



Technical Data Sheet

3M™ High Performance Industrial Plastic Adhesive 4693

Product Features

- 3M™ High Performance Industrial Plastic Adhesive 4693: low viscosity grade for spray or brush application.
- Clear, elastomeric adhesives with high immediate bond strength, long tack range and contact bond properties.
- Exhibit outstanding bond strength to many metals and many plastics such as ABS, glass filled polyester, polypropylene, linear polyethylene and hi-impact styrene.
- Dries to a tough, flexible and transparent film with good resistance to water and aging.

Note: Not recommended for use on Plasticized Vinyl. Use on Plasticized Vinyl may result in poor adhesion or bonds that deteriorate over time.

Technical Information Note

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







Typical Physical Properties

Property	Values	Additional Information
Solids Content by Weight	24 to 28 %	
Color	Clear	
Flash Point	1 °F	View
Notes: Closed Cup		
Flash Point	-17 °C	View
Notes: Closed Cup		
Carrier Solvent	Cyclohexane, acetone	
Coverage	308 sq ft/gal	View
Notes: @ 2.5 g/ft ² dry wt.		
Viscosity	175 to 275 cP	View
Notes: Brookfield Viscometer RVF #2 spindle @ 20 rpm		

Typical Uncured Physical Properties

Property	Values	Additional Information
Base	Synthetic Elastomer	
Net Weight	6.6 to 7 lb/gal	

Typical Performance Characteristics

Property	Values	Additional Information
180° Peel Adhesion	368 oz/in	View 
<p>Dwell/Cure Time: 3.0 Dwell Time Units: day Environmental Condition: 50%RH Substrate: Canvas to Aluminum</p> <p>Notes: 1-2 days @ Room Temperature and 1 day @120°F(49°C)</p>		
180° Peel Adhesion	352 oz/in	View 
<p>Dwell/Cure Time: 3.0 Dwell Time Units: day Environmental Condition: 50%RH Substrate: Canvas to Steel</p> <p>Notes: 1-2 days @ Room Temperature and 1 day @120°F(49°C)</p>		
180° Peel Adhesion	320 oz/in	View 
<p>Dwell/Cure Time: 3.0 Dwell Time Units: day Environmental Condition: 50%RH Substrate: Canvas to ABS</p> <p>Notes: 1-2 days @ Room Temperature and 1 day @120°F(49°C)</p>		
180° Peel Adhesion	288 oz/in	View 
<p>Dwell/Cure Time: 3.0 Dwell Time Units: day Environmental Condition: 50%RH Substrate: Canvas to Acrylic</p> <p>Notes: 1-2 days @ Room Temperature and 1 day @120°F(49°C)</p>		
180° Peel Adhesion	304 oz/in	View 
<p>Dwell/Cure Time: 3.0 Dwell Time Units: day Environmental Condition: 50%RH Substrate: Canvas to Nylon 6</p> <p>Notes: 1-2 days @ Room Temperature and 1 day @120°F(49°C)</p>		
180° Peel Adhesion	320 oz/in	View 
<p>Dwell/Cure Time: 3.0 Dwell Time Units: day Environmental Condition: 50%RH Substrate: Canvas to Phenolic Board</p>		

Notes: 1-2 days @ Room Temperature and 1 day @120°F(49°C)

180° Peel Adhesion

336 oz/in

[View](#) 

Dwell/Cure Time: 3.0
Dwell Time Units: day
Environmental Condition: 50%RH
Substrate: Canvas to Polyester, filled

Notes: 1-2 days @ Room Temperature and 1 day @120°F(49°C)

180° Peel Adhesion

176 oz/in

[View](#) 

Dwell/Cure Time: 3.0
Dwell Time Units: day
Environmental Condition: 50%RH
Substrate: Canvas to Polyethylene, linear

Notes: 1-2 days @ Room Temperature and 1 day @120°F(49°C)

180° Peel Adhesion

304 oz/in

[View](#) 

Dwell/Cure Time: 3.0
Dwell Time Units: day
Environmental Condition: 50%RH
Substrate: Canvas to Polypropylene

Notes: 1-2 days @ Room Temperature and 1 day @120°F(49°C)

180° Peel Adhesion

320 oz/in

[View](#) 

Dwell/Cure Time: 3.0
Dwell Time Units: day
Environmental Condition: 50%RH
Substrate: Canvas to PVC, Hi-impact

Notes: 1-2 days @ Room Temperature and 1 day @120°F(49°C)

180° Peel Adhesion

336 oz/in

[View](#) 

Dwell/Cure Time: 3.0
Dwell Time Units: day
Environmental Condition: 50%RH
Substrate: Canvas to Styrene, Hi-impact

Notes: 1-2 days @ Room Temperature and 1 day @120°F(49°C)

Storage and Shelf Life

Store product at 60-80°F (16-27°C) for maximum storage life. Higher temperatures can reduce normal storage life. Lower temperatures can cause increased viscosity of a temporary nature. Rotate stock on a “first in-first out” basis.

When stored at the recommended temperature in the original, unopened container this product has a shelf life of 30 months from date of manufacture.

Bottom Matter

3M
Industrial Adhesives and Tapes Division
3M Center, Building 225-3S-06
St. Paul, MN 55144-1000
800-362-3550

Trademarks

3M is a trademark of 3M Company.

Automotive Disclaimer

Automotive Applications: This product is an industrial product and has not been designed or tested for use in certain automotive applications, including, but not limited to, automotive electric powertrain battery or high voltage applications. This product does not fully adhere to 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 and may not meet a Ppk of 1.33 for all properties. The product may not undergo an automotive production part approval process (PPAP). 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. No written or verbal statement, report, data or recommendation by 3M related to automotive use of the product shall have any force or effect unless in an agreement signed by the Technical Director of 3M's Automotive Division. Customer assumes all responsibility and risk if customer chooses to use this product in an automotive electric powertrain battery or high voltage application, and 3M will not be liable for any loss or damage arising from or related to the 3M product or customer's use of the product, whether direct, indirect, special, incidental, or consequential (including, but not limited to, lost profits or business opportunity or recall costs), regardless of the legal or equitable theory asserted, including, but not limited to, warranty, contract, negligence, or strict liability. In no event shall 3M be liable for any damages in excess of the purchase price paid for the product.

NOTWITHSTANDING ANY OTHER STATEMENT TO THE CONTRARY, 3M MAKES NO REPRESENTATIONS, WARRANTIES OR CONDITIONS WHATSOEVER, EXPRESS OR IMPLIED, REGARDING THE PRODUCT IF USED IN AN AUTOMOTIVE ELECTRIC POWERTRAIN BATTERY OR HIGH VOLTAGE APPLICATION, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTY ON PERFORMANCE, LONGEVITY, SUITABILITY, COMPATIBILITY, OR INTEROPERABILITY, OR 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.

Handling/Application Information

Application Techniques

Porous Surface: Brush, spray or flow an even coat of adhesive to both surfaces. Very absorbent materials may require more than one coat. Bond while adhesive is tacky. Join surfaces with firm pressure.

Non-Porous Surface: Brush, spray or flow an even coat of adhesive to both surfaces. To achieve a satisfactory bond, adhesive must be force dried @ 180°F (82°C). Bond with firm pressure while warm.

Drying Time: Drying time depends on temperature, humidity, air movement and porosity of the materials bonded. When brushing, wait a minimum of 10 minutes. Bonds can be made up to 60 minutes. Sprayed bonds may be made almost immediately and up to 60 minutes.

Heat Reactivation: Adhesive may be heat reactivated by raising the glue line temperature to 180°F (82°C).

Cleanup: Excess adhesive may be removed with a solvent such as 3M™ Solvent No. 2.*

*Note: When using solvents, extinguish all ignition sources, including pilot lights, and follow manufacturer's precautions and directions for use.

Application Equipment

Note: Appropriate application equipment can enhance adhesive performance. We suggest the following application equipment for the user's evaluation in light of the user's particular purpose and method of application.

1. Pumping: A 2:1 divorced design pump is suggested. All material hoses should be nylon or PVA lined. Packings and glands in contact with the adhesive should be PTFE lined.

2. Spray (Air Atomized):

Production Type Spray Equipment

*3 H.P. Compressor for intermittent use. 5 H.P. Compressor for continuous use.

**To Measure Fluid Flow: Pressurize fluid source only; pull trigger, flow material into measuring device for 60 seconds, increase or decrease fluid source pressure to obtain desired fluid flow.

3. Hoses: All material hoses should be nylon or PVA lined. If product is sprayed, use functioning spray booth.

4. Brush/Roller: Typical brushes/rollers designed for oil-based paint may be used.

Surface Preparation

Surfaces must be dry and free of dust, dirt, grease, oil, mold release materials or other contaminants. For best results, temperature of adhesive should be at least 65°F (18°C).

References

Property	Values
3m.com Product Page	https://www.3m.com/3M/en_US/p/d/b40071871/
Safety Data Sheet SDS	https://www.3m.com/3M/en_US/company-us/SDS-search/results/?gsaAction=msdsSRA&msdsLocale=en_US&co=ptn&q=4693

Family Group

Link Tags:

- 4693
- 4693H

Products	Solids Content by Weight	Color
4693	24 to 28 %	Clear
4693H	N/A	Clear

ISO Statement

This Industrial Adhesives and Tapes Division product was manufactured under a 3M quality system registered to ISO 9001 standards.

Precautionary Information

Refer to Product Label and Material Safety Data Sheet for health and safety information before using this product. For additional health and safety information, call 1-800-364-3577 or (651) 737-6501.

Information

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 and appropriate safety products, 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 of the 3M product or refund of the purchase price.

Limitation of Liability: Except for the limited remedy stated above, and except to the extent prohibited by 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 opportunity), regardless of the legal or equitable theory asserted, including, but not limited to, warranty, contract, negligence, or strict liability.

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.