

NORTON

SAINT-GOBAIN

WINTERTransforming
surfaces
...and beyond

FIXED DIAMOND WIRE

PREMIUM DIAMOND WIRE FOR SLICING, WAFERING, CUTTING, CROPPING AND BRICKING

Norton Winter patented plated diamond wire allows for superior part quality, high material yield, fast cut rate and long product life. The diamond wire is designed with premium quality diamond, a unique plating structure, and exposed diamond edges for superior performance on hard to cut materials.

KEY APPLICATIONS AND MATERIALS

SLICING | WAFERING | CUTTING | CROPPING AND DEBURRING OF
DIFFICULT TO CUT MATERIALS SUCH AS SIC, ALN, SI, SAPPHIRE,
CERAMICS, PRECIOUS METAL, GLASS, QUARTZ, MAGNETIC MATERIAL

KEY MARKET SEGMENTS

MEDICAL EQUIPMENT | POWER ELECTRONICS | SEMICONDUCTORS | SOLAR

www.nortonabrasives.com



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WINTER**FIXED
DIAMOND WIRE**

FEATURES & BENEFITS

- Tightly controlled diamond size and concentration for consistent slicing performance
- Uniform wire diameter and even diamond distribution with no diamond clustering
- Features engineered diamond with high diamond exposure ratio
- Allows for accurate part dimensions, including kerf, part shape and TTV (total thickness variation)
- Delivers a superior surface finish with minimal edge chipping
- Onsite application support and process fine tuning available

Norton Diamond Wire Availability and Common Applications

CORE WIRE DIAMETER (MM)	DIAMOND SIZE (UM)	FINISHED WIRE DIAMETER (MM)	APPLICATION
0.1	8 - 16	0.12	Wafering (Si, Ceramics, Optical glass)
0.12	10 - 20	0.14	Wafering (Si, Ceramics, optical glass)
0.13	25 - 35	0.19	Wafering (Crystals, Ceramics)
0.15	30 - 40	0.23	Wafering/Cropping (SiC, AlN, Sapphire, Hard Ceramics)
0.175	30 - 40	0.25	Wafering/Cropping (SiC, AlN, Sapphire, Hard Ceramics)
0.35	45 - 55	0.45	Bricking/Cropping (Si, Sapphire, Hard Ceramics)

Custom Availability: Specifications can be engineered upon request for optimized processes

OEMs: PSS, Takatori, NTC, IWT, Logomatic, Toyo, etc

— GRAIN DISTRIBUTION —

Case Study # 1

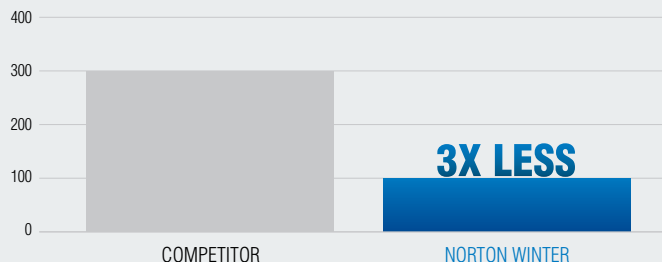
APPLICATION: Slicing of 150 mm SiC crystals

WHEEL SPEC: Norton Winter 0.25mm

MACHINE: Wiresaw for hard material wafering

RESULTS: Able to make 150mm SiC wafer in <12hrs with superior quality. Results in 3X less material to be removed in the finishing step.

MATERIAL REMOVAL REQUIRED AFTER SLICING WITH FIXED DIAMOND WIRE



Case Study # 2

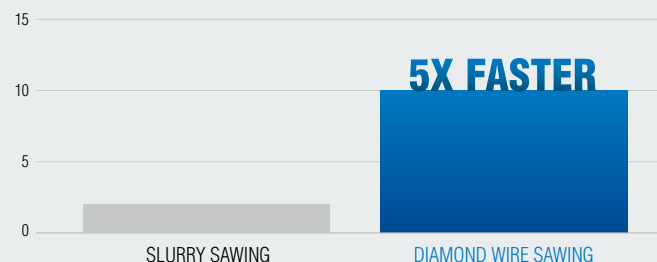
APPLICATION: Slicing of hard ceramics

WHEEL SPEC: Norton Winter 0.12mm

MACHINE: Wiresaw for hard material wafering

RESULTS: Able to cut ceramics 5X faster. 5X more throughput compared to other processing technology with exceptional part quality with less chipping.

CUT RATE RATING



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NO-RISK TEST

