (HV 400-600)	863-360
Test Block, 10 kg (HV 650-750)	863-361
Test Block, 30 kg (HV 200-250)	863-783-854
Test Block, 30 kg (HV 400-450)	863-783-855
Test Block, 30 kg (HV 700-800)	862-592-007

Other test blocks are available; consult your LECO representative. Part numbers, specifications, and prices are subject to change.



AMH43 Micro



AMH43 Macro

HARDNESS TESTING ACCESSORIES

TRACEABLE OPTICAL STAGE MICROMETERS

Description	Part No.
Dual Use. Suitable for use with high magnification systems. Calibrated at 0.010 mm (10 μ m), 0.10 mm, 0.001 inch, and 0.01 inch increments. Appears as black lines on a white background in reflected light, and white lines on a dark background in transmitted light. Glass insert in a 1" X 3" metal slide for durability.	863-783-146CERT
High Magnification Applications. A 1 mm full scale optimized for reflected light. Each increment is 0.010 mm (10 μ m). Appears as black lines on a white background. Glass insert in a 1" x 3" metal slide for durability. Only available in USA.	860-256-110
Low Magnification (Macro) Applications. English and Metric scales. English scale is 5 inches long with graduations at each 0.010 inch. Metric scale is 125 mm long with graduations at each 0.10 mm. 2" x 6" glass plate.	861-375-110

REFERENCE OPTICAL STAGE MICROMETERS • No Documentation Provided

Description	Part No.
Dual Use. Suitable for use with high magnification systems. Calibrated at 0.010 mm (10 μ m), 0.10 mm, 0.001 inch, and 0.01 inch increments. Appears as black lines on a white background in reflected light, and white lines on a dark background in transmitted light. Glass insert in a 1" X 3" metal slide for durability.	863-783-146
High Magnification Applications. A 1 mm full scale optimized for reflected light. Each increment is 0.010 mm (10 μ m). Appears as black lines on a white background. Glass insert in a 1" x 3" metal slide for durability. Only available in USA.	860-256
Low Magnification (Macro/Stereo) Applications. English and Metric scales. English scale is 5 inches long with graduations at each 0.010 inch. Metric scale is 125 mm long with graduations at each 0.10 mm. 2" x 6" glass plate.	861-249-101
English and Metric scales in a crosshair configuration optimized for transmitted light. White lines on a darker background. Minimum English increment is 0.0005 inch. Minimum Metric increment is 0.010 mm (10 μ m). 1" x 3" Glass slide.	861-377
Uncertified Stage Micrometer for DSX100	863-783-784
Uncertified Stage Micrometer for DSX500	863-783-778

VIBRATION ISOLATION PLATFORMS

Description	Part No.
Vibration Free Platform, for LM-Series Holds 75 to 125 lb. (34 to 57 kg); 1 in. H x 12 in. W x 18 in. D (2.5 x 30 x 46 cm)	861-667-101
Vibration Free Platform, for LV-Series Holds 90 to 170 lb. (41 to 77 kg); 1 in. H x 18 in. W x 24 in. D (2.5 x 46 x 61 cm)	861-667-102
Vibration Free Platform, for LR-Series Holds 130 to 200 lb. (59 to 91 kg); 1 in. H x 12 in. W x 18 in. D (2.5 x 30 x 46 cm)	861-667-103
Vibration Free Platform, for Olympus BX-Series/DSX Series Holds 20 to 40 lb. (9 to 18 kg); 1 in. H x 18 in. W x 24 in. D (2.5 x 46 x 61 cm)	861-667-104
Vibration Free Platform, for SZX-Series, GX41 Holds 10 to 30 lb. (5 to 14 kg); 1 in. H x 12 in. W x 18 in. D (2.5 x 30 x 46 cm)	861-667-105
Vibration Free Platform, for PMG3, PME3 Holds 35 to 75 lb. (35 to 75 kg); 1 in. H x 18 in. W x 24 in. D (2.5 x 46 x 61 cm)	861-667-106
Vibration Free Platform, for GX51/71 Holds 50 to 105 lb. (23 to 48 kg); 1 in. H x 18 in. W x 24 in. D (2.5 x 46 x 61 cm)	861-667-109
Vibration Free Platform, for LMV-50V Holds 170 to 310 lb. (77 to 141 kg); 1 in. H x 12 in. W x 26 in. D (2.5 x 30 x 66 cm)	861-667-108

TECHNICAL & PRODUCT INFORMATION

FREE TECHNICAL AND PRODUCT INFORMATION

Form No.	Description
209-106	CORPORATE POSTER • An overview of LECO products
200-983	AUTOMATIC POLISHERS • An overview of various polishing procedures
200-860	METALLOGRAPHIC PRINCIPLES AND PROCEDURES A book detailing all aspects of sample preparation; also available on CD-ROM (209-050-089)
200-971	HARDNESS CONVERSION POCKET-SIZE CHART
203-714	HARDNESS TESTING WALL CHART/POSTER
209-135	LECO SAMPLE PREPARATION (photomicrograph) POSTER

MET-TIPS

A series of publications dealing with various aspects of metallographic specimen preparation techniques.

200-976-001	Met-Tips #1 Calibration of Video Meas System and Microscope Reticles
200-976-002	Met-Tips #2 An Inexpensive Method to Eliminate Bleed-Out of Etchants
200-976-003	Met-Tips #3 In-Situ Metallography
200-976-004	Met-Tips #4 Which Type of Mounting Medium
200-976-005	Met-Tips #5 Revealing Delta Ferrite in Martensitic Stainless Steels
200-976-006	Met-Tips #6 How to Calculate the Specific Gravity
200-976-007	Met-Tips #7 Preparation of Printed Circuit Boards
200-976-008	Met-Tips #8 Stereo-Pairs from Low Power Microscopes
200-976-009	Met-Tips #9 Hardness Testing
200-976-010	Met-Tips #10 Metallography: A Tool for Quality Control
200-976-011	Met-Tips #11 The Art of Grinding
200-976-012	Met-Tips #12 Sectioning
200-976-013	Met-Tips #13 Polishing
200-976-014	Met-Tips #14 Tricks of the Trade
200-976-015	Met-Tips #15 Grit, Mesh and Micron Sizes
200-976-016	Met-Tips #16 Surface Roughness
200-976-018	Met-Tips #18 Etching
200-976-019	Met-Tips #19 Metallographic Preparation of Ceramic and Cermet Materials
200-976-020	Met-Tips #20 Mounting Technique for Opaque Coatings
200-976-021	Met-Tips #21 Sulfur Printing
200-976-022	Met-Tips #22 Colloidal Silica
200-976-023	Met Tips #23 A Simplified Approach to the Use of Reflected Light Microscopes
200-976-024	Met Tips #24 Automatic Specimen Preparation



APPLICATION NOTES

203-821-313	AMH43 Hardness in Decarburized Steel
203-821-232	CAMEO® Magnetic Disc Application for Automatic Grinders/Polishers
203-821-239	CAMEO Manual Preparation
203-821-446	DSX100 Fine Tuning Focus and Exposure
203-821-445	DSX500 Best Image Feature
203-821-460	FASTICK Cameo Grinding
203-821-461	FASTICK SiC Grinding
203-821-444	GPX Cast Iron Auto-Prep Method
203-821-382	FeStar Polishing Film—Carbon Steel
203-821-375	LeStar Polishing Film—Cemented Carbide
203-821-323	Metallographic - Cement Clinkers
203-821-211	PAX-it™ Image Management Software Nodularity
203-821-212	PAX-it™ Image Management Software Overlays

Met-Tips and application notes are available in pdf format on-line at www.leco.com

To see a list of our training classes, go to www.leco.com and select the Support tab.

LECO CORPORATION

In 1936, the Laboratory Equipment Company introduced the first rapid carbon determinator to the American iron and steel industry. Today, more than 75 years later, LECO is recognized globally as a leader in the development of high-quality analytical instrumentation, mass spectrometers, chromatographs, metallography and optical equipment, and consumables.

Located in St. Joseph, Michigan—just 90 miles from both Chicago and Grand Rapids, Michigan—LECO's headquarters is comprised of a multi-building campus. Each building contributes to a unique area of the company's success. At our state-of-the-art research and development center, teams of engineers work together to create and test ideas that will be incorporated into the next generation of instruments. Vertically integrated manufacturing capabilities allow quality to drive production—from stamped metal parts to complex electronic assemblies, most components are produced in-house, allowing strict control over the entire manufacturing and assembly process in accordance with the quality standards of ISO-9001. Our Global Support Center provides service and support after the sale of your instrument, as well as customer training



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LECO Corporation's unique mobile laboratories travel throughout North America, bringing the latest innovations in analytical instrumentation to your neighborhood. Take the opportunity to view our products in use as well as discuss everything from methods to maintenance with knowledgeable LECO technicians.

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Consumable Order Form

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To place an order, complete and fax to: 269-982-8977

Contact Name _____ LECO Acct No. _____
Phone _____ Fax _____ email _____
Ship To _____ Bill To _____

Method of Payment ☐ Tax Exempt ☐ Purchase Order (Number) _____
☐ Credit Card (Number) _____ Exp. Date _____
Name of Cardholder _____

Shipping ☐ Prepay & Charge ☐ COD
☐ Collect (if UPS or FED-X, your collect account number is required) _____

Freight Method ☐ UPS ☐ UPS Next Day ☐ UPS 2nd Day
☐ Other _____
☐ Ship Complete ☐ OK to ship partial

LECO Part No.	Description	Qty.	Price

☐ **Order Confirmation Requested**

Terms Net 30 • FOB St. Joseph, Michigan