

标乐(Buehler)磨抛-研磨消耗品采购指南

标乐美国出品-

GRINDING CONSUMABLES

When selecting a grinding surface there are several factors to consider: amount of material to remove, durability of the grinding surface and the material type.

SiC paper provides rapid material removal for most metal and alloys with minimal sample deformation. However the majority of the material removal occurs within the first minute. For optimum material removal on harder materials, such as sintered carbides and ceramics, sintered metal bonded and resin bonded diamond discs should be used. An additional advantage of diamond discs is their longevity.

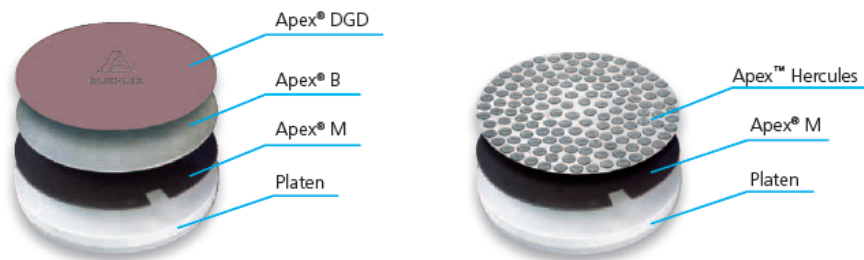
Diamond lapping films have been designed for various material applications including microelectronic devices, wafers ceramics, and optical fibers. Fixed abrasives such as UltraPrep™ Diamond Films offer excellent finishing capabilities, less abrasive embedding and more uniform material removal.

For heavy stock removal in the initial metallographic grinding stages, ZirMet® Abrasive Discs can be used on automatic preparation systems as well as high speed manual grinders.

Apex® Quick-Change Magnetic System

A magnetic-based system used in conjunction with either abrasive surfaces or polishing cloths. Apex® consists of two components. The first is Apex® M, long-life magnetic disc with a pressure sensitive adhesive (PSA) backing on one side and can be used on any conventional platen. The second component is Apex® B bimetallic plate and is used between Apex® M and any PSA backed abrasive, polishing cloth or other consumable of choice.

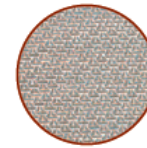
The MagnoSystem is an alternative offering, also comprised of two components. Apex® MagnoDisc or MagnoFix is a direct substitute for Apex® M, while the MagnoMet or MagnoPad are similar but single layer plates like Apex® B.



Type	8in [203mm]	10in [254mm]	12in [305mm]
Apex® M Discs - PSA Backed Magnetic Disc (qty 1)	41-2739-608-001	41-2739-610-001	41-2739-612-001
Apex® B Bimetallic Plate (qty 1)	41-2739-208-001	41-2739-210-001	41-2739-212-001
Apex® MagnoDisc - Aluminum Platen with MagnoFix Installed (qty 1)	16-2071	16-2571	16-3071 ⁵⁰
Apex® MagnoFix - PSA Backed Magnetic Disc (qty 1)	16-2070	16-2570 ⁵⁰	16-3070 ⁵⁰
Apex® MagnoMet Metallic Plates (qty 5)	16-2072	16-2572	16-3072
Apex® MagnoPad Teflon® Coated Metallic Plates (qty 5)	16-2073	16-2573	16-3073

Apex® DGD Color (Diamond Grinding Discs) (qty 1)

Color – Micron	8in [203mm]	10in [254mm] ⁵⁰	12in [305mm]
Green – 240µm	41-3308	41-3310	41-3312
Black – 125µm	41-3408	41-3410	41-3412
Red – 75µm	41-3508	41-3510	41-3512
Purple – 55µm	41-3608	41-3610	41-3612
Yellow – 35µm	41-3708	41-3710	41-3712
White – 15µm	41-3808	41-3810	41-3812
Blue – 8µm	41-3908	41-3910	41-3912



Close up of the surface of Apex® DGD Color



◀ Apex® DGD (Diamond Grinding Discs)

- Excellent for ceramics, glass, TSC and more
- Consumable of choice for Z-axis controlled material removal
- Fixed abrasive surface providing long-wear, high removal rates and superb edge retention and flatness
- Use water only

Apex® DGD (Diamond Grinding Discs) (qty 1)

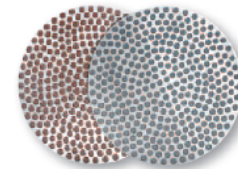
Micron	8in [203mm]	10in [254mm]	12in [305mm]
165µm	41-5008	41-5010	41-5012
125µm	41-5108	41-5110	41-5112
70µm	41-5208	41-5210	41-5212
45µm	41-5308	41-5310	41-5312
30µm	41-5408	41-5410	41-5412
15µm	41-5508	41-5510	41-5512
9µm	41-5608	41-5610	41-5612
6µm	41-5708	41-5710	41-5712
3µm	41-5808	41-5810	41-5812
0.5µm	41-5908	41-5910	41-5912



15-6190 Diamond Dressing Sticks (qty 1) can be used periodically to dress Apex® DGD and DGD Color discs

Apex™ Hercules Rigid Grinding Discs ▶

- Use with Apex® M, MagnoDisc and MagnoFix
- Add MetaDI® or MetaDI® Supreme Diamond Suspension



Apex™ Hercules Rigid Grinding Discs (qty 1)

Type	8in [203mm]	10in [254mm]	12in [305mm]
Apex™ Hercules H For materials ≥ HRC20, HV236	41-2740-308-001	41-2740-310-001	41-2740-312-001
Apex™ Hercules S For materials < HRC20, HV236	41-2740-408-001	41-2740-410-001	41-2740-412-001



◀ UltraPrep™ Diamond Discs

- Excellent for a wide variety of materials
- Use water only

UltraPrep™ Resin-Bonded Diamond Discs, PSA Backed (qty 1)

Diamond Size	Box Code	8in [203mm] ^{SO}	12in [305mm] ^{SO}
30µm	Orange	15-6330	15-6430
9µm	Blue	15-6309	15-6409
3µm	Yellow	15-6303	15-6403

SO - Special Order. Items may have long lead times and minimum orders.

UltraPrep™ Metal-Bonded Diamond Discs, PSA Backed (qty 1)

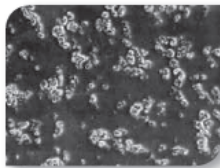
Diamond Size	Box Code	10in [254mm]	12in [305mm]
125µm	Black	15-6199	15-6299
70µm	Red	15-6170	15-6270
45µm	Yellow	15-6145	15-6245
15µm	White	15-6115	15-6215
9µm	Blue	15-6109	15-6209
6µm	Light Purple	15-6106	15-6206



15-6190 Diamond Dressing Sticks (qty 1) can be used periodically to dress UltraPrep™ discs

UltraPrep™ Diamond Lapping Films ▶

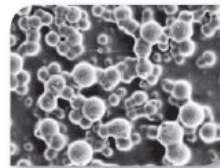
- For fine grinding of hard materials such as ceramic
- Two types available:
 - Type A for finer surface and more gentle material removal
 - Type B for more aggressive material removal



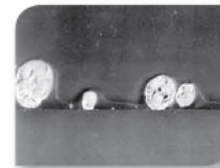
SEM image, UltraPrep™, Type A surface



SEM Cross-section of UltraPrep™, Type A



SEM image, UltraPrep™, Type B surface



SEM Cross-section of UltraPrep™, Type B

UltraPrep™ Diamond Lapping Films (qty 5)

Color – Micron	4in [102mm] Type A, PSA Backed	8in [203mm] Type A, PSA Backed	8in [203mm] Type A, Plain Backed	8in [203mm] Type B, PSA Backed	8in [203mm] Type B, Plain Backed
Light Grey – 0.1µm	69-3118 ^{SO}	15-6791	15-6792		
White – 0.5µm	69-3117 ^{SO}	15-6795	15-6796	15-6495 ^{SO}	15-6496 ^{SO}
Lavendar – 1µm	69-3116	15-6801	15-6802	15-6501 ^{SO}	15-6502 ^{SO}
Pink – 3µm	69-3115	15-6803	15-6804	15-6503	15-6504 ^{SO}
Brown – 6µm	69-3114	15-6806	15-6807	15-6506 ^{SO}	
Blue – 9µm	69-3113	15-6809	15-6810	15-6509 ^{SO}	15-6510 ^{SO}
Orange/Brown – 15µm	69-3112	15-6815	15-6816		
Green – 30µm	69-3111 ^{SO}	15-6830	15-6831		

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