Additives

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.

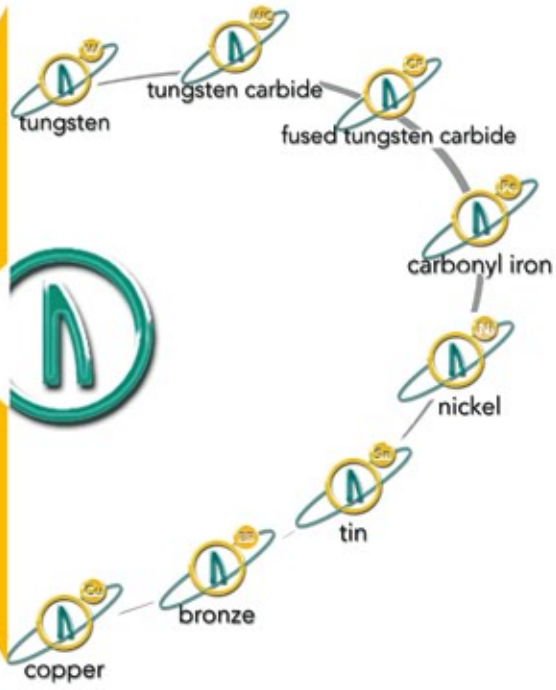
Founded in 1949, eurotungstene is renowned for the high quality of its products. To complete its range of powders for Diamond Tools and better meet customer's requirements, eurotungstene provides a wide range of additives powders:

– Tungsten, Tungsten Carbide and Fused Tungsten Carbide powders
– Copper, Tin and Bronze powders
– Carbonyl Iron powders
– Nickel powders

Our Cobalt, NEXT® and Keen® premixed range is manufactured with these additives.

This wide range of powder additives allows eurotungstene to offer a global solution for the Diamond Tool industry.

The Additive range



Optimization of Cobalt, NEXT® and Keen® formulas

eurotungstene® METAL POWDERS
a member of ERAMET

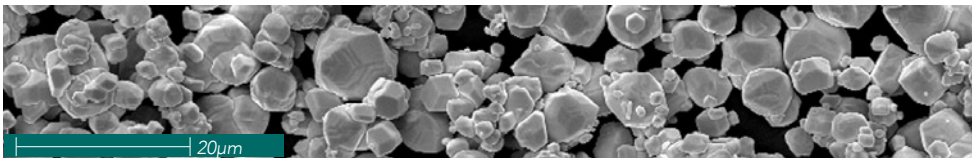
Tungsten range

(produced by eurotungstene)

Eurotungstene produces high quality Tungsten base powders and offers you the most adapted grade selection.
A very narrow grain size distribution allows an excellent dispersion in the matrix.

Tungsten metal powders

The addition of Tungsten improves the diamond retention.



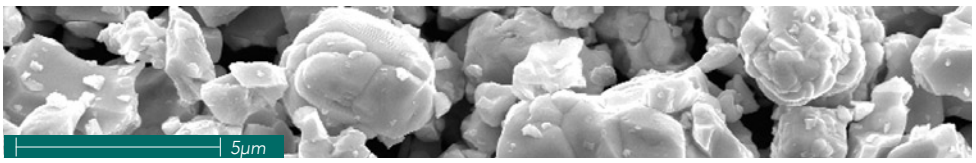
SEM aspect of AW2130 powder

	WP 50	WP 30	WP 15	WP 10	WD 5000	WD 8000
	AW2110	AW2118	AW2123	AW2130	AW3105	AW3110
Fisher grain size (µm)	1.3 - 1.7	2.1 - 2.9	4.0 - 5.0	5.4 - 6.6	10.5 - 13.5	8.0 - 9.0

Other grain sizes available upon request

Tungsten Carbide powders

The addition of CW powder in the matrix increases the hardness and the abrasion resistance of the tools.



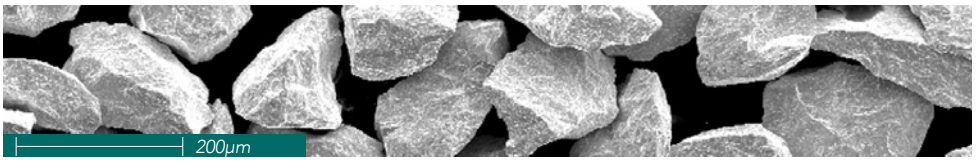
SEM aspect of CW5522 powder

	CWF 09	CWP 40	CWP 30	CWP 15	CWD
	CW5000	CW5400	CW5522	CW5622	CW5722
Fisher grain size (µm)	0.8 - 1.0	2.2 - 2.8	2.6 - 3.4	3.1 - 3.9	4.5 - 5.5

Other grain sizes available upon request

Fused Tungsten Carbide powders

These powders provide a great hardness and an outstanding abrasion resistance.



SEM aspect of CF1126 powder

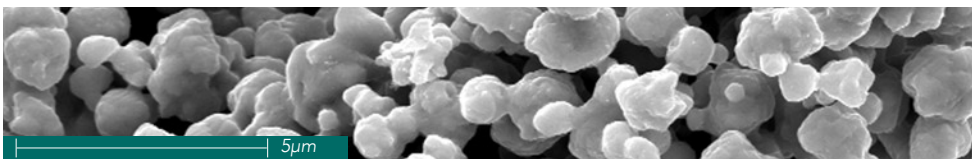
	CF1118	CF1122	CF1126	CF1129	CF1133	CF1136
Microns	250 - 450	150 - 250	106 - 150	75 - 106	38 - 75	<45
Mesh (Tyler)	40 - 60	60 - 100	100 - 140	140 - 200	200 - 400	400

Other grain sizes available upon request

Nickel range

(produced by eurotungstene)

These powders provide easier densification and better sintering ability than standard Nickel powders.



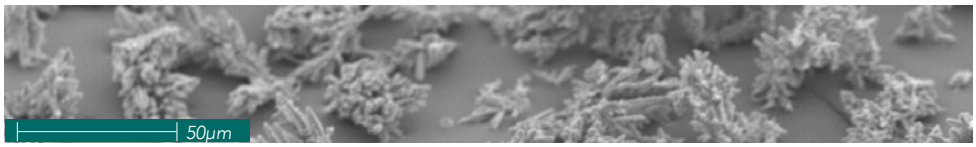
SEM aspect of Ni2800A powder

	Ni2800A	Mi7020
Fisher grain size (µm)	2.0	2.0
Nickel content (O excluded) %	99.8	97.8
Cobalt content (%)	–	2.0

Copper range
(produced by ecka-granules)

- This range of Copper powders improves free-cutting and allows the adaptation of the bond to the cutting of soft material.

electrolytic Copper powders



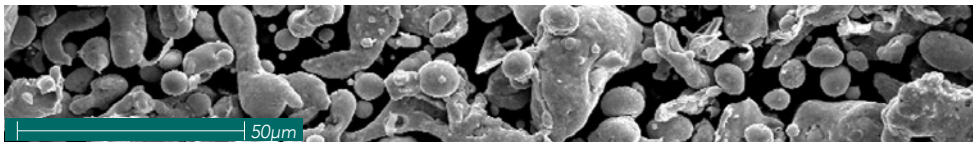
SEM aspect of CU1182 electrolytic copper powder

Code	Designation	Oxygen content (%)	Apparent density (g/cm³)	Cut (µm)
CU 1182	CH-L10	<0.25	0.9 - 1.1	<45
CU 1185	CH-L12	<0.20	1.1 - 1.3	<45
CU 1191	CH-M13	<0.20	1.2 - 1.4	<63
CU 1197	CH-M15	<0.15	1.4 - 1.6	<63
CU 1225	CH-S;28822/G	<0.15	2.0 - 2.3	<63
CU 1232	CH-S n°53163/G	<0.20	1.8 - 2.2	<63
CU 1233	CH-S n°53163/G 2% PA	<0.20	1.8 - 2.2	<63
CU 1307	CH-UF10	<0.45	1.6 - 2.3	<15
CU 5650	CH-FS	<0.12	1.75 - 1.95	<63
CU 5660	CH-FFL	<0.17	0.95 - 1.1	<63
CU 5761	CH-FL	<0.17	1.2 - 1.35	<63

atomized Copper phosphorous powder

These powders ensure a great consistency of purity and grain size distribution.

This high quality powder is the cheapest way to introduce phosphorus in the bond.



SEM aspect of CU2274 copper phosphorous powder

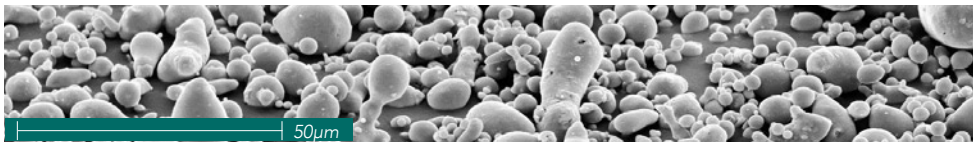
Code	Designation	Alloy composition	Apparent density (g/cm³)	Cut (µm)
CU 1336	94/6 AK-63	Cu94/P6	Typical 3.6	<63
CU 1341	94/6 AK-100	Cu94/P6	4.0 - 5.0	<100
CU 2274	25 GO 93/7 - 200	Cu93/P7	1.5 - 3.0	<75

Other grain sizes available upon request

Tin range
(produced by ecka-granules)

- These Tin powders can be used straight as an additive or be pre-mixed to fine Copper powders to make customized Bronze compositions.

atomized Tin powders



SEM aspect of SN2383 atomized tin powder

Code	Designation	Alloy composition	Apparent density (g/cm³)	Cut (µm)
SN 1099	SN AS < 45	Sn > 99.90	3.0 - 4.0	<45
SN 2379	30 GN-250	Sn > 99.85	3.4 - 4.0	<63
SN 2381	30 GN-350	Sn > 99.85	3.2 - 3.8	<45
SN 2383	30 GN-450	Sn > 99.85	1.8 - 2.5	<32

Brass

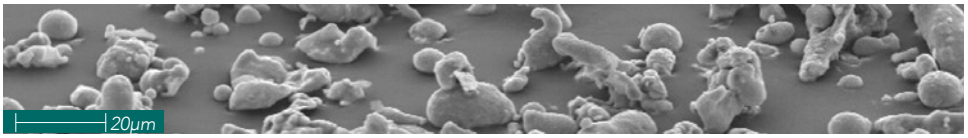
Code	Designation	Oxygen content (%)	Apparent density (g/cm³)	Cut (µm)
LA 1414	CU-Zn V AS-45	-	Typical 3.5	<45

Other grain sizes available upon request

Bronze range
(produced by ecka-granules)

- This range of Bronze powders improves free-cutting and allows the adaptation of the bond to the cutting of soft materials.

atomized Bronze powders
Irregular shape



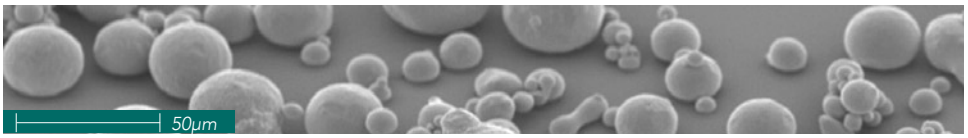
SEM aspect of BR2314 atomized Bronze powder

Code	Designation	Alloy composition (%)	Apparent density (g/cm³)	Cut (µm)
BR 2297	25 GR 60/40-325	Cu60-Sn40	2.5 - 3.2	<45
BR 2299	25 GR 60/40-450	Cu60-Sn40	2.5 - 3.2	<32
BR 2302	25 GR 80/20-325	Cu80-Sn20	2.3 - 3.0	<45
BR 2305	25 GR 80/20-450	Cu80-Sn20	2.6 - 3.4	<32
BR 2314	25 GR 85/15-450	Cu85-Sn15	2.6 - 3.4	<32
BR 2328	25 GR 90/10-325	Cu90-Sn10	2.9 - 3.5	<45
BR 2331	25 GR 90/10-450	Cu90-Sn10	2.9 - 3.5	<32
BR 2351	25 GRA 80/10/10-200	Cu80-Sn10-Ag 10	2.9 - 3.3	<75
BR 4043	25 GR 85/15-325 sp828	Cu85-Sn15	2.6 - 3.2	<45

Other grain sizes available upon request

Spherical shape

Atomized in dedicated plant, these powders assure great consistency of purity and grain size distribution.



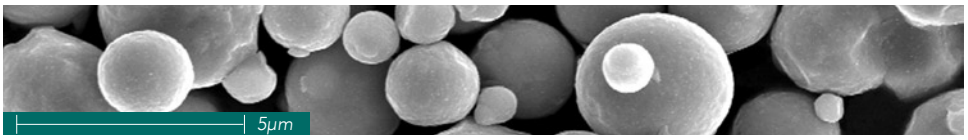
SEM aspect of BR1351 atomized spherical Bronze powder

Code	Designation	Alloy composition (%)	Apparent density (g/cm³)	Cut (µm)
BR 1351	89/11 AK<0.045	Cu89-Sn10.7-P 0.3	Typical 4.4	<45

Other grain sizes available upon request

Carbonyl Iron
(produced by BASF and Sintez)

- This powder gives a homogeneous dispersion in the bond due to its fine particle size and narrow grain size distribution.



SEM aspect of FE2010 powder

Designation	Typical laser D50 (µm)	Fe (%)	C (%)	N (%)	O (%)
FE2010	6.8	>99.5	<0.10	<0.02	<0.30
FE2000	6.8	>99.5	<0.04	<0.01	<0.30

Packing

- Eurotungstene standard packing: metal drums with inner polyethylene bag.
  Consult us for available drum sizes.

@bout

- Download at www.eurotungstene.com (online catalogue)
  – Technical data sheets
  – Material Safety Data Sheets.

  Sintering certificates available upon request.

eurotungstene®
METAL POWDERS
a member of ERAMET

BP 152X - 9 rue André Sibellas - 38042 Grenoble Cedex 9 - France - Phone: +33 4 76 70 54 54 - Fax: +33 2 41 93 48 24
e-mail: eurotungstene@erametgroup.com - web site: www.eurotungstene.com