DURAMEDIA®

Products & Services

"The Best Start ...
to a Great Finish"

WASHINGTON MILLS
CERAMICS CORPORATION

Worldwide Leader in Ceramic Media Manufacturing

A Worldwide Leader

Washington Mills Ceramics manufactures precision ceramic media in Sun Prairie, Wisconsin, USA. We have been a worldwide leader in the manufacture of pre-formed media for the mass finishing market for over 50 years. To meet the ever-changing requirements of the mass finishing industry, Washington Mills Ceramics has the experience and engineers to design and make custom shapes, sizes, and formulations to meet your needs. We maintain a vast inventory of standard media, ready to ship on demand.

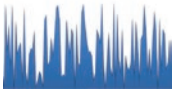
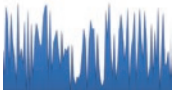
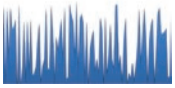
Products & Applications

Washington Mills Ceramics manufactures and distributes mass finishing media in a wide variety of composition choices including; non-abrasive, mild, medium and fast cutting to address specific customer applications. Our DURAMEDIA® ceramic line of products comes in various shapes such as; cylinders, triangles, cones, stars, wedges, pyramids and ellipses. Combined with our DURALUM XA and XM, plastic and steel media offerings, Washington Mills Ceramics covers a multitude of industries such as; Aerospace, Automotive, Jewelry, Medical/Dental, 3D Printing, tooling, and many other industries.

Experience & Testing Capabilities

Complementing our line of mass finishing media, Washington Mills Ceramics offers a parts processing laboratory that provides the early guidance and technical expertise necessary to choose the correct media for your application. The parts processing laboratory provides finishing solutions for your parts at no charge to you, without interrupting your day-to-day production.

TECHNICAL DATA

COMPOSITION	GRINDING PERFORMANCE	DESCRIPTION	APPLICATIONS	TYPICAL PHYSICAL PROPERTIES	PERFORMANCE DATA	SURFACE FINISH IMAGE
3DCML		DURAMEDIA® 3DCML is the fastest cutting ceramic media on the market. It is the more aggressive version of the 3DCM formula.	3DCML is designed for use in vibratory bowls and tubs in applications where maximum metal removal is the goal. It can be used on carbon steel, cobalt chrome alloys, nickel chromium alloys, or any metal 3D printed material.	Color: dark brown Specific Gravity: 3.26 Bulk Density: 125 lb/cf KHN Hardness: 865	Metal Loss = 3.52%	
3DCM		DURAMEDIA® 3DCM is a premium formula designed for the hard alloys common in 3D metal printing.	DURAMEDIA® 3DCM can be used on all metal alloy 3D printed parts. This material is exceptional on aerospace alloys such as titanium.	Color: dark brown Specific Gravity: 3.26 Bulk Density: 125 lb/cf KHN Hardness: 860	Metal Loss = 3.26%	
40		DURAMEDIA® 40 is a fast-cutting media made with fine-sized aluminum oxide abrasive.	DURAMEDIA® 40 can be used on all metals where fast stock removal is required.	Color: tan Specific Gravity: 2.64 Bulk Density: 100 lb/cf KHN Hardness: 555	Metal Loss = 3.23%	
PWS		DURAMEDIA® PWS uses a proprietary blend of fine abrasives. It has excellent cutting ability on the toughest alloys.	DURAMEDIA® PWS is made for use on aerospace products such as titanium, Inconel, and Stellite.	Color: off-white Specific Gravity: 3.20 Bulk Density: 105 lb/cf KHN Hardness: 570	Metal Loss = 3.20%	
120C		DURAMEDIA® 120C is the abrasive version of our high-density 120 formula.	DURAMEDIA® 120C is a long- wearing formula with excellent metal cut. It is typically used on tough aerospace alloys such as titainum.	Color: dark brown Specific Gravity: 3.15 Bulk Density: 125 lb/cf KHN Hardness: 850	Metal Loss = 3.15%	
H		DURAMEDIA® H is a tough, efficient, higher densiy media.	DURAMEDIA® H is a fracture resistant media for use in large vibratory applications and high energy equipment.	Color: tan Specific Gravity: 2.81 Bulk Density: 110 lb/cf KHN Hardness: 530	Metal Loss = 3.14%	
XC		DURAMEDIA® XC is consistently our largest seller. It is the more aggressive version of our C product formulation, with a greater concentration of coarse grain aluminum oxide.	DURAMEDIA® XC offers fast cutting performance designed for heat-treated steels. It has good cutting ability on teflon products and nickel-bronze castings.	Color: olive Green Specific Gravity: 2.62 Bulk Density: 95 lb/cf KHN Hardness: 550	Metal Loss = 3.13%	

TECHNICAL DATA (CONTINUED)

COMPOSITION	GRINDING PERFORMANCE	DESCRIPTION	APPLICATIONS	TYPICAL PHYSICAL PROPERTIES	PERFORMANCE DATA	SURFACE FINISH IMAGE
WK		DURAMEDIA® WK offers a unique bonding formulation and utilizes high concentrations of aluminum oxide blends which results in excellent stock removal.	DURAMEDIA® WK offers excellent deburring, a good attrition rate, and good surfuce enhancement. It is commonly used for blending machining lines and parting lines.	Color: tan Specific Gravity: 2.65 Bulk Density: 100 lb/cf KHN Hardness: 560	Metal Loss = 3.02%	
XA		DURALUM® XA is a tough virgin fused brown aluminum oxide abrasive containing no free silica.	DURALUM® XA is medium-cutting, long-wearing, and imapact-resistant over a wide range of demanding applications. DURALUM® XA is the ideal tumbling nugget.	Crystallography: alpha alumina in a hexagonal crystal Color: Brown Specific gravity: 3.92	Metal Loss =2.75% Typical Chemical Chemistry: Al_2O_3 : 96.05% TiO_2: 2.70% SiO_2: 0.70% Fe_2O_3: 0.10% CaO: 0.15% MgO: 0.30% 145 lbs / Cubic Foot	
C		DURAMEDIA® C has been the industry standard for years; it contains a coarser-grained aluminum oxide abrasive.	DURAMEDIA® C is a general purpose media for use on all ferrous and non-ferrous metals. DURAMEDIA® C leaves a bright finish on your finished part.	Color: dark blue Specific Gravity: 2.59 Bulk Density: 90 lb/cf KHN Hardness: 535	Metal Loss = 2.74%	
50/SC		DURAMEDIA® 50/SC is a relatively good-wearing, mild-cutting silicon carbide media.	DURAMEDIA® 50/SC can be used prior to brazing or welding of all metals.	Color: beige w/ black grain Specific Gravity: 2.39 Bulk Density: 90 lb/cf KHN Hardness: 465	Metal Loss = 2.05%	
ECH		DURAMEDIA® ECH is a general-purpose media containing aluminum oxide abrasive.	DURAMEDIA® ECH provides a medium metal cut on all materials with a good finish. Typical applications include die castings and metal stampings.	Color: brown Specific Gravity: 2.57 Bulk Density: 90 lb/cf KHN Hardness: 550	Metal Loss = 2.53%	
30		DURAMEDIA® 30 is a moderately abrasive material that utilizes a fine grain aluminum oxide to produce smoother finishes.	DURAMEDIA® 30 produces fine finishes on all softer metals including aluminum diecastings. It can be used on copper and brass with proper compounding.	Color: light gray Specific Gravity: 2.57 Bulk Density: 95 lb/cf KHN Hardness: 570	Metal Loss = 2.50%	
LWII		DURAMEDIA® LWII is a lightweight ceramic media with a good cut-to-wear ratio.	DURAMEDIA® LWII was specially developed as a cleaner-running alternative to plastic media in aerospace applications.	Color: beige Specific Gravity: 1.85 Bulk Density: 65 lb/cf KHN Hardness: 495	Metal Loss = 2.2%	
XM		DURAMEDIA® XM is a sintered ceramic tumbling nugget that is hard, durable, and dense.	DURAMEDIA® XM is a coloring agent for burnishing all metals. It is also used as a driver for abrasives.	Color: brown to black Specific Gravity: 3.50 Bulk Density: 140 lb/cf KHN Hardness: 895	Metal Loss = 2.11%	
140		DURAMEDIA® 140 is the preformed version of our DURALUM® XM product, which is extruded to shapes and sizes that address applications which seek to minimize lodging.	DURAMEDIA® 140 is long wearing and provides light radiusing on all metals. It can be used as a burnisher and with chemically accererated deburring products.	Color: dark brown Specific Gravity: 3.20 Bulk Density: 125 lb/cf KHN Hardness: 895	Metal Loss = 2.11%	
120		DURAMEDIA® 120 is a high-density abrasive-free media.	DURAMEDIA® 120 will produce a light radius on all metals and is excellent with chemically accelerated products.	Color: brown Specific Gravity: 3.15 Bulk Density: 120 lb/cf KHN Hardness: 890	Metal Loss = 2.11%	
20/F		DURAMEDIA® 20/F is a versatile, general purpose, mildly abrasive media that combines a low media wear rate with a reasonable metal removal rate.	DURAMEDIA® 20/F is used for mild deburring on all metals and plastics. It can be used in place of plastic media on parts to be anodized. DURAMEDIA® 20/F will burnish with proper compounding. In addition, it can also be used prior to brazing.	Color: white Specific Gravity: 2.46 Bulk Density: 85 lb/cf KHN Hardness: 495	Metal Loss = 1.70%	
10		DURAMEDIA® 10 is a very hard, fine grained, abrasive-free media.	DURAMEDIA® is used for light deburring on all metals. When used with a proper compound it can be used as a burnisher.	Color: white Specific Gravity: 2.42 Bulk Density: 85 lb/cf KHN Hardness: 520	Metal Loss = 1.55%	
FB		DURAMEDIA® FB is a hard and long-wearing media that contains no abrasive.	DURAMEDIA® FB is primarily used as a burnisher on all ferrous and non-ferrous metals.	Color: white Specific Gravity: 2.52 Bulk Density: 95 lb/cf KHN Hardness: 570	Metal Loss = 1.02%	

TECHNICAL DATA - PLASTICS

COMPOSITION	DESCRIPTION	APPLICATIONS	TYPICAL PHYSICAL PROPERTIES	AVAILABLE SHAPES (SIZES)	SURFACE FINISH IMAGE
DPHP230	DURAMEDIA® DPHP230 contains an aluminum oxide abrasive blend to aggressively achieve lower cycle times while producing a visual isotropic surface finish.	DURAMEDIA® DPHP230 can be used for all applications requiring rapid metal removal while avoiding impingement issues that can be associated with harder deburring media.	Color: Light Brown Bulk Density: 77 lb/cf	Pyramids: 1/4, 3/8, 1/2	
3DPM	DURAMEDIA® 3DPM is a plastic formula containing a proprietary blend of abrasives specifically designed for use with 3D printed parts.	DURAMEDIA® 3DPM is primarily designed for single-step finishing of plastic 3D printed parts and for secondary finishing of 3D printed metal parts.	Color: Light Green Bulk Density: 80 lb/cf	Cones: 9/16	
DPLD40MC	DURAMEDIA® DPLD40MC is the more aggressive version of our general-purpose DPLD40. It has very similar finishing characteristics with slightly faster cycle times.	DURAMEDIA® DPLD40MC can be used on all ferrous and non-ferrous metals where fast stock removal is required.	Color: Lighter Green Bulk Density: 72 lb/cf	Cones: 3/8, 7/16, 3/4, 1 Pyramids: 3/4, 1-1/8	
DPLD40	DURAMEDIA® DPLD40 is a fast-cutting media which provides a smooth, matte finish. It is a general-purpose media for all ferrous and non-ferrous metals.	DURAMEDIA® DPLD40 is commonly used for removing machining burrs, die cast flash, and blending parting lines.	Color: Green Bulk Density: 72 lb/cf	Cones: 3/8, 7/16, 9/16, 7/8, 1, 1-1/4, 1-1/2 Pyramids: 1/4 Wedge: 3/4 x 1/2 Paraboloid: 1-1/2	
DPLD10	DURAMEDIA® DPLD10 provides a very mild cutting action producing a low microinch preplate finish.	DURAMEDIA® DPLD10 can be used for surface preparation of parts which require buffing, burnishing, or plating.	Color: White Bulk Density: 65 lb/cf	Cones: 3/8 Pyramids: 1-1/8 Tristar: 1-1/8	

TECHNICAL DATA - STEEL

COMPOSITION	DESCRIPTION	APPLICATIONS	TYPICAL PHYSICAL PROPERTIES	AVAILABLE SHAPES (SIZES)
Carbon Steel	DURAMEDIA® Carbon Steel is a non-consumable media that produces a burr-free, bright, smooth surface. Its durability and increased working pressure make steel the ideal media for a variety of finishes.	DURAMEDIA® Carbon Steel is most commonly used in burnishing applications. It can also be used for light edge break or deflashing of die castings.	AISI/SAE 1015 most common, other chemistries in the 1008-1022 range also used	Round (Balls): 1/8 through 1 Cones: 3/16, 5/16, 1/2, 25/32 Ball Cones: 1/8, 5/32, 3/16, 1/4, 5/16 Oval Ball: 1/8, 5/32, 3/16, 5/16 Diagonals: 1/8, 3/16, 1/4, 5/16, 3/8
Stainless Steel	DURAMEDIA® Stainless Steel is used for the same type of processes as carbon steel. It offers additional flexibility with softer, non-ferrous materials and greater corrosion resistance.	DURAMEDIA® Stainless Steel is used for corrosion-sensitive steel applications. 300-series stainless steel is recommended when complete freedom from rust is essential.	304 most common, 400 series also available	Ball Cones: 3/16, 1/4 Diagonals: 1/4 Other shapes and sizes available upon request

Parts Processing Laboratory

A Value-Added, No Cost Solution for Our Customers

An essential first step in any mass finishing operation is selecting the best type of media for the desired finish. The parts processing laboratory at Washington Mills Ceramics provides the early guidance necessary to choose the right media that provides the most cost-effective and efficient mass finishing performance. The parts processing laboratory at Washington Mills Ceramics Corporation works directly with customers to improve their processes.

GETTING STARTED

STEP 1 CONTACT US

Call, email or send in parts for mass finishing media trials at no cost to you. Describe any mass finishing issues to an experienced technician, and we will explain exactly how our services can improve your process.

STEP 2 SUBMIT SAMPLES

Send in multiple part samples for testing along with information about your current finishing time, media, compound and equipment – all of this helps us, help you.

STEP 3 CONTINUE PRODUCTION

The Parts Processing Laboratory offers guidance on various mass finishing media capabilities without disrupting your day-to-day production requirements. When testing is complete, we'll send you our findings.

Contact us today at 888.676.1846 or ceramicsales@washingtonmills.com

DURAMEDIA® STOCK SIZE CHART - FRACTIONS

ANGLE CUT CYLINDERS 30°	10	20	30	40	WK	F	ECH	C	XC	FB
3/16 x 11/32		•	•	•		•		•	•	
5/16 x 9/16	•	•	•	•	•	•		•	•	
7/16 x 25/32						•	•	•	•	
1/2 x 7/8		•	•	•						
5/8 x 1-1/8					•	•	•	•	•	
5/8 x 1-1/2	•		•	•						
7/8 x 1-1/2							•	•	•	
7/8 x 1-3/4		•	•							

ANGLE CUT CYLINDERS 45°	10	20	30	40	WK	F	ECH	C	XC	FB
3/8 x 5/8		•	•							

ANGLE CUT CYLINDERS 60°	10	20	30	40	WK	F	ECH	C	XC	FB
1/4 x 9/16						•		•		
5/16 x 9/16								•		
3/8 x 9/16								•		

ANGLE CUT TRIANGLES 20°	10	20	30	40	WK	F	ECH	C	XC	FB
3/8 x 3/16						•		•	•	
3/8 x 1/4		•	•	•	•					
3/8 x 3/8								•	•	
5/8 x 3/16								•	•	
5/8 x 1/4			•							
5/8 x 3/8								•	•	
5/8 x 9/16								•	•	
5/8 x 5/8		•	•	•	•					
7/8 x 5/16								•	•	
7/8 x 3/8		•	•	•	•					
7/8 x 5/8							•			
7/8 x 7/8		•	•	•	•					
7/8 x 15/16							•	•	•	
1-1/8 x 5/16								•	•	
1-1/8 x 3/8			•	•						
1-1/8 x 15/16								•	•	
1-3/8 x 1/2		•						•	•	
1-7/8 5/8			•					•	•	

CONES	10	20	30	40	WK	F	ECH	C	XC	FB
3/8 x 1/2										•
1/2 x 5/8		•	•		•					
11/16 x 3/4										•
3/4 x 7/8	•	•	•	•	•			•	•	
1-1/4 x 1-1/4	•	•	•	•	•					

ANGLE CUT STARS 20°	10	20	30	40	WK	F	ECH	C	XC	FB
5/8 x 1/4		•	•	•	•		•		•	
7/8 x 5/16								•	•	
7/8 x 3/8			•		•					
1-1/8 x 3/8		•	•		•			•	•	
1-3/8 x 1/2			•	•						

WEDGES	10	20	30	40	WK	F	ECH	C	XC	FB
5/8 x 3/4							•	•		
1 x 1-1/8			•				•	•		
1-1/2 x 1-5/8							•	•		

PYR/TET MIX	10	20	30	40	WK	F	ECH	C	XC	FB
1-1/4 x 1								•		

DURAMEDIA®50, 120, 120-C and 140 are specialty products. These ceramic media are available in many of the shapes and sizes listed above on a made-to-order basis only.

Additional shapes, sizes and compositions are available upon request to meet our customers' specific requirements.

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General Inquiries, Sales and Customer Service

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