

# 3M™ Thermal Runaway Barrier 600 and 700 Series

## Technical Data Sheet



### Product Description

3M™ Thermal Runaway Barrier 600 and 700 Series is a compressible, flame resistant, thermal insulation mat material. The base mat has high temperature stability (up to 1200°C) that allows material to maintain structural integrity and retain barrier performance.

The mat features non-classified fibers, has good electrical resistance, and is designed to help slow down heat transfer from one cell to the next.

3M TRB600 and 3M TRB700 can be applied between cells to help reduce thermal transport in high temperature

### Typical Physical Properties (mat only)

Product	3M TRB640	3M TRB745	3M TRB755
Basis Weight*	400 gsm	450 gsm	550 gsm
Target Thickness Range	1.3mm-3.2mm		
Typical Cell Gap to Fit	0.5mm-1.8mm		
Thermal Conductivity** (ASTM C518)	<0.045 W/m-K at 25°C		
High Temperature Resistance	Base mat stable up to 1200°C		
Dielectric Breakdown Strength (ASTM D149/D257)	>1.5kV DC	>4.0kV DC	

\*Additional basis weights available upon request to fit different cell gaps. Contact your 3M Application Engineer.

\*\*Specific data available upon request

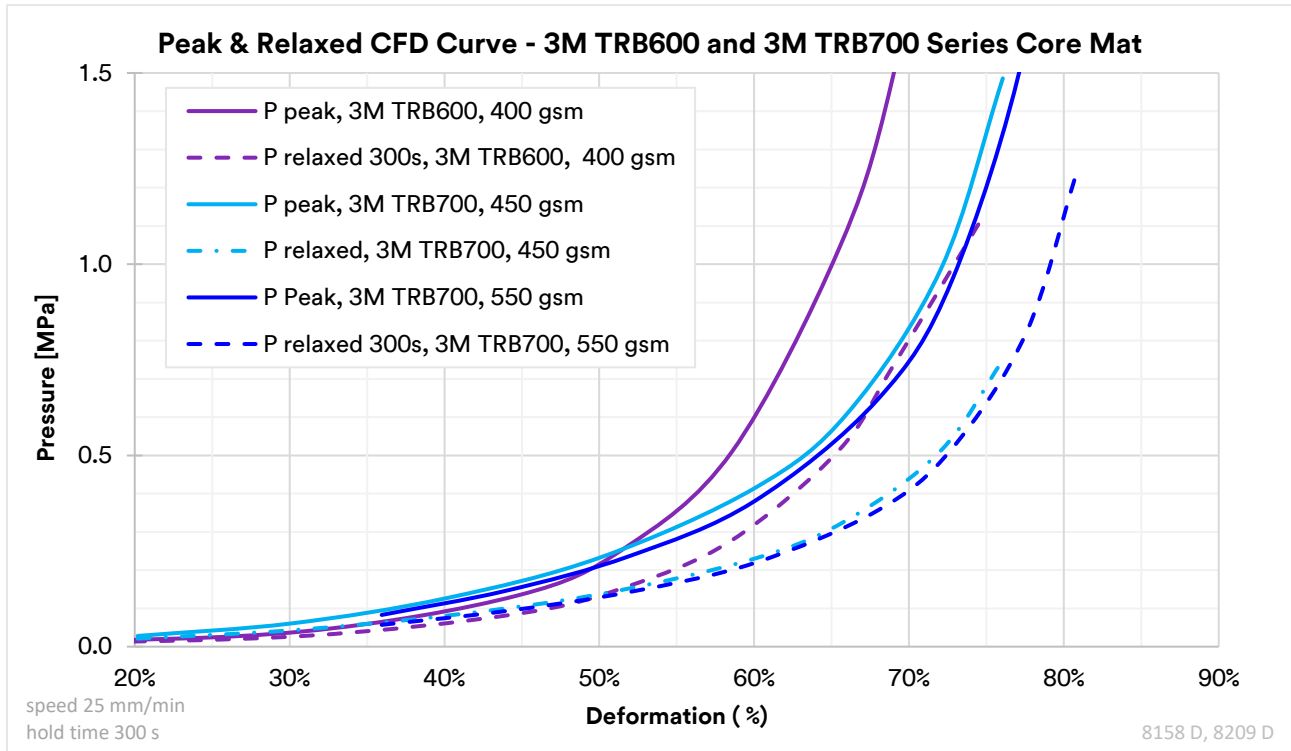
### Encapsulation

Please work with your 3M local Application Development Engineer or Sales Representative to discuss your encapsulation needs.

**Note:** The following technical information is based on typical product characteristics and should not be used for specification purposes.

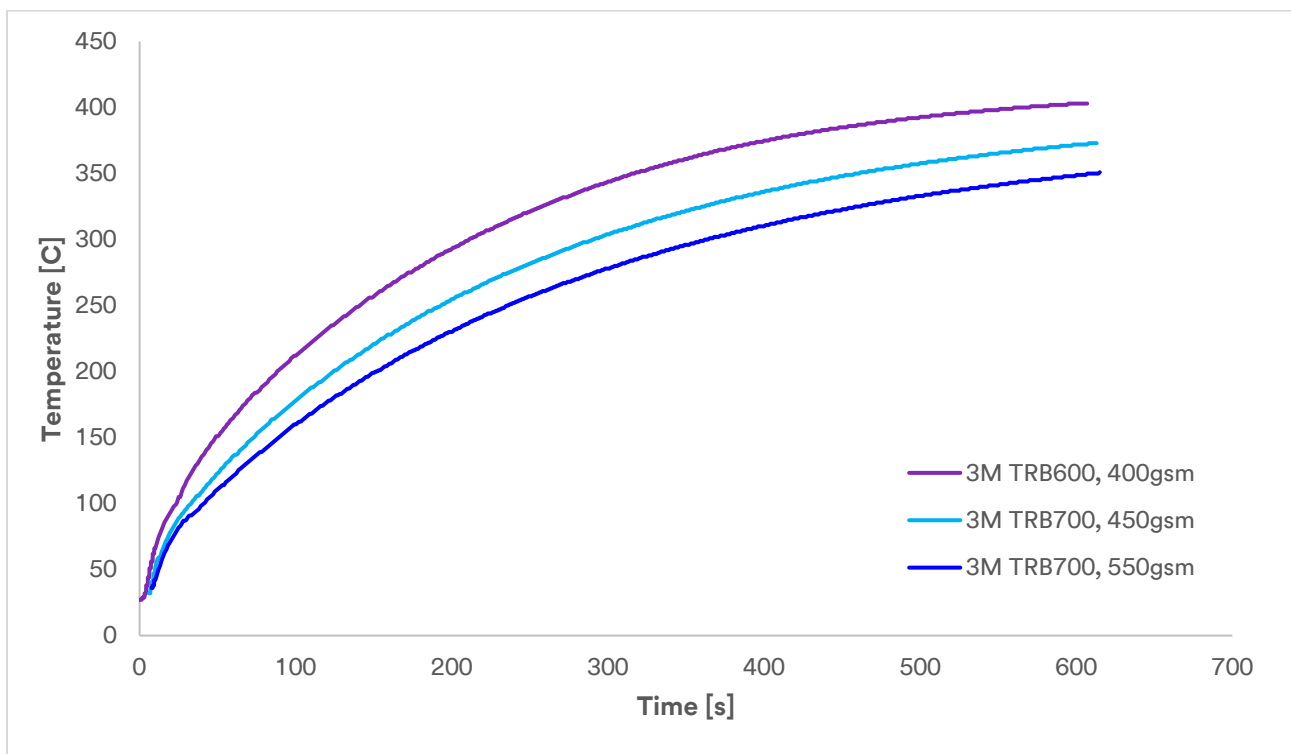
### Compression Response of 3M TRB600 and 3M TRB700

Please reach out to your 3M Application Engineer for more information on compression response.



### Hot/Cold Side Performance of 3M TRB600 and 3M TRB700

Please reach out to your 3M Application Engineer for more information on hot/cold side performance.



## Regulatory Information

Please refer to the product label and Safety Data Sheet (SDS) for health and safety information before using.

## Contact Information

The information provided in this technical document is intended as a guide for these products. For more information or help in selecting a 3M product for an application, please contact your 3M technical service representative or call 1-800-328-1684.

**Intended Use:** 3M™ Thermal Runway Barrier 640/745/755 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.

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