

CARBOREX

Silicon Carbide



WASHINGTON MILLS



A CARBOREX SiC Furnace on-line at more than 2000 degrees Celcius.



Skilled and dedicated employees makes high quality CARBOREX silicon carbide crude – safely and efficiently.

Our Vision

“Innovative leadership in the manufacturing of high quality Silicon Carbide for growth markets”

Washington Mills AS is an integrated company for manufacturing and processing CARBOREX silicon carbide. It is a wholly owned subsidiary of Washington Mills, North America’s largest manufacturer of silicon carbide, aluminum oxide and other advanced specialty electro-fused minerals. Washington Mills AS manufactures crystalline silicon carbide crude, and is one of the world’s largest producers of high quality micro grits and sub-micron powders. Our technical expertise, commitment to quality, and our ability and enthusiasm to supply the growing silicon carbide demands of our customers, sets Washington Mills apart from the competition.

Our Products

“High quality Silicon Carbide micro grits, tailored to meet the toughest specifications”

CARBOREX’s high hardness and outstanding high-temperature properties make it an excellent material in many different applications. Washington Mills’ advanced micro grit technology and capabilities have earned Washington Mills a sterling reputation as an exceptional supplier of silicon carbide micro grits to the semiconductor, photovoltaic and advanced ceramic industries.

The CARBOREX microgrits are processed through the following steps: Crushing, shaping, flotation, chemical treatment to remove impurities, drying, magnetic separation, dust removal, and sieving. The grits are further milled in jet-mills, before being classified by sieving, air classification, and/ or sedimentation in water.

CARBOREX grits and powders are manufactured to precise shapes, sizes and chemistries in order to suit many industries and applications including: wire sawing silicon wafers, ceramic body armor, semiconductor materials, high temperature heating elements, diesel particulate filters, thermal sprays, and many others. Our silicon carbide grains and powders can be made to your exact size, chemistry and shape specifications.

Our Production

“Leading the way in advanced micro grit processing technology, using highly skilled workers, proprietary technology, and advanced R&D capabilities”

CARBOREX crude is produced in a batch operation by heating high-purity silica sand and low-sulphur petroleum coke in electrical furnaces at high temperatures. Meticulous quality control over the manufacturing process of crude allows Washington Mills total process control of the raw material used to make CARBOREX micro grits.

Washington Mills constructed a state-of-the-art microgrit processing plant equipped with the latest crushing and classification technology. Our new plant has the advanced capability to produce high quality micro grits and sub-micron powders from 50 µm down to less than 1 µm (micron).

Our highly skilled process engineers have the technical skills to manufacture micro grits that meet the growing demands of our customers – in both quantity and technical specifications.

Quality control, in both the furnace and processing plant, is an integrated part of our production process. Chemistry, size distribution, surface area, bulk density, grain shape, abrasive efficiency and other relevant parameters are carefully measured and monitored to maintain close control of production, and to ensure the superior quality of the product.



Computer control of micro grit processing lines, using real time data to check for quality and consistency in the end product.

The Quality Assurance System of Washington Mills AS is approved by Det Norske Veritas Certification AS to NS-EN ISO 9001:2000, which further ensures predictable and consistent results in our production and focuses on superior customer satisfaction.





Our state-of-the-art processing lines are carefully engineered to produce CARBOREX micro grits using the best crushing and classification technology.

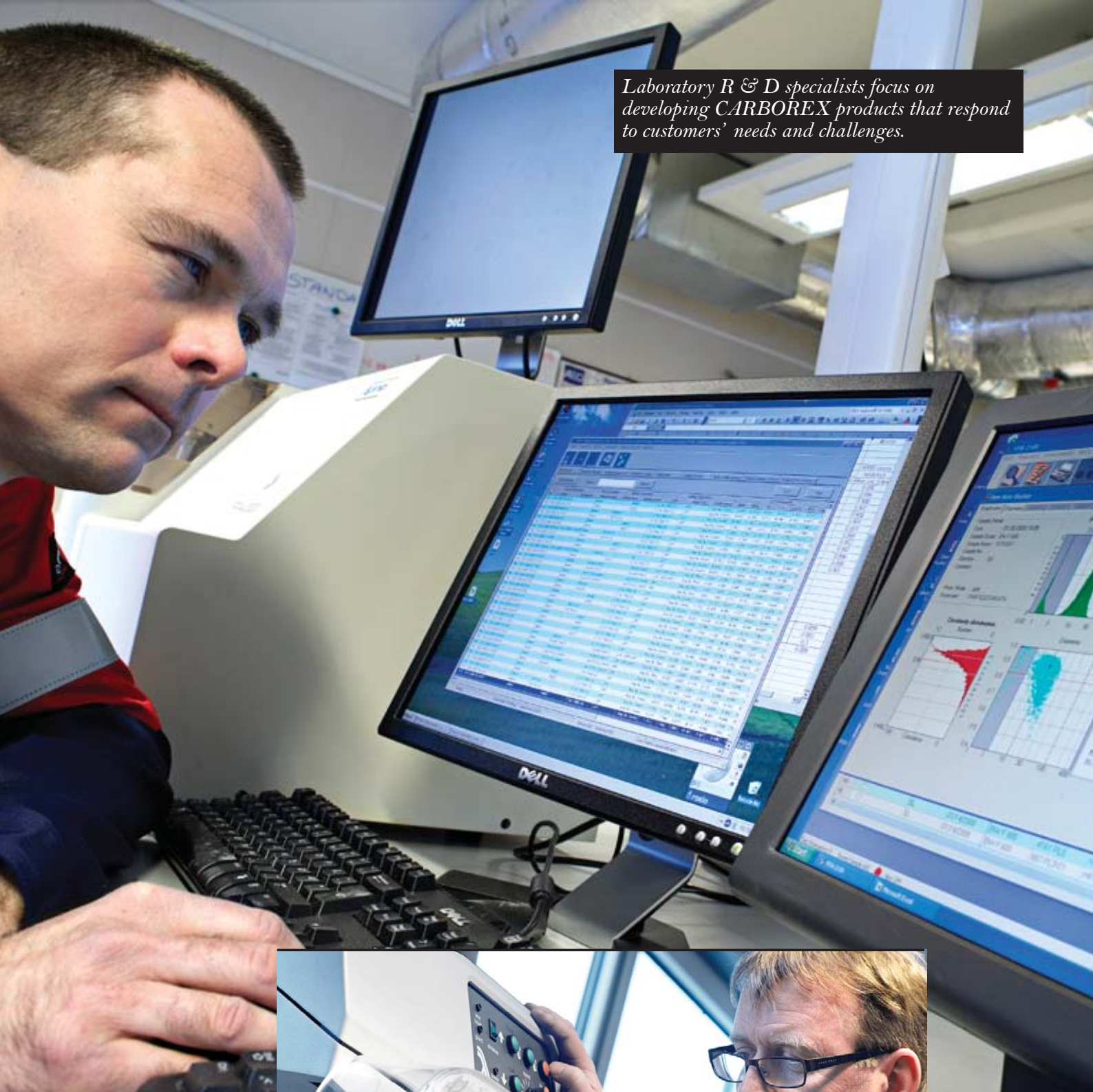
Our Research & Development

*Specialists moving borders through advanced Research
& Development, and state of the art equipment.*

Washington Mills' laboratory and research and development specialists are well equipped to meet the continuing technical challenges that our customers face in their growing markets. The range of analytical work available in our labs in Norway and the USA include all physical measurements, including BET surface testing, analytical chemistry, X-Ray Diffraction and X-Ray Fluorescence. Washington Mills' research and development experts focus on developing CARBOREX products that respond to customers' needs and challenges.

Joint research work with customers has resulted in specific product improvements and process modifications that have benefited our customers' performance. Collaborative Research and Development is an on-going program at Washington Mills that strives for continual product improvement and helps to improve our customers' products and technologies. Washington Mills makes research and development a priority for customers interested in improving their understanding of silicon carbide in order to improve their processes and make their products better.

Laboratory R & D specialists focus on developing CARBOREX products that respond to customers' needs and challenges.



Laboratory researcher using a test wiresaw machine to run trials on the cutting efficiency of CARBOREX micro grits.



Washington Mills AS is dedicated to growing its business and respecting the community and the environment in which it operates.

Our Sales Organisation

“Competent, flexible and service oriented – a sales team dedicated to understanding and servicing our customers’ needs”

The sales activities of Washington Mills AS are managed from our head office in Norway and our German sales office. The products are sold on a direct basis through our own representatives, or through highly competent agents and distributors located in selected countries all over the world. Sales, customer service, logistics and other procedures are integrated parts of our Quality System, which emphasize flexibility, delivery reliability, and customer satisfaction.

WASHINGTON MILLS

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