3M Science. Applied to Life.™

3M Advanced Materials Division

3M™ Boron Nitride Cooling Filler

Platelets 003SF

Introduction

- Super Fine (SF) platelets with mean size of 3 µm
- Controlled top size 30 µm

Typical Applications (non-limiting):

- Thin films <25 µm and fibers
- Fine channels and windings

Compatible Matrix Materials (non-limiting):

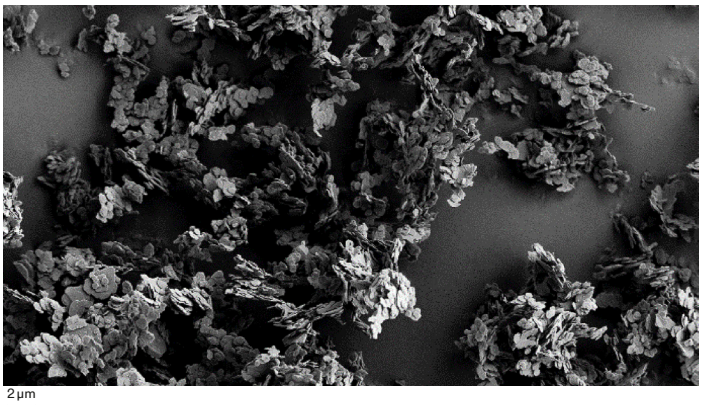
- Thermoplastics

Typical Physical Properties

(Not for specification purposes)

O	≤1.1%
C	≤0.06%
B_2O_3	≤0.2%
BN	≥98.0%

BN content is calculated as (100% minus B_2O_3, O, C, Si, Al, Fe, Ca, without loss on drying)



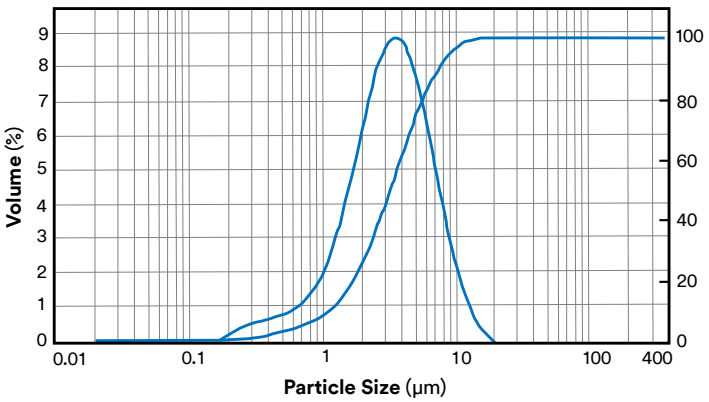
Characteristics

(Not for specification purposes)

3M Boron Nitride Cooling Filler Platelets 003 SF 7010232143	Minimum	Maximum
Particle Size Distribution d(0.1) (µm)	0.5	2
Particle Size Distribution d(0.5) (µm)	2	6
Particle Size Distribution d(0.9) (µm)	6	14
(Untapped) bulk density (DIN) (g/cm³)	n.a.	0.15
Specific Surface Area (m²/g)	10	20

Bulk density determined according to ISO 23145-2 (DIN density)
Particle size distribution measured by laser light scattering (Mastersizer 2000, ethanol, 30s internal Ultrasonic)
For calculation purpose: Density of bulk hBN 2.25 g/cm³

Particle Size Distribution



Refer to the 3M Boron Nitride Cooling Filler Safety Data Sheet for safety information.

Warranty, Limited Remedy, and Disclaimer: Many factors beyond 3M's control and uniquely within user's knowledge and control can affect the use and performance of a 3M product in a particular application User is solely responsible for evaluating the 3M product and determining whether it is fit for a particular purpose and suitable for user's method of application. User is solely responsible for evaluating third party intellectual property rights and for ensuring that user's use of 3M product does not violate any third party intellectual property rights. Unless a different warranty is specifically stated in the applicable product literature or packaging insert, 3M warrants that each 3M product meets the applicable 3M product specification at the time 3M ships the product. 3M MAKES NO OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY IMPLIED WARRANTY OF NON-INFRINGEMENT OR ANY IMPLIED WARRANTY OR CONDITION ARISING OUT OF A COURSE OF DEALING, CUSTOM OR USAGE OF TRADE. If the 3M product does not conform to this warranty, then the sole and exclusive remedy is, at 3M's option, replacement of the 3M product or refund of the purchase price.

Limitation of Liability: Except where prohibited by law, 3M will not be liable for any loss or damages arising from the 3M product, whether direct, indirect, special, incidental or consequential, regardless of the legal theory asserted, including warranty, contract, negligence or strict liability.

Technical Information: Technical information, recommendations, and other statements contained in this document or provided by 3M personnel are based on tests or experience that 3M believes are reliable, but the accuracy or completeness of such information is not guaranteed. Such information is intended for persons with knowledge and technical skills sufficient to assess and apply their own informed judgment to the information. No license under any 3M or third party intellectual property rights is granted or implied with this information.

3M Advanced Materials Division

3M Center
St. Paul, MN 55144 USA

Phone 1-800-367-8905
Web www.3M.com/thermalmanagement

3M Technical Ceramics

Zweigniederlassung der 3M Deutschland GmbH
Max-Schaidhauf-Str. 25, 87437 Kempten, Germany

Phone +49 (0)831 5618-0
Web www.3M.de/bncf

Issued: 09/23 17633HB