



Step Up to the Plate



NOW—Get more control of quality and costs—with the first matched system of 3M-quality abrasives, optimized especially for low pressure, pre-plate polishing applications!

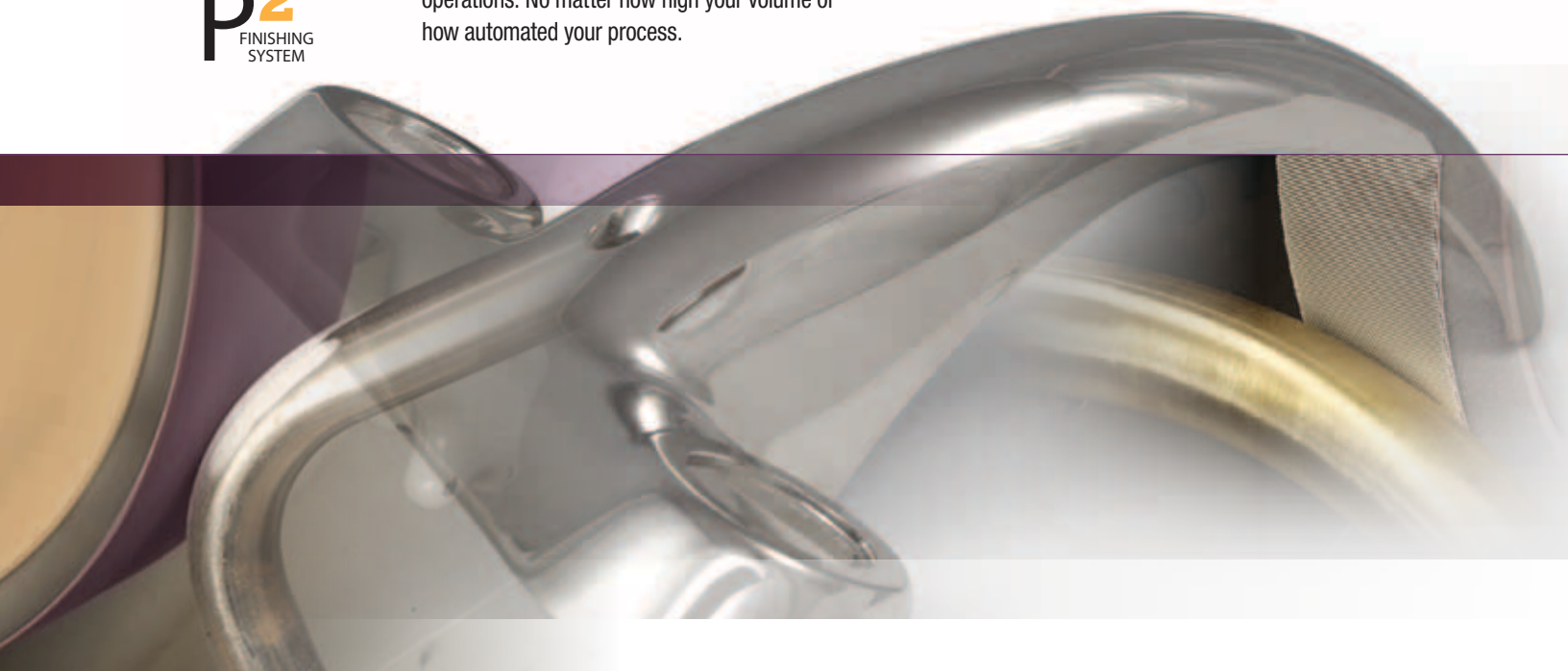
Featuring – 3 new high-performance belts, optimized for low-pressure, offhand polishing



The new standard of quality, consistency and control

In the past, preparing metal parts for plating was as much an art as it was a science. Operators would often have to adapt whatever abrasives were at hand to suit their individual requirements. The results, as you might expect, were unpredictable.

Now, with the new P2 Plating/Polishing System from 3M, you can enjoy more consistent quality...improved productivity...and higher profit from your pre-plating polishing operations. No matter how high your volume or how automated your process.



- Designed to help you achieve a smooth, defect-free plated finish –every time!
- Reduced costs – with new, more economical belt constructions that last longer
- Improved productivity, thanks to fewer belt changes, less break-in time, greater consistency
- Less scrap & rework due to fewer wild scratches
- Improved part quality, for increased customer satisfaction
- More comfort – thanks to a smoother, more consistent touch

Helping you win. That's the 3M Advantage.

In today's tough economy, some people might be tempted to cut back, lay low, and wait for the good times to return.

But that's not your style. You understand that the only way to survive the new economic realities is to work smarter, and give your customers a better value than the next guy.

That's why we're inviting you to "step up to the plate" – and meet your competition head-on – by partnering with 3M, the global leader in abrasive technology. By standardizing on 3M belts at every process step, you get the assurance that comes from using reliable, made-in-America products, optimized to work together as a complete, high-performance system. It's also important to remember that with 3M, you get more than great products. You also have access to our 100+ years of abrasive technology and applications know-how; ongoing investment in abrasive R&D; plus local, direct-from-the-manufacturer technical support.

We're ready to work with you to deliver the kinds of tailored solutions – like our new P2 Finishing System for plating/polishing – that address the unique challenges you face. Because we understand that our success depends on helping you become more successful.

Here's how it works:

STEP 1

Dimensioning, Defect Removal

Remove surface defects and imperfections with new 3M™ Flexible AO Belts 302D or 332D

- Choose 302D for flexibility on tight contours
- Choose 332D for flexibility with greater durability

NEW! 3M™ Flexible AO Belts 302D and 332D

Value-priced belts that beat the imports!

These flexible aluminum oxide (AO) belts feature a proprietary 3M construction, producing a sharper cut to resist loading. This not only delivers more consistent performance, but also provides up to 20% longer life than comparable AO belts. Longer life means lower cost per finished part and less time lost to belt changeovers and break-in, for greater productivity.

- **Belt 302D** features a J-weight backing, for the greatest flexibility on tight contours.
- **Belt 332D** features an X-weight backing, for greater durability.

Both of these belts are value-priced, to help you control costs without sacrificing performance.

3M has made these belts more affordable – not by cutting corners, but through the improved production efficiencies made possible by our new, state-of-the-art North American abrasive maker. Manufacturing in the U.S. ensures 3M can continue to offer you a more consistent product, more reliable sourcing and more value.



▲ PROFIT TIP

For the greatest economy, use new 3M Flexible A/O Belts 302D or 332D.

STEP 2

Final Finish and Polishing

Polish with new 3M™ Trizact™ Polishing Belt 310EA or the Trizact belt best suited to your operation, to remove any remaining defects and prepare the surface for plating.

NEW! 3M™ Trizact™ Polishing Belt 310EA

Step up to a new level of polishing performance

New Trizact belts 310EA have been specifically engineered for optimal performance in low-pressure, hand-held polishing operations. Compared to conventional coated abrasives, they deliver more consistent, high quality fine finishes, while helping to eliminate wild scratches that result in scrap and rework. And they last over 4X longer than conventional abrasive belts.

At low pressure, the abrasive structures on Trizact Belts 310EA are designed to provide quick initial break-in – plus a consistent cut, all the way to the backing, to give you every last bit of polishing power you pay for.

- Provides consistent performance, part-to-part and operator-to-operator – right to the end of belt life
- Faster break-in, for immediate productivity
- Helps eliminate wild scratches, surface flaws – less scrap, less rework
- Up to 4x the life of competitive conventional abrasive belts



▲ PROFIT TIP

Start with the final (finest) polishing step prior to plating and see how Trizact belts improve your finish consistency!

▲ PROFIT TIP

Are you a “finish fanatic?” Start with a coarser, conventional abrasive, but switch to Trizact Belts earlier in the sequence.

Coarse

60

P600

Fine

STEP 1: 302D/332D

STEP 2: Trizact Belts

A100

A5

3M Recommended Abrasive Sequence:

Typical steps for an optimum finish on mild steel: 3M Belts 302D/332D, grades 120, 180, 240; 3M Trizact belts, grades A45, A20, A10, A5. Depending upon the incoming part finish and your finish requirements, your sequence may vary.

The Science of Smooth

The heart of the P2 System is a unique collection of 3M™ Abrasive Belts – each carefully selected to meet the full spectrum of polishing process requirements.

Whether you need a highly-flexible belt for low pressure, off-hand polishing of tightly contoured parts – or a durable, long-lasting belt for automated, high-pressure applications –

there's a 3M abrasive belt that's ideally suited for the job!

Ask your 3M Representative to help you determine which 3M belts are best suited for your application.



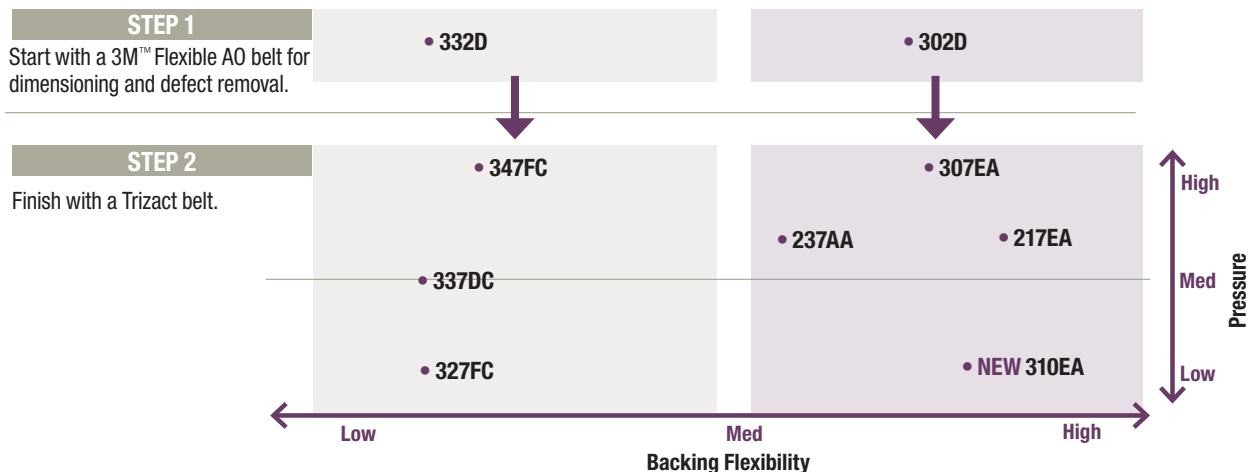
www.3M.com/abrasives

The 3M™ Plating/Polishing Product Portfolio

Product	Application	Abrasive	Backing	Pressure	Metals	Grades	
STEP 1							
3M™ Flexible AO Belts for Dimensioning, Defect Removal							
NEW! 302D	Light grinding / intermediate polishing Flexible, for tight contours	A0	J-wt	Low to high	All metals	60,80, P100 – P600	
NEW! 332D	Light grinding / intermediate polishing Flexible, with more durable backing	A0	X-wt	Low to high	All metals	60, 80, P100 – P400	
STEP 2							
3M™ Trizact™ Belts for Final Finish & Polishing							
NEW! 310EA	Intermediate Finishing– Fine Polishing	Trizact	J-wt	Low	Steel, Al, brass	A45, A20, A10, A5	
217EA			J-wt	Med. to high	All metals	A100 – A6	
307EA			J-wt	High	Hard/heat sensitive	A100 – A6	
237AA			X-wt	Med. to high	All metals	A160 – A6	
327DC			Trizact CF	X-wt	Low	All metals	A300 – A30
337DC				X-wt	Medium	All metals	A300 – A30
347FC				Y-wt	High	All metals	A300-A30

Choose the best combination of 3M Abrasive Belts that best matches your process requirements.

For parts requiring more durable belts For parts requiring more flexible belts



The Trizact performance advantage – now available for pre-plating polishing applications

Lower is finer.

The unique construction of 3M™ Trizact™ abrasives requires a different grading system. Grade is defined by the average particle size in microns and begins with “A”. The table below shows the abrasive grade comparison to conventional abrasive grades. The lower the A-grade, the finer the grade.

Trizact Abrasive Grade (Average Mineral Size in Microns)	Conventional Grade
A3	4000
A5*	3000
A6	2500
A10*	P1500
A16	P1200
A20*	P1000
A30	P600
A35	P500
A45*	P400
	P320
A60	
	P280
A65	
A75	P240
A80	
A90	P220
A100	P180
A110	
A130	P150
A160	P120
A200	P100
A300	P80
A400	60
A500	50

* 3M Trizact Polishing Belts 310EA are available in grades A5, A10, A20 and A45.

All of the belts in the P2 Finishing System – with the exception of our new value-priced AO belts 302D and 332D – are constructed using 3M™ Trizact™ Abrasive technology.

The outstanding performance and long life of 3M™ Trizact™ Abrasives is made possible through the science of microreplication, in which precisely-shaped, three dimensional structures are formed and then uniformly reproduced on a surface.

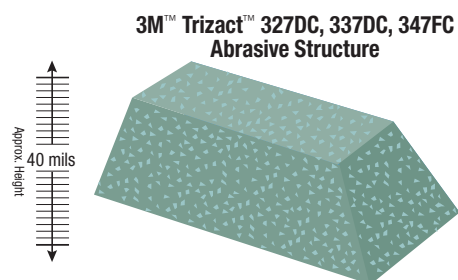
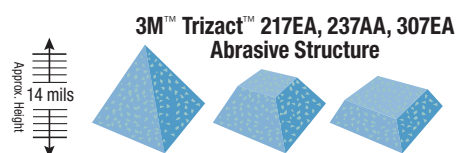


Microreplication was invented by 3M in the 1960s, and is used in a wide range of products such as optical films, reflective materials, electrical connectors and engineered abrasive belts and discs.

Why do Trizact abrasives generate better pre-plate finishes?

Trizact abrasives consist of three-dimensional structures containing multiple layers of abrasive mineral. As the structures wear down, fresh, sharp mineral is exposed. The result is an abrasive product that cuts and finishes consistently from the beginning to the end of its life – all the way to the backing.

As shown in the graphic at right, microreplication allows 3M to design abrasives with varying shapes and formulations, to control the level of breakdown, cut, finish and life.



Trizact abrasives provide consistent cut and finish over the entire life of the abrasive.

At 3M, product innovation is just the beginning!

Tech tip from the 3M CAM Center

Contact Wheels:

As you move into the finer grades, move away from serrated contact wheels and use lower durometer smooth face contact wheels; i.e., foam wheels, soft rubber wheels, soft cotton wheels, etc. Typically, a softer full face contact wheel will produce a finer finish that is easier to buff or plate than a stiff or serrated contact wheel.

Contact Wheel Dressing:

Wheel balance and trueness become increasingly more important as you progress into the finer grades. To dress your contact wheel: adhere a new piece of coated abrasive (grade 50 to 120) to a flat board or plate steel. Hold this lightly, but firmly against the rotating contact wheel until the wheel is concentric.

Note: It is important to use light pressure. Higher pressure can aggravate the wheel's out-of-round condition.

The 3M Customer Abrasive Methods (CAM) Center, located at 3M's St. Paul, Minnesota, headquarters, was established to help customers identify the most cost-effective combination of abrasives, equipment and techniques for their particular applications. At the CAM Center, evaluations are carried out under controlled, repeatable conditions using a wide array of production scale grinding,

polishing and finishing equipment, as well as in our on-site research and testing laboratories.

The services of the 3M CAM Center include applications development, process optimization, operator training and other technical support. Contact your local 3M representative for more information.



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