



RESHAPING THE WORLD OF TOOLROOM GRINDING

Through extensive research and development in grinding wheel technology, Saint-Gobain Abrasives brings you Norton Vitrium³ – a new generation, patent-pending bond science.

Our exclusive bond platform provides unprecedented grain adhesion with expanded product versatility across many toolroom applications.

Norton Vitrium³ technology is now available in toolroom wheels with an expanded stock offering of popular sizes. Vitrium³ toolroom wheels are also available custom-made to your exact specification requirements.

www.nortonindustrial.com



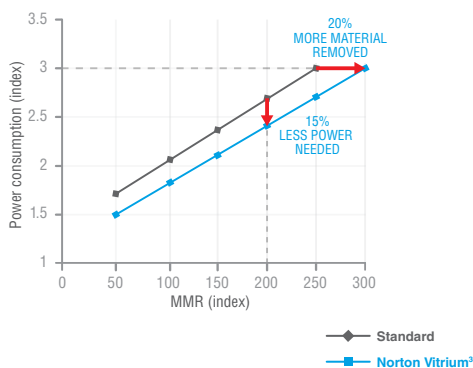
A REVOLUTIONARY BOND THAT LOWERS PROCESS COST IN THREE WAYS

- 1. Cool Cutting** – Improved holding power with a lower bond-to-abrasive ratio exposes a larger grain surface area enabling the wheel to cut freely, increasing speed of cut.
- 2. Precise Profile** – Reduced dressing time and dresser wear with the superior grain-holding properties of Norton Vitrium³ bond significantly improve wheel form and corner holding as compared to other bond systems.
- 3. High Speed** – Norton Vitrium³ bond provides the ultimate wheel strength - allowing testing and rating for high speed operations. Machines that can work at higher feed rates, speed, and pressure, significantly increase production.

Test 1: Cool Cutting
REDUCED BURN AND POWER CONSUMPTION

The graph shows the increase in power consumption as Material Removal Rate (MRR) goes up. At an MRR index of 200, Norton Vitrium³ wheel requires 15% less power to remove the same amount of material. This means less heat is generated on the work piece, resulting in less burn.

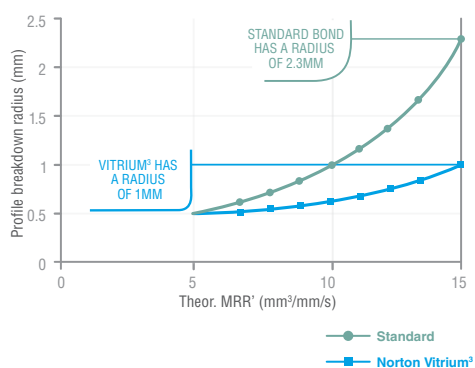
At a power consumption index of 3, Norton Vitrium³ wheel removes 20% more material than the standard wheel, at the same power consumption, reducing heat generated on the work piece.



Test 2: Precise Profile
PROFILE HOLDING AFTER FIVE CYCLES

After five continuous cycles (without dressing) the profile radius of standard wheels has a considerably higher wear than Norton Vitrium³ wheels.

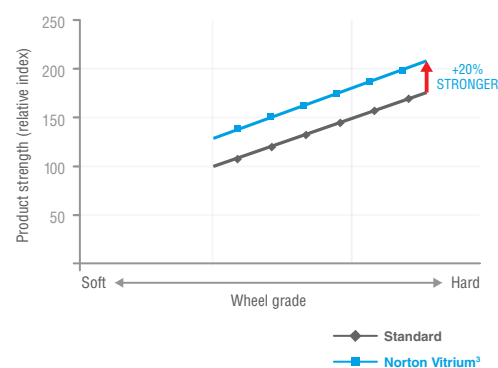
For a given Material Removal Rate (MRR), Norton Vitrium³ wheels hold their profiles better than the standard wheels.



Test 3: High-Speed
WHEEL STRENGTH

The product strength and improved grain adhesion of Norton Vitrium³ bond allow softer-grade wheels to be qualified for high speed grinding. At the same grade, a Norton Vitrium³ wheel is stronger than any other comparable product.

This allows the wheels to be tested and rated to run at higher speeds.



To eliminate burn, reduce dressing time, and/or hold a precise profile, upgrade to improved performance with Norton Vitrium³ wheels – available in ceramic alumina Norton Quantum NQ or SG, and aluminum oxide 32A or 48A abrasives.

Complete recommendations are available using the Toolroom Grinding Wheel Selection Guide (Form #7505).

Contact your local sales representative or Customer Service for more details.

BEST – NORTON Vitrium³ with NQ or SG Abrasive | **BETTER** – NORTON Vitrium³ with 32A or 48A Abrasive | **GOOD** – Defer to BETTER Product

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FORM #8581 REV. 03/16
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