

3M Advanced Materials Division

3M™ Boron Nitride Cooling Filler Agglomerates 50M

Introduction

- Mix (M) of agglomerates, platelets and clusters with 50 µm protective screening
- Agglomerates boost thermal conductivity
- “Soft” agglomerates need special mixing to maintain particle structure and optimized thermal conductivity

Typical applications (non-limiting):

- Excellent for potting resins and encapsulation of electronic devices
- Coatings (e.g. electrical insulation of cables)

Compatible matrix materials (non-limiting):

- All (preferentially PC, PET, PEEK, TPE, Epoxy, Polyurethane)

Typical Physical Properties

(Not for specification purposes)

O	<0.7%
C	<0.2%
B ₂ O ₃	<0.1%
BN	>98.5%

BN content is calculated as (100% minus B₂O₃, O, C, Si, Al, Fe, Ca, without loss on drying)

Typical Physical Properties

(Not for specification purposes)

3M Boron Nitride Cooling Filler Agglomerates 50M 7010253670	Minimum	Maximum
Particle Size Distribution d(0.1) (µm)	5	10
Particle Size Distribution d(0.5) (µm)	15	30
Particle Size Distribution d(0.9) (µm)	35	70
(Untapped) bulk density (Scott) (g/cm ³)	0.1	0.4
Specific Surface Area (m ² /g)	1.5	3.5

Bulk density determined according to ISO 23145-2 (DIN density)

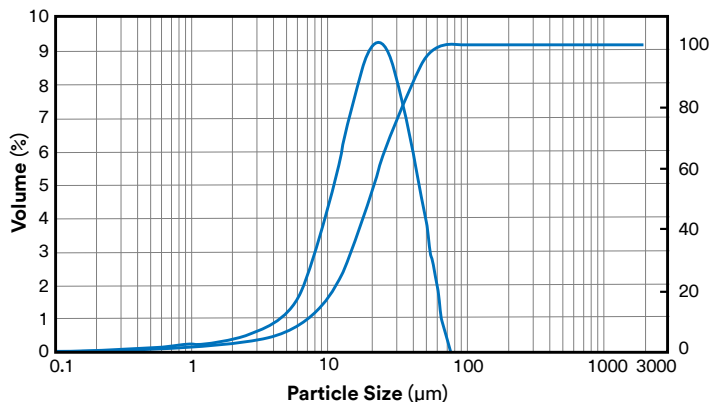
Particle size distribution measured by laser light scattering (Mastersizer 2000, dry, 0.1 bar)

For calculation purpose: Density of bulk hBN 2.25 g/cm³



20 µm

Particle Size Distribution



Particle size distribution measured by laser light scattering (Mastersizer 2000, dry, 0.1 bar)

Refer to the [3M Boron Nitride Cooling Filler Safety Data Sheet](#) for safety information.

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