



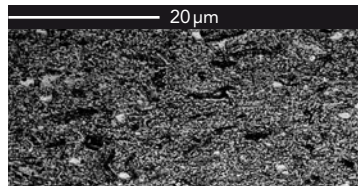
NEXT® range

A global supplier

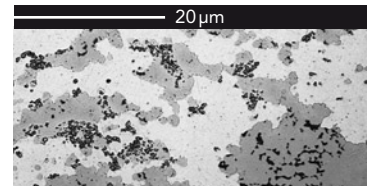
- Eurotungstene supplies all types of binders to the Diamond Tool industry (Cobalt, NEXT®, Keen® and additives) from the most comprehensive product range in the Diamond Tool sector. Founded in 1949, Eurotungstene is renowned for the high quality of its products and was the first company to develop pre-alloyed powder NEXT® in 1997. Being a base material for the Diamond Tool industry and being composed of alloyed metals (Cobalt, Iron and Copper), NEXT® can be mixed with traditional additives.

Main advantages of the NEXT® concept

- This concept of pre-alloyed powders offers both technical and economical advantages:
 - NEXT® is more cost-effective and its price remains more stable than traditional binders.
 - Excellent metal distribution on a much finer scale and greater homogeneity than other standard mixtures.
 - High protrusion and strong diamond retention with enhanced tool life and performance.

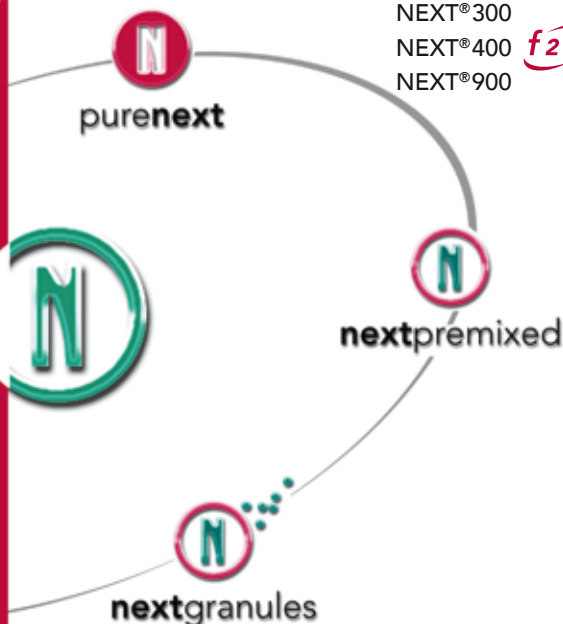


Microstructure of a sintered piece (hot pressed at 750°C and after etching) of NEXT® 100



Microstructure of a sintered piece (hot pressed at 750°C and after etching) obtained with a conventional mixture

The NEXT® range



● Pure NEXT®

NEXT®100
 NEXT®200
 NEXT®300
 NEXT®400 *f2s*
 NEXT®900

NEXT® premixed

Binary premixed
 NEXT® with Fe or WC

MX1180
 MX1480
 MX2480
 MX3480
 MX4885 *f2s*

Ternary premixed
 NEXT® with
 Fe + Br or Fe + WC

MX1660
 MX1760

NEXT® granules

NEXT®101
 NEXT®201
 NEXT®301
 NEXT®401 *f2s*
 MX1481
 MX1661
 MX3481
 MX4885-1 *f2s*

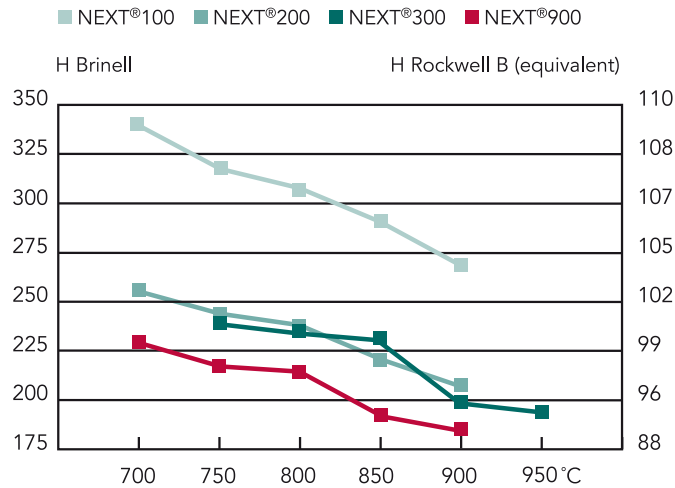
Other grades upon request.



purenext

- **Pre-alloyed powders are composed of 3 metals: Cobalt, Iron and Copper.**
The range consists in 4 grades of pure NEXT® whose properties can be optimized by mixing with traditional additives.

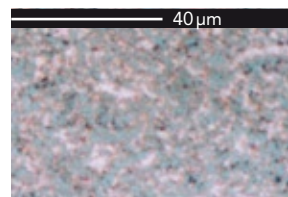
Hardness as a function of sintering temperature (hot pressing)



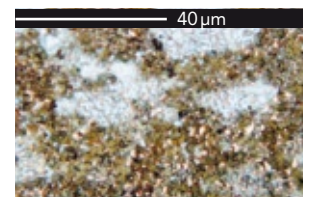
Pure NEXT®

NEXT® 100	NEXT® 200	< 3% Cu NEXT® 300
<ul style="list-style-type: none"> - Cutting performances optimized by mixing with traditional additives. - Generally recommended for blade superior to 500mm. - Grade available with oxidation protection. 	<ul style="list-style-type: none"> - Exceptional free cutting ability. - Generally recommended for blade inferior to 500mm. 	<ul style="list-style-type: none"> - Low copper content. - Designed for laser welding (backing). - High ductility and high torque resistance.

< 3% Co NEXT® 900
<ul style="list-style-type: none"> - Excellent combination with traditional additives. - Good performances obtained for stone polishing.



NEXT®100



NEXT®900

Sintering temperatures

	Pure NEXT®			
	NEXT®100	NEXT®200	NEXT®300	NEXT®900
Minimum	825 °C	700 °C	775 °C	825 °C
Recommended for most applications	850 °C	725 °C	825 °C	850 °C



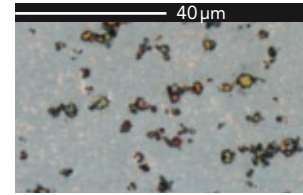
nextpremixed

● **Main advantages:**

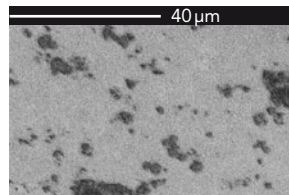
- Outstanding homogeneity and excellent dispersion in the bond.
- Optimization of tool performances.
- Matched with specific requirements by addition of traditional additives.

Binary premixed

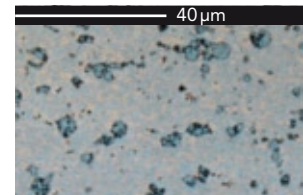
	+ 20% Fe	+ 20% WC
80% NEXT®100	MX1480	MX1180
	<ul style="list-style-type: none"> – Fe powder increases ductility. – Cutting performances optimised by mixing with traditional additives. 	<ul style="list-style-type: none"> – WC powder increases abrasion resistance. – For most grinding and polishing applications.
80% NEXT®200	MX2480	
	<ul style="list-style-type: none"> – Fe powder increases ductility. – Optimized sawing performances of NEXT®200 when long blade life is required. 	
80% NEXT®300	MX3480	
	<ul style="list-style-type: none"> – Excellent laser welding properties. – Specially designed for backing. 	



Sintered piece of MX1480



Sintered piece of MX2480



Sintered piece of MX1180

Ternary premixed

	+ 20% WC + 20% Fe	+ 20% Br (85/15) + 16% Fe
60% NEXT®100	MX1660	MX1760
	<ul style="list-style-type: none"> – Good abrasion resistance without too much hardness. – Mostly used for sawing of medium abrasive materials. 	<ul style="list-style-type: none"> – Bronze increases the free cutting.

Sintering temperatures

	NEXT® premixed					
	MX1180	MX1480	MX2480	MX3480	MX1660	MX1760
Minimum	825 °C	750 °C	700 °C	750 °C	800 °C	725 °C
Recommended for most applications	850 °C	800 °C	750 °C	825 °C	850 °C	850 °C
Special recommendation	800 °C polishing	–	–	–	850 °C core drills	–

Sintering certificates available upon request.



nextgranules

Typical granule size:
63 – 450 μm

● **Main advantages of NEXT® granules:**

- Same properties as non-granulated NEXT® powders (after sintering).
- Increased cold pressing ability.
- Improved flow properties.
- Easy debinding.
- Very low generation of dust while handling and processing.

Range of NEXT® powders available in granulated versions are:

- Pure NEXT®: NEXT®101, NEXT®201, NEXT®301.
- NEXT® premixed: MX1481, MX1661, MX3481.

Other premixed powders can be granulated upon request.

- NEXT®400 and MX4885 powders are specially designed for the free sintering process. They combine both technological and economical advantages of the pre-alloyed solution.



purenext

NEXT®400



nextpremixed

MX4885 :
85% NEXT®400
+ 15% special iron



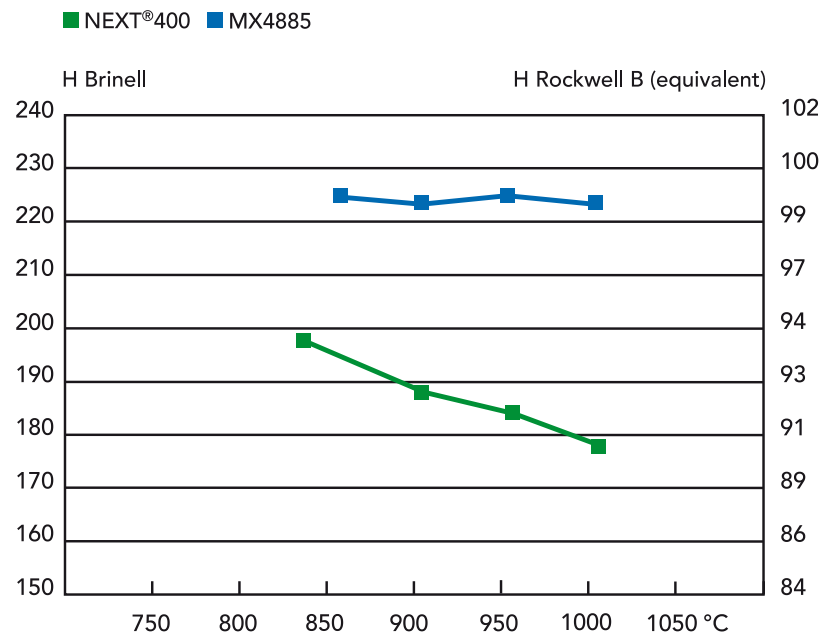
nextgranules

NEXT®401,
MX4885-1

Hardness

(free sintering)

Specimen cold-pressed at 200 MPa (51.5% relative green density), then free sintered under hydrogen (heating rate: 150°C/hour. – Holding time: 1 hour).



Sintering temperatures

	NEXT®400	MX4885	NEXT®401	MX4885-1
Minimum	875°C	900°C	875°C	900°C
Recommended for most applications	900°C	950°C	900°C	950°C

Packing

- 25 kg metal drums containing polyethylene bag sealed under inert gas.
Consult us for available drum size.

After opening and to avoid any oxidation of the powder, customer should use the dessicant bags placed in the drums for further usage.

@bout

- Download at www.eurotungstene.com (online catalogue):
 - Technical data sheets.
 - Material Safety Data Sheets.**Sintering certificates available upon request.**

