

SAPPHIRE BLUE

A new ceramic material for abrasive applications

Product description

The hardness and toughness of this abrasive material are the key parameters for metal grinding. The different requirements for maximum cutting rate and superfine surface quality have resulted in a wide range of grinding tools; but in many applications compromises have still been necessary in the selection of abrasives.

Hermes research and development into ceramic materials has now produced an abrasive which will not only effect the process goals of performance and surface quality, but will directly influence the concept of the manufacturing process itself.

The key to this technological breakthrough is the development of a very fine crystalline structure, permitting fine control of grit fracture in the micro-range. This ensures constant generation of new cutting edges - for long tool life, good surface quality an low surface roughness.



Grit benefits

- High hardness
- High toughness
- Microcrystalline structure
- Microfracture behaviour promotes formation of new cutting edges (self-sharpening)
- Sharp cutting edges
- Improved surface quality, with simultaneously improved stock removal rate, due to multiple cutting edges
- Longer life

Applications

- Turbine blades
- Tools
- Golf clubs
- Castings and forgings
- Welding seams in automotive and tank construction
- Steel, brass, aluminium alloys
- High-temperature Ni-based alloys



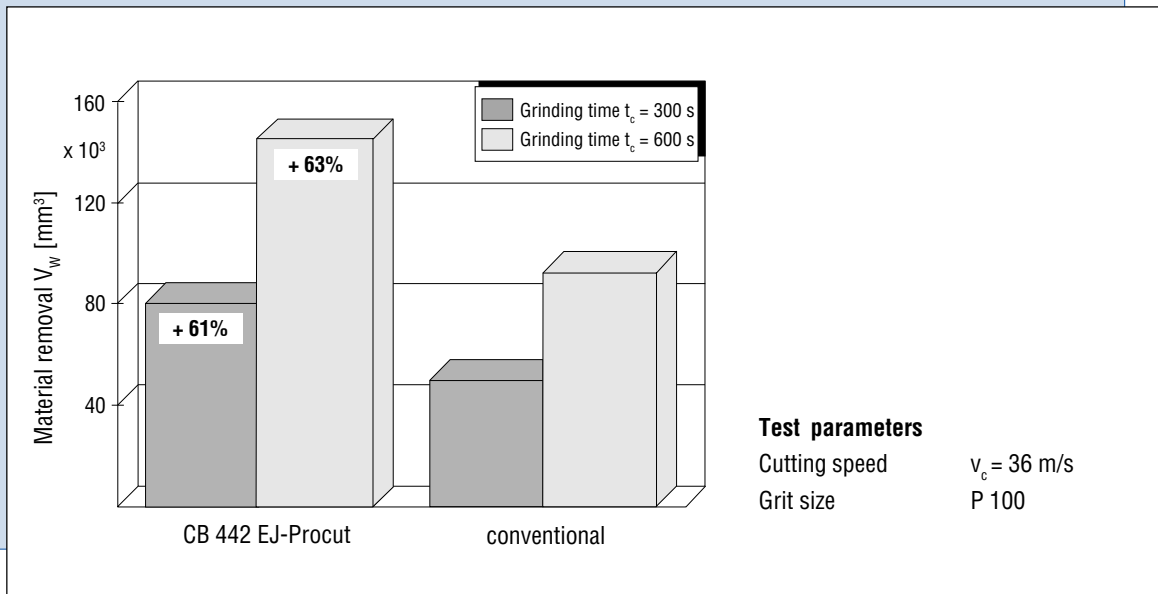
Products

| Kind of tool | Type | Code | Grit range | Applications |
|----------------------|------------------|-------|--|---|
| Grinding belts | CB 447 Z | 44730 | + 36 - + 80 | Rough machining |
| | CB 478 Z | 47833 | # 36 - # 80 | |
| Grinding belts | CB 404 J-flex | 40460 | P 80 - P 180 | Form and profile grinding |
| | CB 432 EJ | 43203 | P 60 - P 80, P 120 - P 240, P 320, P 400 | |
| | CB 442 EJ-Procut | 44204 | P 80 - P 120, P 220 | |
| Fiber grinding discs | CB 444 X | 44420 | # 36 - # 60 | Rough machining of welding seams and burrs |
| | CB 444 J | 44400 | P 80, P 100 | |

Application recommendations

| | | | |
|--|---------------------|---------------------|--|
| High pressure for formation of new micro cutting edges during the grinding process | High cutting speeds | Hard contact wheels | Surface finish 1 - 2 grit sizes finer than with conventional aluminum oxide abrasives |
|--|---------------------|---------------------|--|

Material removal comparison



Hermes Abrasives Ltd.

524 Viking Drive
 Virginia Beach, VA 23452
 P.O. Box 2389
 Virginia Beach, VA 23450

Phone 757-486-6623
 Phone 1-800-464-8314
 Fax 757-431-2370
 Fax 1-800-243-7637
www.hermesabrasives.com

Distributed by: