MOMENTIVE
performance materials

Boron Nitride Powders
Grades HCP, HCPH, HCPL, and AC6004

Momentive Performance Materials' boron nitride (BN) powders of grades HCP, HCPH, HCPL, and AC6004 are generally single-crystal hexagonal platelets with very high purity. The mean particle sizes for these ultra-fine powders are in the range of 6 to 13 µm, and they are >99.9% -325 mesh.

HCP
Grade HCP is Momentive's basic high-purity grade and is flexible enough to fulfill a wide range of advanced material applications. Its mean particle size is 7-10 µm.

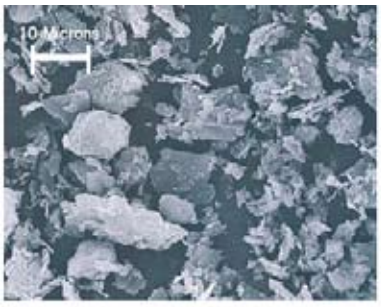
HCPH
HCPH is processed to consist of a more agglomerated structure than HCP, and therefore a higher specific surface area. This makes it ideal for creating good particle-to-particle contact in a matrix.

HCPL
HCPL is refined to achieve a lower surface area than HCP, making it more lubricious and stable at even higher temperatures. It also exhibits improved blending in many formulations.

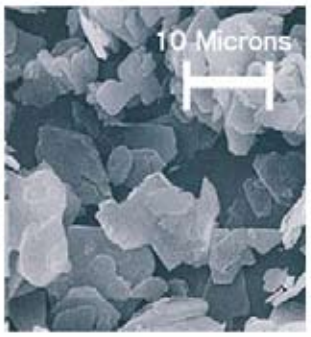
AC6004
AC6004 has the lowest coefficient of friction of any Momentive boron nitride powder, making it an outstanding lubricant. It possesses a slightly larger particle size (12-13 µm), a lower surface area, and a tighter particle size distribution than HCP.

Applications
These grades are used in a broad range of demanding applications, including release agents for high temperature metal and glass processing and thermal management materials for electronics. Additionally, these grades are employed as additives in solid lubrication applications, and as base materials for hot-pressed solids and composites and refractory coatings.

Momentive Performance Materials produces over 80 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 HCP-1000x



Grade HCPL-1000x

Grade HCPH-1000x

Grade AC6004-1000x

Boron Nitride Powder

Grades HCP, HCPH, HCPL, and AC6004

General Characteristics of Boron Nitride

- Thermal Conductor
- Electrical Insulator
- Low Dielectric Constant/Loss
- High Temperature Stability
- Lubricious
- Inert and Chemically Stable
- Non-Wetting
- Variety of Crystal Sizes and Particle Formations

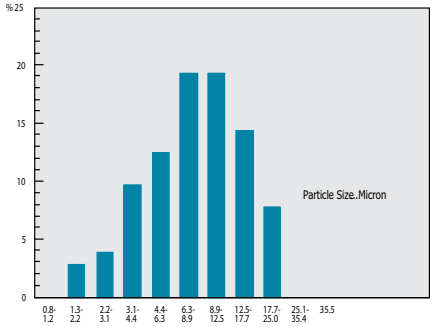
Typical Properties

Grade	HCP	HCPH	HCPL	AC6004
Crystal (Type)	Hexagonal (Graphitic)	Hexagonal (Graphitic)	Hexagonal (Graphitic)	Hexagonal (Graphitic)
Color	White	White	White	White
Mean Particle Size µm	7 - 10	6 - 9	9 - 12	12 - 13
Crystal Size µm	4	3	8	>10
Surface Area m^2/g	13	17	7	2
Tap Density g/cc	0.40	0.35	0.50	0.55
Oxygen %	0.40	0.50	0.40	0.30
Soluble Borates %	0.20	0.20	0.20	0.15
Carbon %	0.03	0.03	0.03	0.02

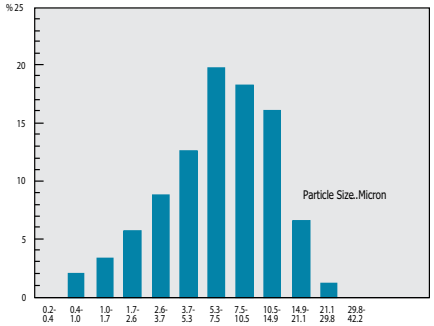
Elemental

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

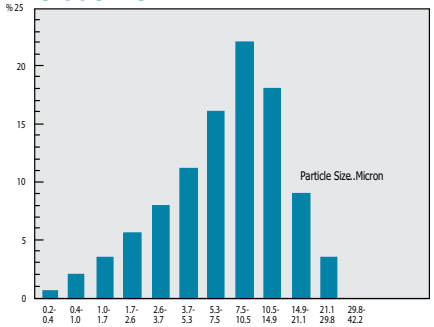
Grade HCP



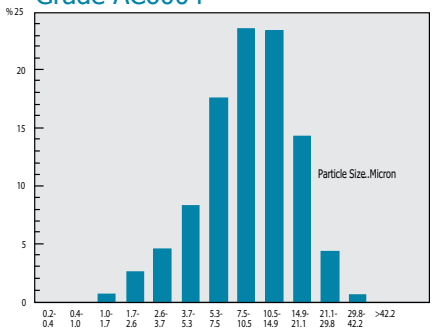
Grade HCPH



Grade HCPL



Grade AC6004



www.momentive.com

SALES OFFICES	USA	GERMANY	JAPAN	CHINA
	T: 440.878.5700	T: 49.4152.938.300	T: 81.3.5114.3774	T: 86.21.3860.4500
	F: 440.878.5928	F: 49.4152.938.303	F: 81.3.5114.3779	F: 86.21.5079.3736
	E: cs-na.ceramics@momentive.com	E: cs-eur.ceramics@momentive.com	E: cs-jp.ceramics@momentive.com	E: cs-asia.ceramics@momentive.com

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