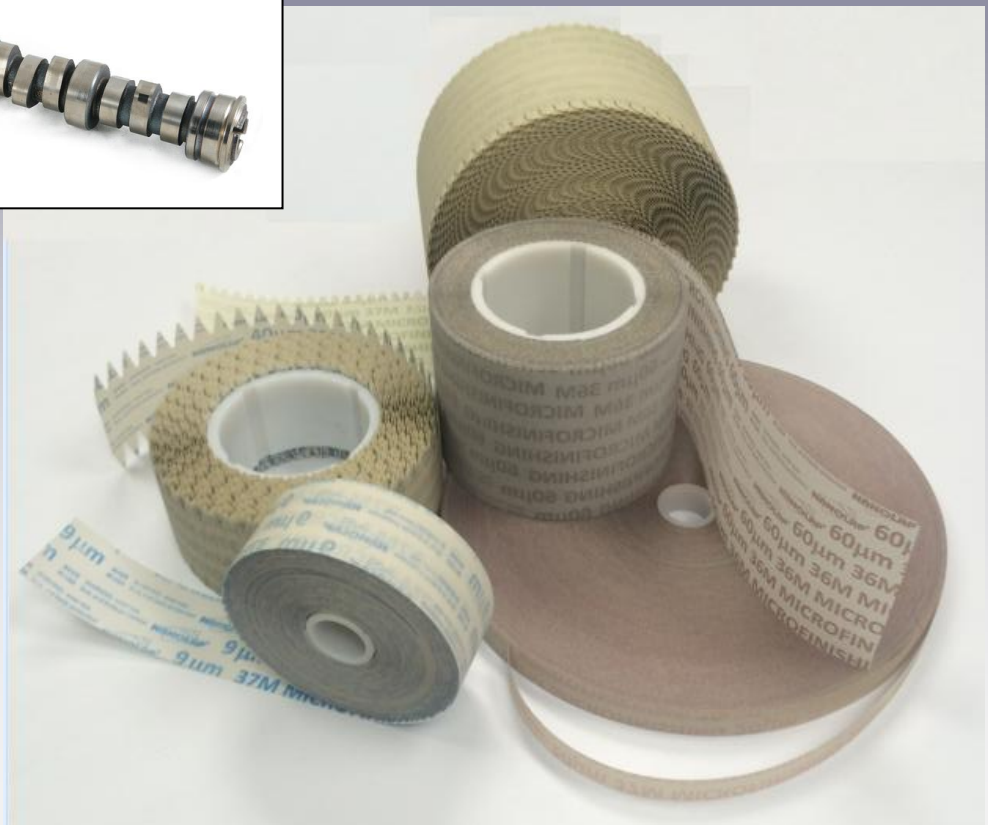


Nanolap[®] Microfinishing Film

Premium, heat-treated aluminum oxide grain, precision coatings, durable bond and frictional backing technology are uniquely designed for demanding microfinishing applications delivering high stock removal rate, exceptional finish consistently.



Nanolap Technologies, LLC,

85 Harrisburg Drive,

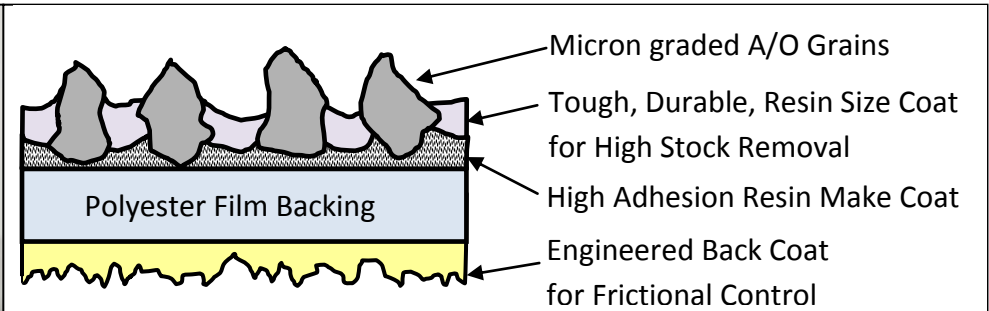
Englewood, OH 45322

Phone: 877-658-4949, Fax: 800-418-7047

Email: Sales@Nanolaptech.com

FEATURES	BENEFITS
Premium, heat-treated, precision micron-graded aluminum oxide	<ul style="list-style-type: none"> • Superior stock removal rate and consistent finish
Tough, durable, high performance, reinforced adhesive bond system	<ul style="list-style-type: none"> • Higher stock removal rate with better surface finish • Excellent adhesion for grain retention contributes to scratch-free, uniform, consistent finishes • Excellent durability for long product life
Strong and uniform 5 mil polyester film back with non-abrasive engineered anti-slip back-coat layer	<ul style="list-style-type: none"> • Excellent friction control • Non tape slip results in excellent cut and finish • Non-abrasive coating for minimum tool wear • Universal design for both soft and hard shoes
Full Grit range: 100 – 9 micron	<ul style="list-style-type: none"> • Extensive grit offering for broad range of microfinishing film applications
Color coded back print by grit size	<ul style="list-style-type: none"> • Ease of product identification
Available in straight and scallop edged rolls	<ul style="list-style-type: none"> • High-precision edge cutting : +/- 0.03mm • Custom designed scalloped-edge rolls for perfect fit to finish diesel crankshafts, and curved parts • Generate superior part tolerances

37M Microfinishing Film Design



FEATURES

Color coded back print by grit
 Engineered frictional coatings for soft and hard shoes

AVAILABILITY

Back print color	Abrasive Micron Size	Backing	Shapes Available
Purple	80 µm	5 mil And 3 mil Polyester Backing with Engineered Frictional coating	Straight-edge rolls Scallop rolls Belts
Yellow	60 µm		
Black	50 µm		
Blue	40 µm		Discs & Sheet with or without pressure sensitive adhesive
Green	30 µm		
Red	20 µm		
Orange	15 µm		
Light blue	9 µm		



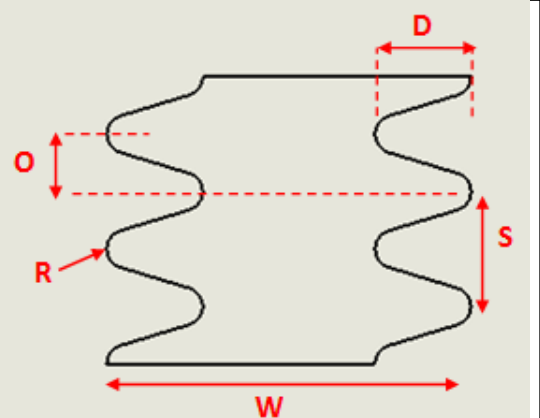
MAIN APPLICATIONS

- Camshaft lobes and journals
- Crankshaft mains, pins, thrust walls, and oil seals
- Transmission shafts
- Axles
- Cylinder shaft
- Hydraulic Spool Valves
- Compressor Shafts
- Torque Convertor Covers
- Engine Balance Shaft
- Drive Sprocket Assemblies
- Turbine Shaft
- Gears
- Bearings
- Roll finishing



SCALLOP ROLL SPECIFICATION

- W: Total width
- D: Depth from peak to valley
- S: Step from peak to peak
- R: Radius
- O: Offset from peak on one side to peak on the opposite side (we recommend that $O = S/2$ or zero)



CASE HISTORY EXAMPLES

<p>Roll Finishing Product: Nanolap[®] 37M 15 µm film rolls vs. competitive 15 and 9 µm microfinishing film rolls Material: Steel Results: Higher cut-rate of Nanolap[®] film rolls achieved target finish with the 15 µm product only and replaced the two-step 15 and 9 µm process; customer improved productivity by 60% and saved 50% film consumption cost</p>	<p>Diesel Crankshaft Polishing Product: Nanolap 37M 40 and 20 µm scalloped edge film rolls vs. competitive 40 and 20 µm scalloped edge film rolls Material : Forged Steel Tooling : Urethane and Diamond shoes Results: Nanolap[®] film rolls achieved similar cut and finish as the competitive film rolls at slower film index rate, results in 30% cost and labor savings for the customer</p>
<p>Compressor Polishing Product: Nanolap[®] 37M 30 µm film rolls vs. competitive 30 µm film rolls Material: Cast Iron Results: Nanolap[®] film rolls produced 10% better Ra finishing than the competitor product with 90% cycle time, generated 20% saving for the customer.</p>	<p>V12 Diesel Crankshaft Polish Product: Nanolap[®] 37M 40 and 20 µm film rolls vs. competitive 40 and 20 µm film rolls Material: Forged Steel Results: Nanolap[®] film rolls worked well on Pins and Mains – equal or better than the competition with a 10% cost savings; product approved by customer</p>
<p>Automotive Camshaft Polishing Product: Nanolap[®] 37M 40 and 15 µm film rolls vs. competitive 40 and 15 µm film rolls Material: Forged Steel Tooling: Urethane and Diamond Results: Nanolap[®] film rolls achieved Ra 0.08 micron, better than the competitor's Ra 0.10 at slow film tape index rate with 20% cost savings Nanolap[®] 37M product approved by customer</p>	<p>Automotive Transmission Shaft Polishing Product: Nanolap[®] 37M 20 µm and 36M 15 µm film rolls vs. competitive film rolls Material: Forged steel Coolant: Oil-based Tooling: Urethane Results: Nanolap[®] film rolls worked well on the journal and nose of the transmission shaft; equal to or better than competition</p>
<p>Axle and related Parts Polishing Product : Nanolap[®] 37M 50 µm film rolls; new machine Material: Hardened steel 60 HRC Coolant: Water based Results: Nanolap[®] film roll met customer's stock removal, cycle time and finish requirements for the newly- installed machine, product approved by customer</p>	