



DIAMOND LAPPING FILM

PSI Diamond Lapping Film, manufactured by the 3M Company, is an innovative product available for material science, fiber optics and many other industries. Originally developed for audio/video reading head polishing, it is now available in configurations to fit popular metallurgical lab and fiber optic equipment. Its ability to polish the most difficult hard and mixed hardness materials quickly, without pull-out and with incredible flatness, makes Diamond Lapping Film a product to investigate for hard or difficult materials.



PSI Diamond Lapping Film is available in 4 specifications and 11 micron grades with or without a Pressure Sensitive Adhesive (PSA) backing. All share a precision 3 mil polyester backing, color coded for easy grade identification. The types differ in the method used to secure the diamonds particles to the polyester film backing.

PSI Diamond Lapping Film Type A is a single layer of the specified grade diamond particles resin bonded to the film backing. Type A is excellent for polishing applications where very little material removal is required. It will have a shorter life than the other types, but gives a better finish grade for grade.

PSI Diamond Lapping Film Type H is a heavier diamond concentration version of the single layer Type A film.

PSI Diamond Lapping Film Type B consists of diamond particles encapsulated in small soft ceramic beads, which are then resin coated to the polyester film backing. This results in a longer lasting, more aggressive product than the Type A product. As the ceramic beads wear, fresh diamond particles are exposed to work on the specimen surface.

AVAILABLE DIAMOND FILM GRADES				
Color	Type A	Type H	Type B	Type P
Amber				60 μ
Amber				45 μ
Green	30 μ	30 μ		
Orange	15 μ	15 μ		
Blue	9 μ	9 μ	9 μ	
Brown	6 μ	6 μ	6 μ	
Pink	3 μ	3 μ	3 μ	
Yellow-Green	1.5 μ	1.5 μ		
Lavender	1 μ	1 μ	1 μ	
Off White	.5 μ	.5 μ	.5 μ	
Gray Green	.1 μ	.1 μ		

PSI Diamond Lapping Film Type P shares characteristics with both Type A and Type B. Type P consists of diamond particles directly bonded to the polyester film with a very hard resin. This results in a product which works aggressively due to the large particle size, but because of the harder resin, exhibits a long life. Diamond Lapping Film Type P is used for fine grinding and flattening prior to use of the other products.

Successful applications include metallography, fiber optic polishing, dental materials research, semiconductor and electronics analysis, polishing carbide coatings, and many others.

The learning curve of Diamond Lapping Film is somewhat steep, but the rewards are dramatic. Difficult specimens can be processed by hand in a few minutes. Particle pull out is eliminated because the diamond cuts everything equally while retaining flatness throughout the process.

To facilitate your trials of this product, PSI offers individual discs and sheets for your evaluation. Contact us and we will be pleased to discuss PSI Diamond Lapping Film with you.