



WASHINGTON MILLS



“Washington Mills’ commitment is to ensure that all processes consistently supply products and services of the highest quality which meet or exceed our customers’ expectations.”



Our Company

Fusing the World's Minerals

An Industry Leader

Washington Mills is a world leader in the manufacture and distribution of abrasive materials and fused mineral products. As one of the largest producers in the world with sales and manufacturing facilities around the globe, our capabilities and capacity are unrivaled in the industry. From macro grits to micro grits to custom specialty fusions, our fused minerals are used in hundreds of different industries and applications. Our business is providing our customers with the best value by offering the highest quality products at competitive prices – we pay attention to that business.

A History of Excellence

Established in 1868, Washington Mills was the first producer of abrasive grain in the United States. From its early beginnings as a single product producer of Emery, Washington Mills has evolved into a company that offers a highly diversified array of products ranging from standard abrasive grains to specialty fused minerals available in a multitude of grit sizes. The company's commitment to the industry and dedication to growth and innovation has made Washington Mills one of the largest and most respected abrasive grain and fused mineral producers in the world today.

It's Our Policy

Our quality policy is more than words — we stick by our commitment to quality. With over 130 years of experience in the industry, Washington Mills has established its credentials by consistently delivering on its quality policy. From the acquisition of raw materials to the shipping of finished product, we test for quality at each stage of the production process. Our meticulous quality procedures include analysis, audits, certifications and spot checks for every product throughout the entire production process.

Integrity, Dependability, Customer Focused

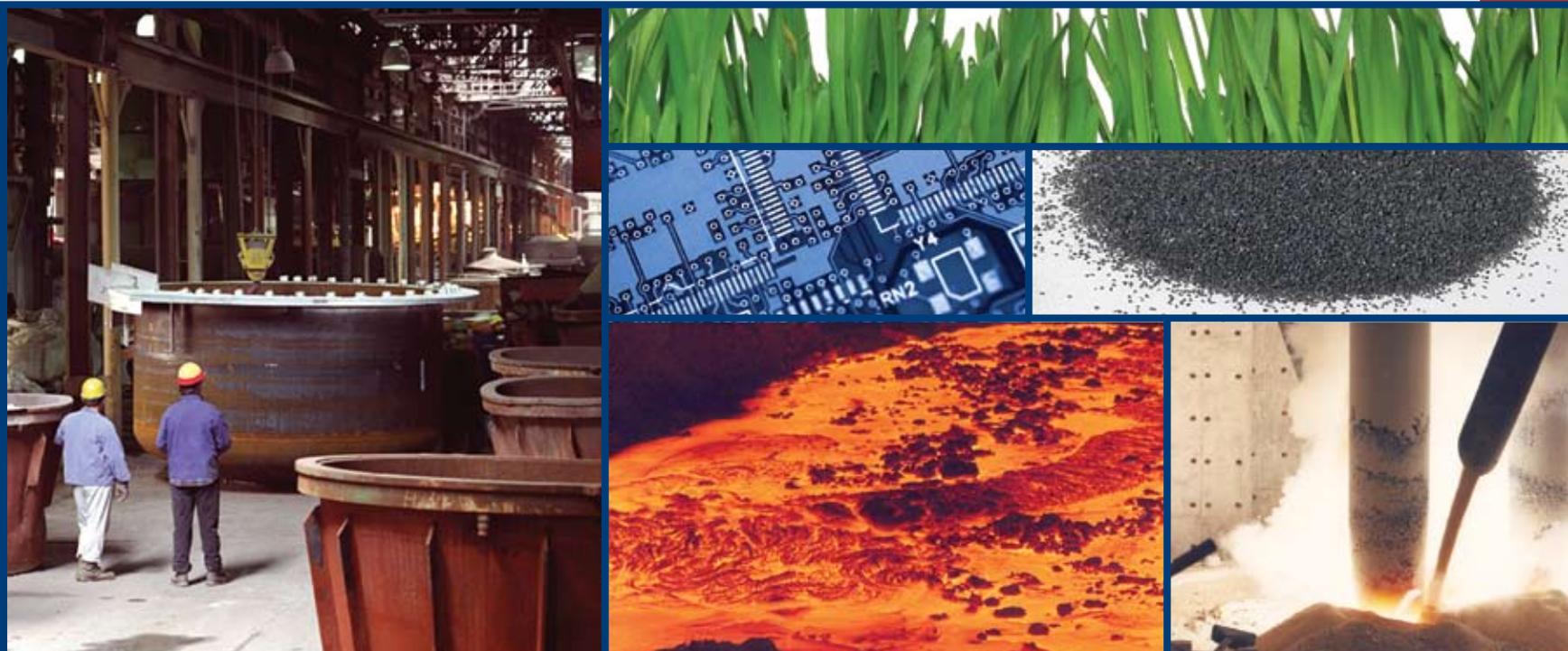
Our people and our customers are unquestionably the most important stakeholders in our business. At Washington Mills, we stand for integrity in everything we do, and our dedicated employees and strong core values have earned us a reputation as a trusted business partner. Honest, dependable and consistent — we believe in delivering value and exceeding our stakeholders' expectations every day.

Recycling Our Way Into the Future

As a company dedicated to respecting the environment in which it operates, Washington Mills has a simple if ambitious goal – to make one hundred percent use of raw materials with zero waste. We're committed to reducing the environmental impact of land filling spent material, and make every effort to recycle your spent material whenever possible. Our goal of a completely closed loop manufacturing system helps the environment and reduces our customers' costs.

Meeting Your Material Needs Today and Tomorrow

With four separate fusion plants and seven separate crushing and finishing plants across the globe, we have unparalleled capabilities and capacity to rapidly respond to your material needs. Our skilled material engineers and ceramic specialists, superb analytical laboratory, and unique pilot scale R&D facility, keep us a step ahead of the competition. Our technical expertise and long history of fusion excellence not only ensure that we can meet your product needs, we take it a step further by working with you towards continual product advancement and development of new or improved products to suit your needs.



Our Products

A one-stop shop for your material needs

Washington Mills offers a rich array of abrasive grains and specialty fused minerals from its multi-plant locations. We are the only manufacturer of Brown Fused Aluminum Oxide, White Fused Aluminum Oxide, Silicon Carbide, and Boron Carbide in North America and have the world-wide capability to serve you well. Our products are available in a wide range of grit sizes and are precision engineered to meet your application challenges.

Some of our products include:

Alumina-Zirconia	Emery	Potassium Fluoroborate
Alumina Bubbles	Ferro Silicon	Silica Fume
Alumina Silica Fines	Fused Silica	Silicon Carbide
Boron Carbide	High Chromium Aluminum Oxide	Spinel
Brown Aluminum Oxide	Iron Pyrite	Steel Media
Ceramic Media	Mag-Chrome	Toll Fusion of Various Minerals
Chrome Alumina	Magnesium Oxide	White Aluminum Oxide
Cryolite	Mullite	Zirconia
Custom Fusions	Pink Aluminum Oxide	Zirconia Mullite

Don't see what you're looking for?

Let us help you make the material you're looking for. Our New Product Development Service is uniquely equipped with special trial size equipment and skilled engineers to tackle your material challenge. Our engineers have created an impressive range of new exotic fused minerals for customers looking to test new fused mineral formulations and to improve the performance of existing materials.



New Product Development

Developing Partnerships through New Products

Washington Mills is the only raw material manufacturer to offer new product development services to customers, complete with integrated resources for research, engineering and manufacturing.

“You choose it, We fuse it”

Washington Mills has invested in equipment specially designed for small-scale product development work and sample size custom fusions so that you may test and produce your next product with no costly capital investment.

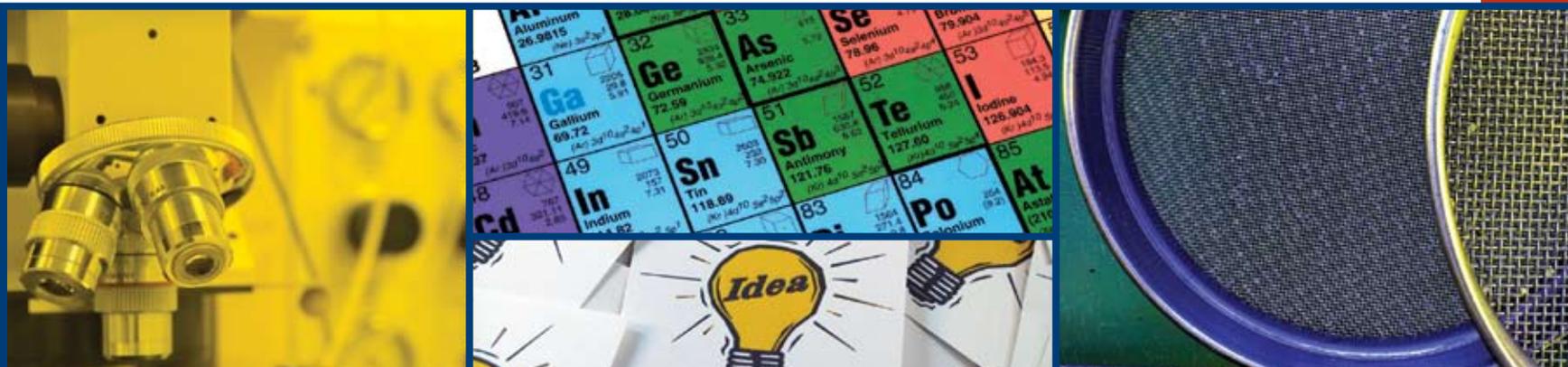
Our services include:

- pilot scale furnacing capabilities
- a fully equipped pilot processing plant designed to create experimental materials
- crushing, grinding, and magnetically separating materials
- surface treating and heat treating new product compositions
- identifying new process steps

We can produce a broad range of trial fusions for you ranging from five pounds to three hundred + tons – with precise, predictable qualities and extensive knowledge of the issues to be considered when “scaling up” from lab to production. Our ceramic and fusion specialists have created an impressive range of new, exotic fused materials and improved the performance of existing materials.

Laboratory Services

Our Laboratory Services Group has extensive testing capabilities and is staffed by a team of full-time chemists and technicians experienced in determining the chemical and physical properties of many different materials. Using advanced laboratory capabilities, we maintain exacting control over chemical composition, purity and crystal structure, and can assure the consistency needed to meet the most critical applications. We make use of the most current methods of analysis and tools including: instrumental, analytical, physical measurements, X-Ray Diffraction Analysis and X-Ray Fluorescence Analysis (XRF).



Our Markets

Properties, Applications, Industries ... the diversity defines us

Properties

Washington Mills' fused materials are carefully engineered to perform a multitude of tasks across a wide variety of industries and specific applications. The natural properties of our materials coupled with our proprietary manufacturing processes and fusion expertise make our products highly effective in many different applications.

Our materials have a multitude of distinct properties and are commonly known for their excellence in:

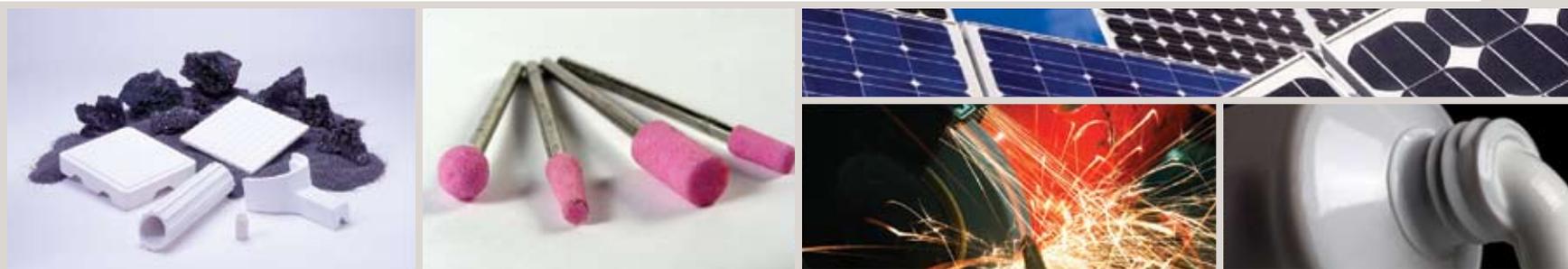
Anti-skid	Grinding	Neutron Absorption	Scale Removal
Burnishing	Heat Resistance	Piercing	Sharpening
Chemical Stability	Hot Strength	Polishing	Slicing
Coating	Insulating	Precision Cutting	Surface Preparation
Corrosion Resistance	Lapping	Pressure Blasting	Thermal Conductivity
Cutting	Metal Finishing	Profiling	Thermal Stability
Deburring	Metal Separation	Sanding	Wear Resistance

Applications

Washington Mills' grains and powders touch more things than meet the eye. Highly diversified in the types of industries in which they are used, our fused materials are engineered for use in many applications — some of which are listed here:

- » Wiresawing silicon wafers
- » Producing desired finishes on metals
- » Crucial wear parts
- » Protecting foundry furnaces
- » Making high-tech ceramic shapes
- » Enhancing slag chemistry
- » Wear resistance in laminate flooring
- » Polishing jet engine blades

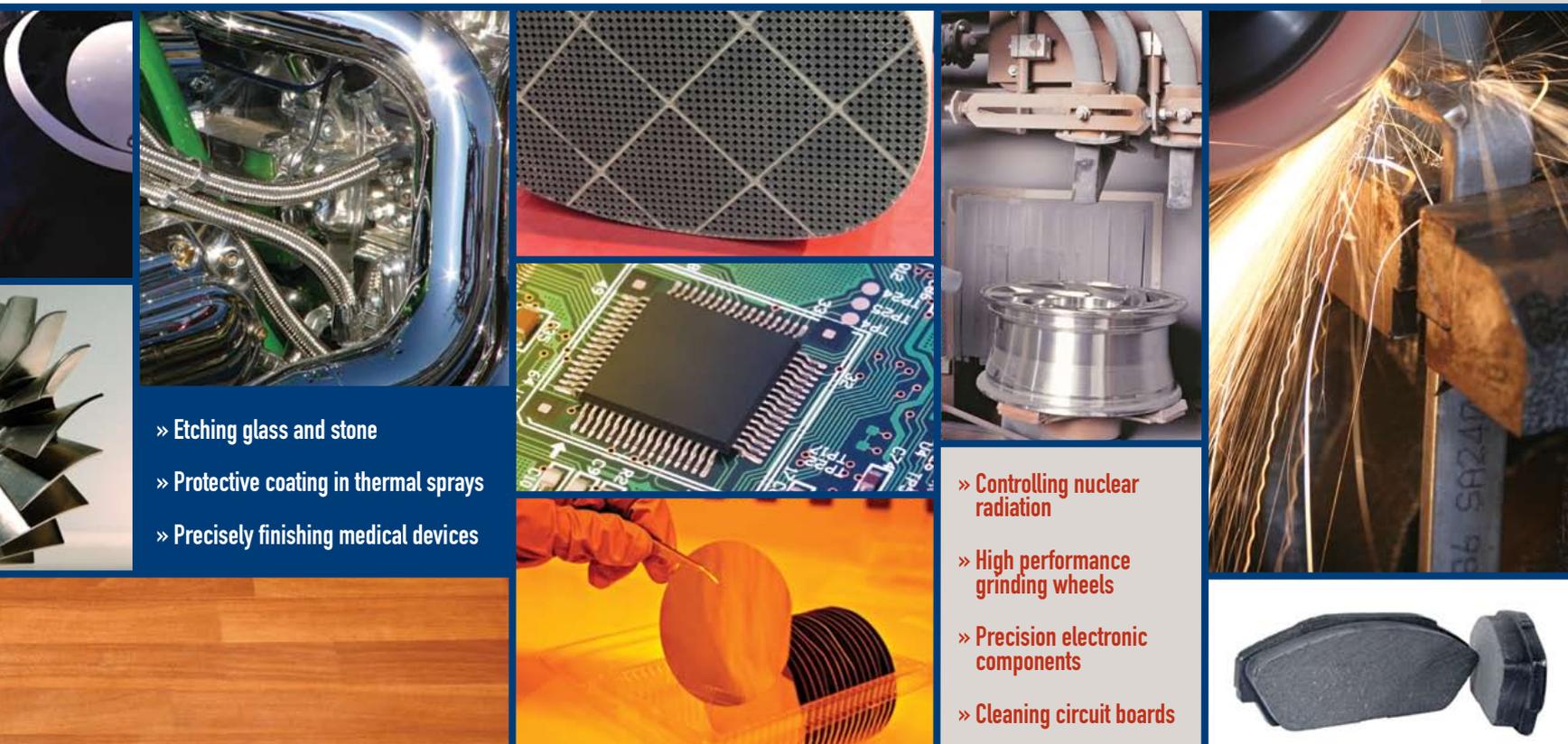




Industries

From Aerospace to Cosmetics – Clean Energy Technologies to Metallurgy – High Tech Ceramics to Thermal Sprays – Washington Mills’ products perfect your products and technologies. Washington Mills’ fused materials can be found hard at work in the following industries:

Aerospace	Cosmetics	Medical Devices	Photovoltaic
Advanced Ceramics	Electric Component Manufacturing	Metal Finishing	Powder Spray
Automotive	Investment Casting	Metallurgical	Precision Cutting
Bonded & Coated Abrasives	Iron & Steel	Metal Separation	Refractory
Buffing Compounds	Laminates	Mining	Semiconductor
Clean Energy	Lapping	Nuclear	Thermal Spray
Coatings	Mass Finishing	Oil & Gas	Wiresawing



- » Etching glass and stone
- » Protective coating in thermal sprays
- » Precisely finishing medical devices

- » Controlling nuclear radiation
- » High performance grinding wheels
- » Precision electronic components
- » Cleaning circuit boards

Production Process

Where Value is Created

Raw Materials

Washington Mills carefully selects the finest raw materials, sourced from around the world. The materials are shipped directly to our fusion plants where they are stored before processing.

Fusion Expertise

Washington Mills' state-of-the-art fusion plants are equipped with the latest furnacing technology and operated by our teams of highly skilled furnace operators. Our numerous furnaces ensure reserve capacity, allowing us to respond to the diverse material demands of our customers. Owning our own fusion plants gives us total process control and maintains strict quality control of our crude production from start to finish. The depth of our furnacing expertise is evident in the quality of our final products.

Crushing and Grading

Our high capacity crushing and grading facilities enable us to do things others can't. We've been perfecting our processing techniques for over 130 years and through continual innovation, we've developed some of the finest processing systems in the business. Our advanced grain processing machinery is designed to shape and size the grain to your exact specifications, allowing us to produce grains and powders specifically engineered to your needs.

Packaging and Shipping

Our automated bagging systems package to order according to your choice of: super sacs, drums, or bags. Our shipping department works to find the lowest cost and most reliable route available in order to deliver the product to your door in the shortest amount of time possible.





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WASHINGTON MILLS

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