



MOMENTIVE

performance materials

Boron Nitride Powder Grades AC6028, AC6103, and AC6091

Momentive Performance Materials' boron nitride (BN) powder grades AC6028, AC6103, and AC6091 are large agglomerates of well-defined individual ($\sim 10 \mu\text{m}$) crystals. These low-to-medium-density grades are processed to achieve tailored surface areas; they are pourable and exhibit good lubrication and thermal conductivity properties in finished products.

AC6028

AC6028 has an average particle size in the range of 100-150 μm and a surface area of 3.6 m^2/g .

AC6103

AC6103 has a larger particle size of 250 μm and a higher surface area than AC6028.

AC6091

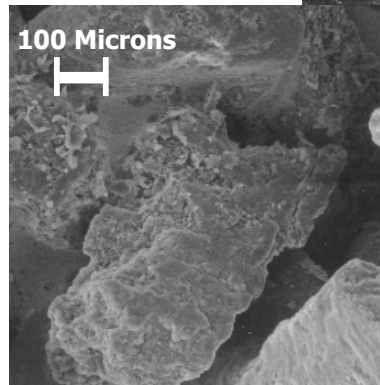
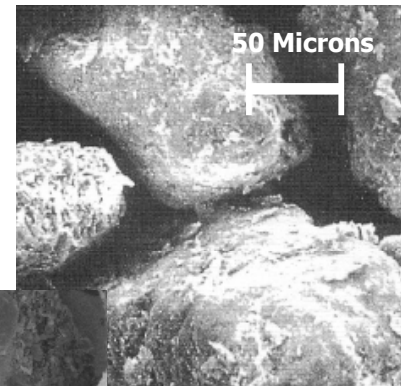
AC6091 is similar in particle size to AC6028 (average particle size of 125 μm), but is refined to achieve a lower surface area and higher tap density.

Applications

These grades are ideal for use in thermal spray applications as well as metal-matrix and ceramic composites for wear applications such as high-performance brake linings. They are also used in heating elements and adhesives, pastes, and potting compounds with increased thermal conductivity and high electrical resistivity.

Momentive Performance Materials produces over 75 standard and custom grades of BN powders to meet a wide range of application requirements, and has over 40 years of expertise in the synthesis and refinement of boron nitride powders.

Grade
AC6028 - 200x



Grade
AC6103 - 50x

Boron Nitride Powder

Grades AC6028, AC6103, and AC6091

General Characteristics of Boron Nitride

- Electrical Insulator
- Low Dielectric Constant and Loss
- High Temperature Stability
- Thermal Conductor
- Lubricious
- Inert
- Non-Wetting

Screen Sizing Analysis

Screen	Grade AC6028	Grade AC6103	Grade AC6091
+40	0	0.1	0
-40/+80	0.1	72.3	0
-80/+100	35.3	6.0	8.6
-100/+150	45.0	10.5	67.1
-150/+200	10.9	5.2	16.4
-200/+325	3.1	1.7	1.3
-325	5.5	4.3	6.4

Typical Properties	Grade AC6028	Grade AC6103	Grade AC6091
Crystal (type)	Hexagonal (Graphitic)	Hexagonal (Graphitic)	Hexagonal (Graphitic)
Color	White	White	White
Mean Particle Size, μm	100-150	250	125
Crystal Size, μm	10	10	10
Surface Area, m^2/g	3.2	6.5	1.4
Tap Density, g/cc	0.7	0.55	1.0
Oxygen, %	0.3	0.3	0.3
Sol. Borate, %	0.2	0.1	0.1
Carbon, %	0.05	0.05	0.05

Elemental

Ca, Si	<500 ppm (per element)
Cu, Al, Mg, Fe, K	<100 ppm (per element)
Cl, S	<50 ppm (per element)
Na	<20 ppm
Other Metals	<10 ppm each

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