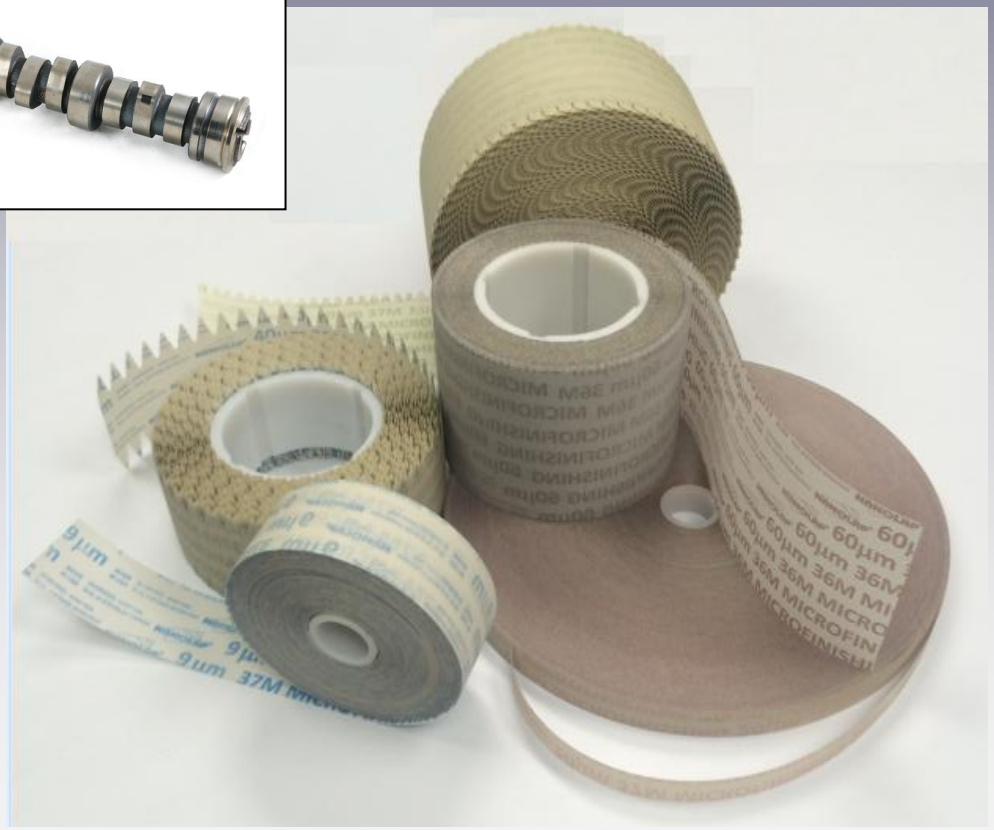
Nanolap® Microfinishing Film

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.



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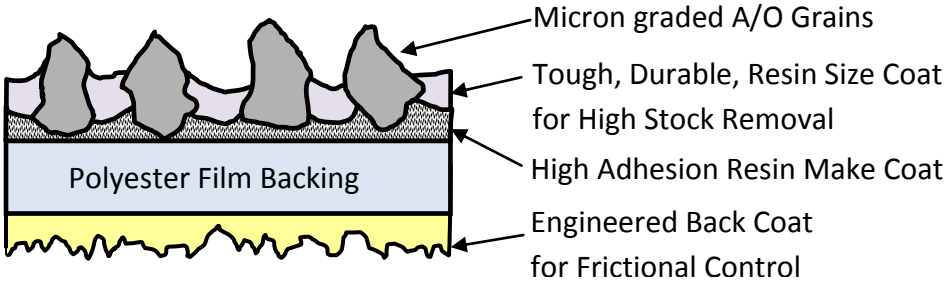
NANOLAP® Technologies, LLC

Nanolap® 37M Microfinishing films

Proudly Made In the USA

FEATURES	BENEFITS
Premium, heat-treated, precision micron-graded aluminum oxide	• Superior stock removal rate and consistent finish
Tough, durable, high performance, reinforced adhesive bond system	• 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	• 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	• Extensive grit offering for broad range of microfinishing film applications
Color coded back print by grit size	• Ease of product identification
Available in straight and scallop edged rolls	• 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

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AVAILABILITY

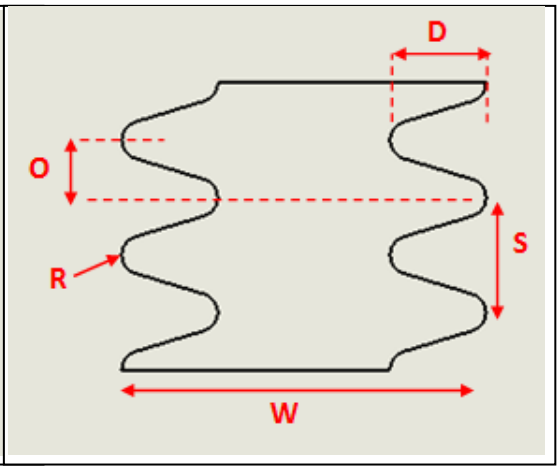
Back print color	Abrasive Micron Size	Backing	Shapes Available
Purple	80 µm	5 mil And 3 mil Polyester Backing with Engineered Frictional coating	Straight-edge rolls Scallop rolls Belts Discs & Sheet with or without pressure sensitive adhesive
Yellow	60 µm		
Black	50 µm		
Blue	40 µm		
Green	30 µm		
Red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



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CASE HISTORY EXAMPLES

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

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

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.

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

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

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

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