



3M™ Flame Barrier FRB-NT102

Data Sheet

May 2025

Product Description 3M™ Flame Barrier FRB-NT102 is flexible insulation for OEM electrical flame barrier applications.

- Product Features**
- An inorganic-based, halogen-free* material
 - UL 94 V0, 5VA flame rating (UL File E65069)
 - Good dielectric strength
 - Good convertibility - material is easily slit, cut, formed and die cut
 - Good compatibility with various adhesives

*Halogen Free defined as both 1) no halogen compounds are intentionally added to the product or used in the manufacturing process for the product and 2) any impurities present are less than 900 ppm bromine, less than 900 ppm chlorine, and/or less than 1500 ppm total bromine and chlorine. The latter are the levels set forth in certain industry standards, such as the International Electrotechnical Commission (IEC) 61249-2-21 standard.

Properties

Note: Automotive Manufacturing, Design, and Quality Disclaimer. This product does not fully adhere to all typical automotive design or quality system requirements, such as IATF 16949 or VDA 6.3. This product may not be manufactured in an IATF certified facility. Values are not to be used for specification purposes. Cpk calculations for properties may be made once specification is established for specific application. Customer is solely responsible for evaluating the product and determining whether it is appropriate and suitable for customer's automotive application and for conducting incoming inspections before use of the product. Failure to do so may result in injury, death, and/or harm to property.

3M™ Flame Barrier FRB-NT102

Physical Properties	Test Method	Value Imperial (Metric)
Nominal Thickness	ASTM D-645	4 mil (0.102 mm)
Basis Weight	ASTM D-202	0.29 lb/yd ² (156 g/m ²)
Tensile Strength, MD	ASTM D-828	22 lb/inch (39 N/cm)
Electrical Properties		Value
Dielectric Breakdown Voltage	ASTM D-149	2.2 kV
Comparative Tracking Index ¹	ASTM D3638	PLC 0
Other Properties		Value
Flame Rating ¹	ANSI/UL 94	V-0, 5VA

The technical information and data in this table should be considered representative or typical only and should not be used for specification purposes.

Notes:

1. UL QMFZ2/E65069 assigned rating

3M™ Flame Barrier FRB-NT102

Regulatory	For Regulatory information including RoHS, REACH, please visit www.3M.com/regs The above information represents 3M's knowledge and belief which may be based in whole or in part on information provided by 3rd party suppliers to 3M.
Shelf Life & Storage	This product has a 5-year shelf life (from date of manufacture) when stored in humidity controlled storage (50°F/10°C to 80°F/27°C and <75% relative humidity).
Availability	For availability, please contact your local distributor. Names and addresses are available from www.3M.com/oem or call 1-800-676-8381.

Intended Use: These products are intended for use within a high voltage lithium-ion battery pack to help address the spread of heat that occurs during thermal runaway propagation in automotive, off-highway, industrial and marine battery applications. Since there are many factors that can affect a product's use, the customer remains responsible for determining whether the 3M product is suitable and appropriate for the customer's specific application and system, including customer conducting an appropriate risk assessment and evaluating the 3M product in customer's application and system.

Restricted Use: 3M advises against the use of this 3M product in any application other than the stated intended use(s), since other applications have not been evaluated by 3M and may result in an unsafe or unintended condition.

Technical Information: The technical information, guidance, and other statements contained in this document or otherwise provided by 3M are based upon records, tests, or experience that 3M believes to be reliable, but the accuracy, completeness, and representative nature of such information is not guaranteed. Such information is intended for people 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.

Product Selection and Use: 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. As a result, customer is solely responsible for evaluating the product and determining whether it is appropriate and suitable for customer's application, including conducting a workplace hazard assessment and reviewing all applicable regulations and standards (e.g., OSHA, ANSI, etc.). Failure to properly evaluate, select, and use a 3M product in accordance with all applicable instructions and with appropriate safety equipment, or to meet all applicable safety regulations, may result in injury, sickness, death, and/or harm to property.

Warranty, Limited Remedy, and Disclaimer: Unless a different warranty is specifically stated on the applicable 3M product packaging or product literature (in which case such warranty governs), 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, FITNESS FOR A PARTICULAR PURPOSE, OR ARISING OUT OF A COURSE OF DEALING, CUSTOM, OR USAGE OF TRADE. If a 3M product does not conform to this warranty, then the sole and exclusive remedy is, at 3M's option, replacement or repair of the 3M product or refund of the purchase price. Warranty claims must be made within one (1) year from the date of 3M's shipment.

Limitation of Liability: Except for the limited remedy stated above, and except to the extent prohibited by applicable law, 3M will not be liable for any loss or damage arising from or related to the 3M product, whether direct, indirect, special, incidental, or consequential (including, but not limited to, lost profits or business

3M™ Flame Barrier FRB-NT102

opportunity), regardless of the legal or equitable theory asserted, including, but not limited to, warranty, contract, negligence, or strict liability.

Automotive Manufacturing, Design, and Quality Disclaimer. This product does not fully adhere to all typical automotive design or quality system requirements, such as IATF 16949 or VDA 6.3. This product may not be manufactured in an IATF certified facility. Values are not to be used for specification purposes. Cpk calculations for properties may be made once specification is established for specific application. Customer is solely responsible for evaluating the product and determining whether it is appropriate and suitable for customer's automotive application and for conducting incoming inspections before use of the product. Failure to do so may result in injury, death, and/or harm to property.

Disclaimer: 3M industrial and occupational products are intended, labeled, and packaged for sale to trained industrial and occupational customers for workplace use. Unless specifically stated otherwise on the applicable product packaging or literature, these products are not intended, labeled, or packaged for sale to or use by consumers (e.g., for home, personal, primary or secondary school, recreational/sporting, or other uses not described in the applicable product packaging or literature), and must be selected and used in compliance with applicable health and safety regulations and standards (e.g., U.S. OSHA, ANSI), as well as all product literature, user instructions, warnings, and limitations, and the user must take any action required under any recall, field action or other product use notice. Misuse of 3M industrial and occupational products may result in injury, sickness, or death. For help with product selection and use, consult your on-site safety professional, industrial hygienist, or other subject matter expert. For additional product information, visit www.3M.com.

3M is a trademark of 3M Company.



Electrical Markets Division

13011 McCallen Pass, Bldg C.

Austin, TX 78753

800.245.3573

Fax 800.245.0329

www.3M.com/oem

Please recycle

© 3M 2025. All rights reserved.

TDS-114746 Rev 1