



Science.  
Applied to Life.™

# Centerless Grinding, Cylindrical Grinding & Flat Finishing

Long-lasting abrasive technology  
helps you achieve desired dimensions  
and finishes – featuring the  
NEW 3M™ Cubitron™ II 399F Belts

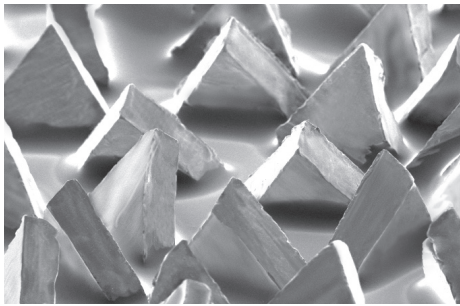


# Science behind technology

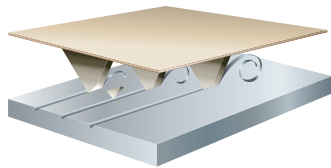
Newly designed 3M precision shaped agglomerate belt for deburring, centerless grinding, cylindrical grinding and flat finishing offers you unprecedented performance on a wide range of metals including carbon steel, stainless steel and other alloys – for outstanding quality, throughput and cost savings. Long lasting abrasive technology helps you achieve desired dimensions and finishes - right from the start!

That's where we can help, and it all starts with better science.

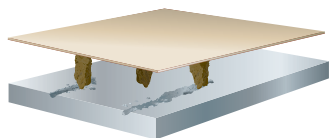
## The science of speed



**3M™ Cubitron™ II Abrasives** are comprised of precisely-shaped, uniformly-sized and vertically-oriented triangles of ceramic aluminum oxide. These self-sharpening triangles are designed to fracture as they wear, continuously forming new, super-sharp points and edges that slice cleanly through the metal like a knife, instead of gouging or plowing. This prevents heat from building up in the workpiece – reducing heat-related stress cracks and discoloration. And, because the abrasive itself stays cooler and sharper, it lasts up to four times as long as conventional ceramic grain belts!



As the triangular shaped grain wears, it continuously fractures to form sharp points and edges that result in faster, cooler cutting action.



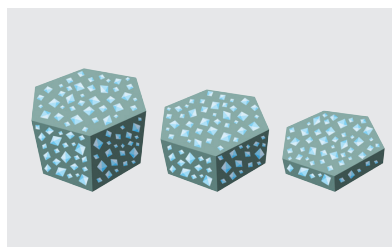
In contrast, conventional ceramic abrasive grain is irregular and blocky in shape. Instead of a clean, machining action, the grain tends to "plow" through the metal, causing heat to build up in the workpiece and the abrasive – resulting in a slower cut, shorter belt life and undesirable effects, such as burnishing.

## The science of consistent finishes

### 3M™ Trizact™ Abrasives

Derived from patented 3M microreplication technology, Trizact abrasives consist of very small, precisely-shaped three-dimensional structures distributed uniformly over the substrate. Unlike conventional abrasives, which are constructed from randomly spaced and irregular-shaped minerals, the uniform configuration of Trizact abrasives helps deliver more consistent finishes with higher cut rates, and cooler grinding and finishing temperatures.

The fast, fine, consistent finishes made possible with Trizact abrasives help reduce reject rates and improve worker productivity. In addition, Trizact abrasive belts can last up to five times longer than conventional belts.



## The science of performance

### 3M™ Agglomerate Abrasives



Newly designed 3M precision shaped agglomerate belt for deburring, centerless grinding, cylindrical grinding and flat finishing offers you unprecedented performance on a wide range of metals including carbon steel, stainless steel and other alloys – for outstanding quality, throughput and cost savings. Long lasting abrasive technology helps you achieve desired dimensions and finishes – right from the start!



### **Automotive**

Mirror brackets,  
grab bars, fender  
brackets, pick up  
truck bed rails, brush  
guards, luggage  
racks



### **Medical**

Hospital bed rails,  
handicap railing, iv  
poles, surgical trays  
and more

### **Food Industry**

Oven and refrigerator  
door handles, various  
restaurant equipment,  
gussets and hardware.







### 3M™ Cubitron™ II 399F Abrasive Belt

- Up to 2x life against competitive engineered abrasives
- Short break-in period
- Extended belt life
- Fewer rejects, less rework – higher productivity
- Water resistant polyester YF backing
- Aluminum Oxide grades 180 to 600



### 3M™ Cubitron™ II 784F Abrasive Belt

- 3M Precision Shaped Grain with a grinding aid provides more cutting power than AZ and AO minerals
- Fewer rejects, less rework – higher productivity
- Ideal for stock, scale and defect removal applications
- Strong value for medium to high pressure grinding and dimensioning
- Polyester waterproof backing
- Available in grades 36+ to 180+



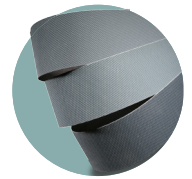
### 3M™ Cubitron™ II 984F Abrasive Belt

- 3M Precision Shaped Grain continuously fractures into sharp points that cut exceptionally fast, helping increase productivity
- Engineered to run cooler, reducing metal discoloration/oxidation and the chance of heat related stress cracks
- Precision Shaped Grain requires less pressure, which can mean less operator fatigue
- Belt life is significantly longer, producing more parts per belt and requiring fewer belt changes
- YF-weight backing excels in medium/high pressure stainless, cobalt chrome and nickel alloy applications



### 3M™ 384F Abrasive Belt

- Workhorse for general purpose metalworking applications
- Consistent performance on all metals at a great value
- Waterproof X-weight polyester backing
- Available in grades 36+ to 240+; P320-400

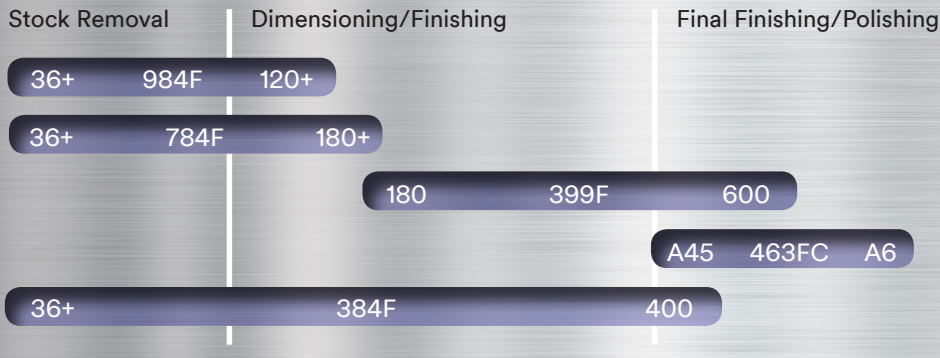


### 3M™ Trizact™ 463FC Abrasive Belt

- Consistent superior finish beginning to end
- Consistent cut
- Long life
- Offered in a finer grade range, for those materials that require silicon carbide minerals, or for finer finishes on all metals.
- Waterproof Y-weight polyester backing

3M™ Trizact™ Abrasive Grading	
Trizact Abrasive Grade	FEPA (P-Grade)
A5	P3000
A6	P2000
A10	P1500
A16	
A20	P1200
A30	
A35	P600
A45	P400
	P320
A60	
A65	
	P240
A80	
A90	P220
A100	
A110	P180
A130	P150
A160	P120

## Grinding/Finishing Capabilities



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