



Technical Data Sheet

Preliminary 3M™ Fastbond™ Water-Base Multipurpose Adhesive 1077, Low VOC



Additional Info



SDS

Product Description

3M™ Fastbond™ Water-Based Multipurpose Adhesive 1077, Low VOC is a pressure-sensitive adhesive designed for lightweight substrate bonding in general industrial applications. Offering a medium-strength initial grab for quick bond, this water-based adhesive helps ensure ease of use and reliable performance.

Product Features

- Water-based
- Solventless air propelled system, eliminates the need for traditional propellants
- Less than 1 % VOC by weight
- One or two sided bonding

Technical Information Note

3M will continue to test samples from additional manufacturing lots and issue a new Technical Data Sheet if the results change. The technical information and data should be considered representative or typical only and should not be used for specification purposes. The following data is taken from tests conducted on a limited number of production runs.

Typical Uncured Physical Properties

Attribute Name	Temperature	Value
Density		1.1 g/mL
Base Viscosity	25 °C	40-100 mPa.s ¹

¹ Brookfield Viscometer spindle #2 at 50 rpm

Typical Physical Properties

Attribute Name	Value
Color	Milky White (wet), Clear (dry)
Solids Content by Weight	55-60 %
Base	synthetic elastomer
Dry Time	15 min ¹
Bonding Range	15-45 min
Spray Pattern	Mist
Flammable Solvent	No
Flammable Propellant	No
VOC	<1 %
pH	6-7
Coverage	4.7 m ² ²

¹ Dry time will depend on ambient temperature, humidity and coverage applied.

² @ 27 g/m² (2.5 g/ft²) dry

Typical Performance Characteristics

Attribute Name	Value
Shear Adhesion Failure Test - SAFT	54 °C ¹

¹ SAFT Shear Adhesion Failure Test with birch plywood, 25 mm (1 in) overlap, 100 g used, temperature start at 32 °C (90 °F) and ramped 5.5 °C (10 °F) every 10 min. until complete failure.

Handling/Application Information

Directions for Use

The actuators are not inserted during the manufacturing process to avoid accidental dispensing of the adhesive that may dry and clog the valve, ensuring that the customer does not experience issues when dispensing the adhesive. Depending on your usage criteria, you may only need one actuator per can. We are providing an extra actuator for customers who may not use the adhesive frequently.

To use the can do the following:

1. Remove the cap, note the actuators under the cap.
2. Peel the seal off the top of the can. Do not puncture through the seal, pieces of the seal could clog the valve.
3. Pointing the actuator away from the user, or other people in the area, gently insert the stem into the valve. Gently rotate the actuator during insertion, if needed.
4. Begin spraying.

Work Stoppage

For short work stoppages, covering the spray tip is unnecessary. Adhesive may need to be wiped away from the orifice on the actuator. If the stoppage is more than 10 minutes, cover the spray tip with tape and replace the cap. If unused for an extended period, adhesive may dry, requiring the installation of the second actuator to resume spraying.

Application Guidelines

Directions for Use: Bonds can be made by applying 3M™ FastBond™ 1077 to one or both of the surfaces to be bonded. Single surface application may require heavier coverage, and pressure to activate the adhesive. User should evaluate the adhesive to determine which method(s) is suitable for their use. Bonds to porous substrates can generally be made without significant drying, typically less than 15 minutes depending on environmental factors and adhesive coverage. Pressure must be applied to activate the adhesive. Non-porous substrates need to dry until adhesive does not transfer when touched with a gloved hand.

Apply a uniform coat of adhesive to one of the surfaces to be bonded. Very porous material may require more than one coat. (Allow adhesive to dry completely between coats).

Temperature: Maintain temperature between 16-27 °C (60-80 °F) 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 21-32 g/m² (2.0 – 3.0 dry g/ft²). Additional adhesive may be required for heavier materials, rough surfaces and porous substrates.

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

Disposal: Refer to SDS for Disposal Considerations. Always dispose of content/container in accordance with the local/regional/national/international regulations.

Storage and Shelf Life

Store under normal conditions of 16° to 27 °C (60° to 80 °F) and 40 to 60 % relative humidity in the original, unopened packaging, out of direct sunlight.

Lower or higher temperatures may affect the spray pattern and performance of the product. For best performance, use this product within 18 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

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

Precautionary Information: Refer to product label and Material Safety Data Sheet for health and safety information before using the product. For information, please contact your local 3M Office. You can click or scan QR code to see contact detail or visit www.3M.com Important Information: All statements, technical information and recommendations contained in this document are based upon tests or experience that 3M believes are reliable. However, many factors beyond 3M's control can affect the use and performance of a 3M product in a particular application, including the conditions under which the product is used and the time and environmental conditions in which the product is expected to perform. Since these factors are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M product to determine whether it is fit for a particular purpose and suitable for the user's method or application. All questions of liability relating to this product are governed by the terms of the sale subject, where applicable, to the prevailing law. Values presented have been determined by standard test methods and are average values not to be used for specification purposes. Our recommendations on the use of our products are based on tests believed to be reliable but we would ask that you conduct your own tests to determine their suitability for your applications. This is because 3M cannot accept any responsibility or liability direct or consequential for loss or damage caused as a result of our recommendations.

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