



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™ CGD	Apex DGD Color	Apex DGD	CaribiMet
Available Diameters	8in [203mm] 10in [254mm] 12in [305mm]	8in [203mm] 10in [254mm] 12in [305mm] 350mm <i>regionally</i>	8in [203mm] 10in [254mm] 12in [305mm]	2.875in [73mm] 8in [203mm] 10in [254mm] 12in [305mm]
Available Micron/Grit	320 - 120µm	240 - 8µm	165 - 0.5µm	80 [P80] - 1200 [P2500]
Useful Life	Multiple Use	Multiple Use	Multiple Use	Single Use
Advantages	<ul style="list-style-type: none"> • high removal • excellent flatness • long wear surface • suitable for most materials 	<ul style="list-style-type: none"> • aggressive removal • excellent flatness • long wear surface • suitable for most materials 	<ul style="list-style-type: none"> • high removal • superb edge retention and flatness • long wear surface • excellent for ceramics, glass, TSC 	<ul style="list-style-type: none"> • moderate removal • excellent surface finish • suitable for most materials



	ZirMet	FibrMet Abrasive Discs	UltraPrep Diamond Lapping Films
Available Diameters	8in [203mm] 10in [254mm] 12in [305mm]	4in [102mm] 8in [203mm] 12in [305mm]	8in [203mm]
Available Micron/Grit	60 [P60] - 220 [P240] <i>regionally</i>	15 - 0.05µm	30 - 0.1µm
Useful Life	Multiple Use	Multiple Use	Multiple Use
Advantages	<ul style="list-style-type: none"> • high removal • long wear surface 	<ul style="list-style-type: none"> • for fine grinding applications on glass, epoxy or polymers • fine surface finish 	<ul style="list-style-type: none"> • for fine grinding of hard materials such as ceramic



FibrMet™ Abrasive Discs (qty 50)

- For fine grinding applications on glass, epoxy or polymers
- Produces fine surface finish
- Choose from either aluminum oxide or silicon carbide



Color	Micron	Material	4in [102mm] PSA Backed	4in [102mm] PSA Backed ^{2,3}	8in [203mm] PSA Backed	8in [203mm] Plain Backed	12in [305mm] PSA Backed
Off White	0.05µm	Al ₂ O ₃			69-3175 ⁵⁰	69-3275	
White	0.3µm	Al ₂ O ₃	69-3104	693104050 ^{2,3}	69-3174		69-3124
Green	1µm	Al ₂ O ₃	69-3103	693103050 ^{2,3}	69-3173		69-3123
Pink	3µm	Al ₂ O ₃	69-3102	693102050 ^{2,3}	69-3172	69-3272	69-3122
Grey	3µm	SiC	69-3912				
Light Blue	9µm	Al ₂ O ₃	69-3101	693101050 ^{2,3}	69-3171	69-3271	69-3121
Yellow	12µm	Al ₂ O ₃	69-3100	693100050 ^{2,3}	69-3170		69-3120
Grey	15µm	SiC	69-3107				

^{2,3} Refer to regional maps in footer for product availability
⁵⁰ - Special Order. Items may have long lead times and minimum orders.

Replicating Materials for Field Applications

Field metallography is necessitated by certain applications. Both Replicating Tape and Replicating Media provide users the ability to produce a portable copy of the microstructure of interest. Replicating Tape requires some skill for producing excellent results. Replicating Media is a simple two part system that easily captures the surface detail.



57-5005	Disc Holder, hard rubber, 1in [25mm]	57-6001	Static Mixers (qty 10)
57-5003	Disc Holder, hard rubber, 2.875in [73mm]	57-6002	Replicating Media 1/7, 1.7oz [50mℓ] (1min working time, 7min cure time)
57-5000	Replicating Tape, 1 x 0.005 x 25in [25 x 0.13 x 8mm]	57-6003	Replicating Media 7/30T, 1.7oz [50mℓ] (7min working time, 30min cure time)
57-5001	Replicating Adhesive Bases, 1 x 3in [25 x 76mm] (qty 30)	70986E ^{2,3}	Replica Sheet, 10 x 12cm, 35µm (qty 20)
57-5004	Flapper Wheel, 60 [P60] grit	70987E ^{2,3}	Replica Sheet, 10 x 12cm, 125µm (qty 20)
57-6000	Manual Applicator for Replicating Media		