

3M Advanced Materials Division

3M™ Boron Nitride Cooling Filler Agglomerates

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Introduction

3M Technical Ceramics offers a family of boron nitride-based powders designed to improve thermal conductivity in polymers. 3M™ Boron Nitride Cooling Filler Agglomerates have excellent heat transfer capabilities and offer an economical solution for thermal interface materials (TIM).

Typical Physical Properties

(Not for specification purposes)

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

3M™ Boron Nitride

3M™ Boron Nitride is a versatile ceramic material offering thermal conductivity, temperature stability, chemical resistance and electrical insulation. Its layered structure of hexagonal plates also contributes outstanding lubricating properties.

3M boron nitride products are manufactured at fully dedicated, ISO 9001 and 14001 certified facilities. Our manufacturing processes are optimized for quality, efficiency and consistency – helping ensure reliable and repeatable product performance.

Powder Characteristics

(Not for specification purposes)

Particle Size Distribution			Bulk Density (DIN) (g/cm ³)	Surface Area (m ² /g)	Grade
d(0.1) μm	d(0.5) μm	d(0.9) μm			
5 – 10	15 – 30	35 – 70	0.1 – 0.4	<3.5	Agglomerates 50
10 – 50	55 – 115	105 – 205	0.3 – 0.5	<3.5	Agglomerates 150

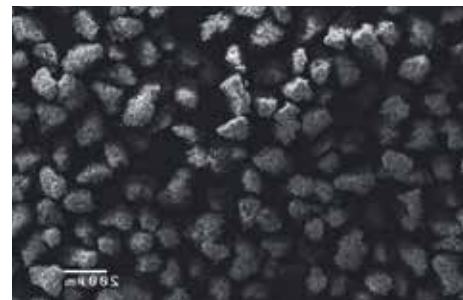
Custom Boron Nitride Materials

Our experienced specialists will work with you to develop and optimize custom boron nitride products for your application. The particle size, powder morphology and chemical composition

of 3M boron nitride can be tailored to your specific requirements. We are ready to assist you with initial design and development, and our extensive and well-equipped manufacturing facilities allow us to quickly scale-up to full production. For more information, contact us at **1-800-367-8905**.

Product Storage, Handling and Safety

The substance boron nitride contained in the products 3M™ Boron Nitride Cooling Fillers (all grades) has been duly registered in conformance with



3M™ Boron Nitride Cooling Filler Agglomerates (SEM micrograph)

REACH obligations according to EC directive 1907/2006 (see product Safety Data Sheet for registration number). The products contain less than 0.1 wt % Diboron Trioxide (substance of very high concern – SVHC, technically unavoidable impurity, see SDS). The products do not contain any other SVHC substance of the actual SVHC candidate list.

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98-0050-0041-3 Rev. B