



Technical Data Sheet

3M Fastbond Pressure Sensitive Adhesive 1049



[Regulatory Info/SDS](#)

Product Description

Preliminary Technical Data Sheet Status:

The data presented in this preliminary data sheet are 3M's best estimates for the current product construction being evaluated. While this product is developed for general commercialization, additional testing is underway to generate more data. Before the Technical Data Sheet is finalized, changes in the product construction, process conditions and performance may occur that can cause subsequent changes in product attributes. User should consult with 3M before making any business plans in reliance upon the future availability or the current properties of this product.

3M™ Fastbond™ Pressure Sensitive Adhesive 1049 is a water-based, high solids adhesive with low volatile organic compounds (VOCs).

Product Features

- Water-based
- Less than 1% VOC by weight
- Bonds substrates such as, aluminum,galvanized steel, stainlesssteel, HDPE, PMMA, Polycarbonate, ABS, wood and geotextile fabrics.
- High solid content
- One sided bonding

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 Uncured Physical Properties

Attribute Name	Value
Net Weight	8.4 lb/gal
Base	Synthetic Elastomer

Typical Physical Properties

Attribute Name	Temperature	Value
Color		Milky White (wet), Clear (dry)
Solids Content by Weight		51 %
Viscosity	22 °C (72 °F)	315 cP ¹
Coverage		125 ft ² ²
pH		8.3
Dry Time		15 min ³
Bonding Range		60 min

¹ Brookfield Viscometer RVF #3 Sp. @ 20 rpm

² 2 grms/sq ft dry wt

³ Dry time will depend on ambient temperature, humidity and coverage applied.

Typical Performance Characteristics

Attribute Name	Value
Shear Adhesion Failure Test - SAFT	190 °F ¹

¹ SAFT Shear Adhesion Failure Test with birch plywood, 1 inch overlap, 100 grams used, temperature start at 90°F and ramped 10°F every 10 min. until complete failure.

Handling/Application Information

Directions for Use

Applications: Apply a uniform, generous coat of adhesive to one of the surfaces to be bonded (porous surface preferred.) Very porous material may require more than one coat. (Allow adhesive to dry completely between coats). Temperature: Maintain temperature between 60-80°F(16-27°C) for adhesive and substrates to be bonded

Coverage: Coverage is dependent upon porosity of the substrate and the method by which the adhesive is applied. apply the adhesive in a uniform pattern at a coverage rate between 2.0 - 3.0 dry gms./sqft (Additional adhesive may be required for heavier materials).

Drying: Allow adhesive to dry until the surface becomes tacky. The substrate may then be bonded using hand pressure. Bonded parts may be handled immediately.

Cleanup: Wet adhesive may be removed using water or soapy water. For dry adhesive removal, use 3M™ Citrus Base Adhesive Remover, or Ethyl Acetate.*

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

Surface Preparation

Surfaces must be clean, dry and dust free. Remove all dirt, dust, oil, grease, wax, loose paint, etc. to ensure proper adhesion.

Application Equipment

Setting Up 3M™ Performance Water-Based Cylinder Spray Applicator and Adhesive Pex Hose for 3M™ Fastbond™ Pressure Sensitive Adhesive 1049:

Inspect the equipment: Check the cylinder valve stem for residual dry adhesive. Clean with 3M™ Citrus Base Adhesive Remover and tools if there is residual dry adhesive. Check the connections on hoses and clean, if needed.

Assemble the Spray Applicator: Slide the nozzle onto the spray applicator with the quick connect fitting for the hose oriented down. Firmly press the nozzle to the gun, and lock it into place by twisting the collar. Insert the desired spray tip into the tip collar fitting. Place the gasket into the tip collar fitting and gently push it into place. Lock the tip collar assembly onto the nozzle. Lock the applicator by twisting the nut clockwise to lock the trigger.

Connect Applicator to the Cylinder: Connect Pex the hose to the spray applicator using the quick connect fitting. Connect the hose to the cylinder valve, this is a threaded connection. slowly open the cylinder valve, check the connection for any leaks, and tighten or adjust if needed. Fully open the cylinder valve and unlock the trigger to begin spray.

Equipment Shut Down:

- Lunch or small break: Close/lock the spray needle to avoid accidental actuation of the applicator.
- Full day: Close the cylinder valve and spray needle on the applicator. Leave cylinder, hose, nozzle and applicator all assembled. On start-up the next day remove the collar and metal spray tip. Replace with clean components.
- More than a day: Close the cylinder valve, release remaining adhesive/pressure in the adhesive hose then disassemble all components. Dispose of used parts and clean remaining components before leaving.
- For a holiday close everything, remove all components and store the cylinder according to the appropriate storage conditions.

Cylinder Disposal: Once all adhesive has been dispensed the cylinder may qualify for scrap or recycling. Check local regulations. Rupture the burst disc and clean the outside before disposal.

Industry Specifications

Storage and Shelf Life

Protect from freezing! Best storage temperature is 60-80°F (15-27°C). Higher temperatures reduce normal storage life. Lower temperatures can cause increased viscosity of a temporary nature. This water-based adhesive will become unusable with prolonged storage below 40°F (4°C). Rotate stock on a “first in, first out” basis. When stored at recommended temperature in the original, unopened container, this product has a shelf life of 12 months from date of manufacture.

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.

Automotive Disclaimer

Select Automotive Applications: This product is an industrial product and has not been designed or tested for use in certain automotive applications, such as automotive electric powertrain battery or high voltage applications, which may require the product to be manufactured in a IATF certified facility, meet a Ppk of 1.33 for all properties, undergo an automotive production part approval process (PPAP), or fully adhere to automotive design or quality system requirements (e.g., IATF 16949 or VDA 6.3). Customer assumes all responsibility and risk if customer chooses to use this product in these applications.

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.

ISO Statement

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

3M™ Industrial Adhesives and Tapes Division
3M Center, St. Paul, MN 55144-1000
3M.com/iatd

3M, Fastbond and Scotch-Weld are trademarks of 3M.
©3M 2024 (9/24)