

# 3M™ Acrylic Plus Tape Series EX4000

## Technical Data Sheet



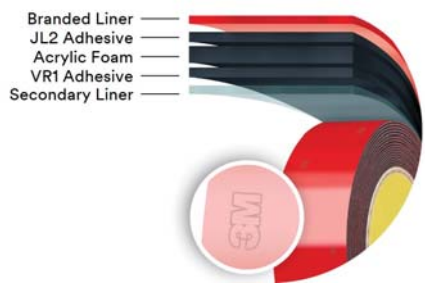
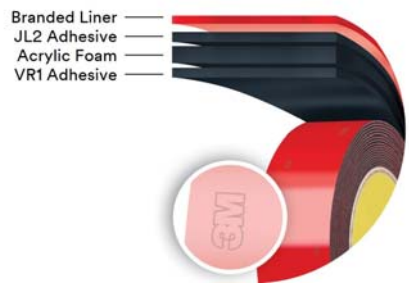
3M™ Acrylic Plus Tape Series EX4000 is a family of black, double-coated acrylic foam tapes designed for the attachment of automotive exterior trim parts such as body side moldings and claddings. 3M EX4000 tapes offer an advanced adhesive system that adheres well to traditional, low surface energy, and scratch- and mar-resistant automotive paint systems.

In addition, 3M EX4000 tapes offer the following key features:

- Unique foam core that provides stress relaxation when high application loads are encountered, while maintaining tight bond-line aesthetics under normal conditions.
- Excellent resistance to impact in cold weather
- Black color provides good bond-line appearance

Some typical applications for 3M EX4000 tapes include body side moldings, claddings, roof ditch moldings and wheel flares.

### Product Construction



### Liner Options

See the technical update "[3M™ Acrylic Foam and Acrylic Plus Tapes: Product Constructions](#)" for liner and tabbing information.

## Physical Properties

	EX4008	EX4011	EX4015
Thickness	0.76 mm (0.030 in)	1.14 mm (0.045 in)	1.52 mm (0.060 in)
Range	+/- 0.10 mm (0.004 in)	+/- 0.13 mm (0.005 in)	+/- 0.13 mm (0.005 in)
Density	633 kg/m <sup>3</sup> (39.5lb/ft <sup>3</sup> )	545 kg/m <sup>3</sup> (34 lb/ft <sup>3</sup> )	529 kg/m <sup>3</sup> (33 lb/ft <sup>3</sup> )
Range	+/- 56 kg/m <sup>3</sup> (3.5 lb/ft <sup>3</sup> )	+/- 56 kg/m <sup>3</sup> (3.5 lb/ft <sup>3</sup> )	+/- 56 kg/m <sup>3</sup> (3.5 lb/ft <sup>3</sup> )

## Roll Width and Length

3M™ Acrylic Plus Tapes are available in the following standard widths. Millimeter widths – rounded to the nearest whole number – and 1/8-inch increments starting with 1/4 inch.

**Minimum widths: 4 mm Levelwound, 5 mm Planetary (Standard versions), 6 mm Planetary (T versions)**

### Planetary

#### EX4011 / EX4011T

Roll Width	Roll Width Tolerance	Roll Length (max)
< 8 mm (< 0.276 in)	+/- 0.40 mm (+/-0.015 in)	66 M (72 yds)
8 - 9 mm (0.276 - 0.375 in)	+/- 0.40 mm (+/-0.015 in)	99 M (108 yds)
10 - 18 mm (0.394 – 0.709 in)	+/- 0.40 mm (+/-0.015 in)	132 M (144 yds)
> 18 mm (> 0.709 in)	+/- 0.80 mm (+/- 0.031 in)	132 M (144 yds)

#### EX4015 /EX4015T

Roll Width	Roll Width Tolerance	Roll Length (max)
< 10 mm (< 0.315 in)	+/- 0.40 mm (+/-0.015 in)	66 M (72 yds)
> 10 mm (0.394)	+/- 0.40 mm (+/-0.015 in)	99 M (108 yds)

### Levelwound

#### EX4011 / EX4011T

Roll Width	Roll Width Tolerance	Roll Length (max)
4 - 14 mm (0.157 – 0.551 in)	+/- 0.40 mm (+/-0.015 in)	900 M (984 yds)
15 - 16 mm (0.591 – 0.630 in)	+/- 0.40 mm (+/-0.015 in)	700 M (765 yds)

#### EX4015 / EX4015T

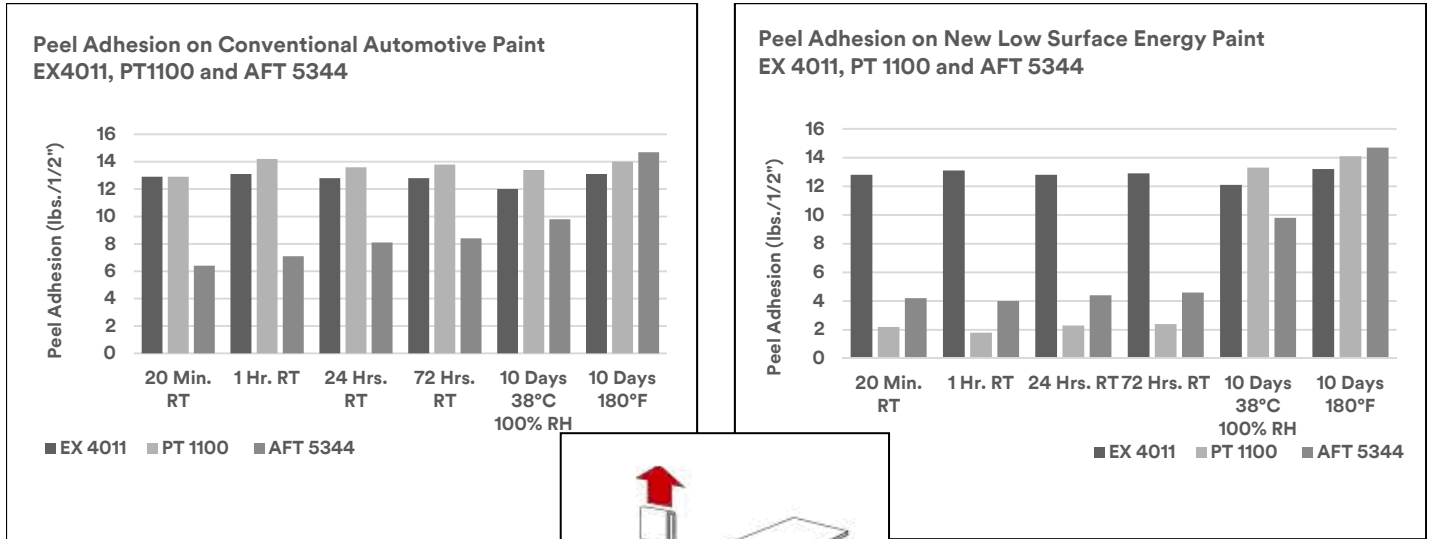
Roll Width	Roll Width Tolerance	Roll Length (max)
4 – 16 mm (0.157 – 0.630 in)	+/- 0.40 mm (+/-0.015 in)	500 M (545 yds)

## Performance Properties

Typical performance of 3M™ Acrylic Plus Tape EX4000 Series is shown below. Peel values depend on paint composition. These values are for reference only.

Note: Care should be taken to make sure the surface is clean and dry prior to application of the tape and to not saturate the tape with strong polar solvents, like alcohols, after initial application. After adhesion build, the JL2 adhesive is durable to typical automotive environmental conditions and chemicals and provides a robust attachment solution. If this is a concern, please contact your 3M Technical Representative.

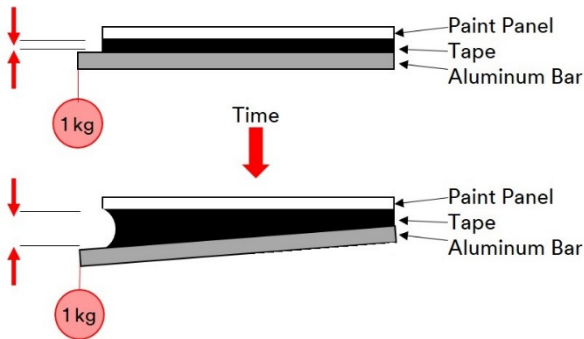
## 90° Peel Adhesion Testing



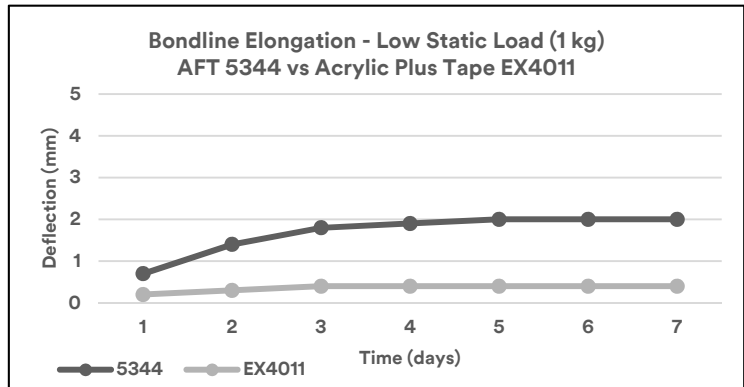
\* Test is performed on a Paint Panel

## Static Break Away (Typical Results)

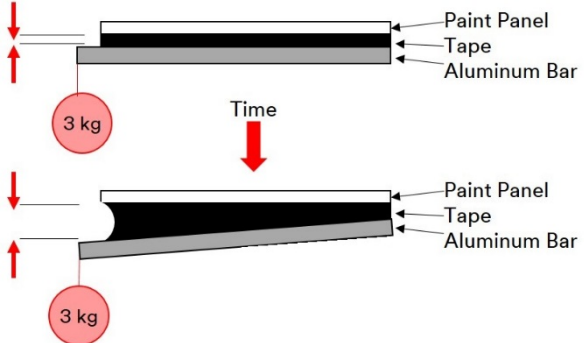
Deflection (Bondline Elongation)  
 Low Static Load (1 kg)



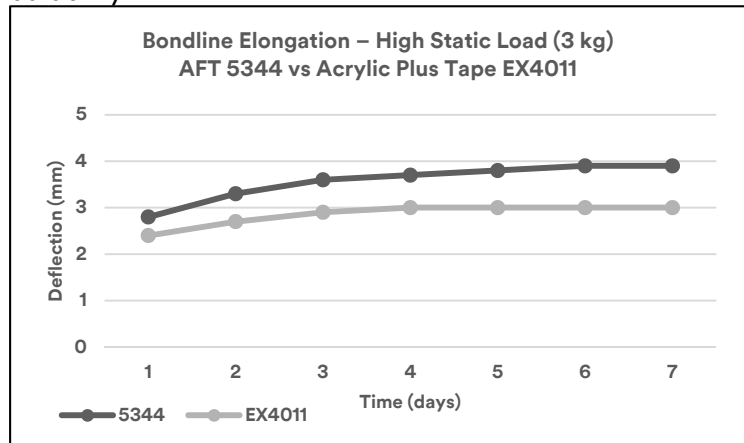
3M™ Acrylic Plus Tape EX4011 demonstrates low elongation properties under low load conditions for good bond line aesthetics.



Deflection (Bondline Elongation)  
 High Static Load (3 kg)



3M™ Acrylic Plus Tape EX4011 demonstrates high elongation properties under high load conditions to relieve stress for good durability.



## Shelf Life

One year from date of manufacture when stored at 4° C - 38° C (40° F - 100° F) and 0 - 95% relative humidity. Optimum storage conditions are 22° C (72° F) and 50% relative humidity.

## Regulatory Information

Please refer to the product label and Safety Data Sheet (SDS) for health and safety information before using. Observe proper handling precautions as outlined in the SDS, which is available on request or at [www.3M.com/msds](http://www.3M.com/msds).

The product is published as a material entry and is available for access on [www.mdssystem.com](http://www.mdssystem.com). For product IMDS I.D. number, email requests to [3M-IMDSrequest@mmm.com](mailto:3M-IMDSrequest@mmm.com).

## Contact Information

The information provided in this technical document is intended as a guide for this product. 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.

**Technical Information:** The technical information, recommendations and other statements contained in this document are based upon tests or experience that 3M believes are reliable, but the accuracy or completeness of such information is not guaranteed.

**Product 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. Given the variety of factors that can affect the use and performance of a 3M product, 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.

**Warranty, Limited Remedy, and Disclaimer:** Unless an additional warranty is specifically stated on the applicable 3M product packaging or product literature, 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 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 damage 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.



### Automotive Division

3M Center  
St. Paul, MN 55144-1000  
Phone 1-800-328-1684  
Web [www.3M.com/autosolutions](http://www.3M.com/autosolutions)

3M is a trademark of 3M Company  
Please recycle. Printed in USA.  
© 3M 2016. All rights reserved.