**3M** 3M™ Hi-Tack Composite Spray Adhesive 71

## Technical Data Sheet

## March 2019

#### **Product Description:**

A high tack, resin compatible mist spray aerosol adhesive for resin infused composite applications.

#### **Key Features:**

- Securely bonds many lightweight materials used in resin infused composites. Such as glass fiber, carbon fiber, nylon fibers, peel ply & transfer mesh.
- Meets CARB / OTC VOC Requirements.
- Compatible with resins used in composite manufacture, including epoxy, vinyl ester & polyester resins.
- Does not impede resin flow.

#### **Typical Properties:**

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

Product Property	3M™ Hi Tack 71 - Aerosol	ck 71 - Aerosol 3M™ Hi Tack 71-Cylinder	
Base	Acrylic Based	Acrylic Based	
Solids Content - (by wt.):	19 to 20% by wt	19% by wt	
Net Weight / Container	18.0 oz / 511 g	30 lbs / 66 Kg	
Density (lbs/gal):	6.6 lbs/gallon; 790	6.5 lbs/gallon; 760	
Density (IDS/ gal).	grams/liter	grams/liter	
Color(s):	Translucent or Yellow Green	Translucent or Yellow Green	
Volatile Organic Compounds:	<25%	<25%	
CARB / OTC Compliant:	Yes	Yes	
Coverage @ 10 gram / m <sup>2</sup>	99 square feet; 10 square	2550 square feet; 250 square	
Coverage @ 10 grain / In	meters Per Aerosol Can	meters Per Cylinder	
Spray Pattern:	Mist/Particulate	Mist/Particulate	
Dry Time:	15 to 60 seconds	15 to 60 seconds	
Bonding Range:	Up to 20 minutes	Up to 20 minutes	
Shear Adhesion Failure Test - SAFT <sup>(1)</sup> :	205°F 96°C	205°F 96°C	
Flammable Solvent:	Yes	Yes	
Flammable Propellant:	Yes	Yes	

Test Descriptions:

<sup>(1)</sup>SAFT Shear Adhesion Failure Test with birch plywood, 1 inch overlap, 100 grams used, temperature start at 90F and ramped 10F every 10 minute until complete failure.

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#### **Directions for Use:**

Aerosol Can: Preparation: For best results, all surfaces to be bonded must be clean, dry, and free from dirt, dust, oil, loose paint, wax or grease, etc. Working Temperature: The adhesive and surfaces to be bonded should be at 65°F (18°C) or above.

Hold can perpendicular 8" to 12"; 180 mm to 250mm from the substrate to be sprayed. Typical woven fiberglass materials only need 1 dry gram / square foot to hold up to 6 layers vertically. Overhead or more difficult materials may need an application to both materials. More adhesive may be needed depending on number of layers, configuration and nature of materials. For example the transfer mesh may need more adhesive to avoid edge curl. One Surface Bonding: Tack range 10 seconds to 15 minutes. Two Surface Bonding: For more permanent or demanding applications spray both surfaces. Allow minimum 30 seconds drying. Tack range 1 to 30 minutes.

Cylinder: Preparation: For best results, all surfaces to be bonded must be clean, dry, and free from dirt, dust, oil, loose paint, wax or grease, etc. Working Temperature: The adhesive and surfaces to be bonded should be at 65°F (18°C) or above.

Connections: Attach larger end of hose to the spray applicator and use a wrench to tighten securely. With the applicator fully locked against the trigger, attach the smaller hose end to cylinder valve. Use a wrench to tighten securely. Use only 3M standard cylinder spray applicator. Recommended nozzle is 650050 for widest spray pattern. Alternatively, nozzle 2500250 for narrower spray pattern. Hose lengths come in 6', 12' & 25'. (see table below)

Application: Shake before use if cylinder has been inactive over one month. Slowly open the cylinder valve and inspect connections for leakage. Fully open cylinder valve. Unscrew trigger stop 3-4 turns. Test spray pattern. Adjust trigger stop as needed to vary output. Hold applicator 10 to12 inches from surfaces to be bonded. Keep applicator square to the surface. Move applicator at steady speed. Best results obtained by applying even amount to the bonded area. 1 or 2 coats to one surface may be needed depending on substrate texture or performance requirements. Alternatively, apply an application to both surfaces. Allow the adhesive to dry until tacky without transfer to touch. Overhead or more difficult materials may need an application to both materials. More adhesive may be needed depending on number of layers, configuration and nature of materials. For example, the transfer mesh may need more adhesive to avoid edge curl.

One Surface Bonding: Tack range 10 seconds to 15 minutes.

Two Surface Bonding: For more permanent or demanding applications spray both surfaces. Allow minimum 30 seconds drying. Tack range 1 to 30 minutes.

Shut Down: Tighten trigger stop to lock trigger. Close valve on cylinder. Replace nozzle. Do not disconnect hoses until pressure in cylinder is completely depleted. Hose and applicator can be transferred to new cylinder.

Clean Up: Cylinder applicators, hoses, spray tips and excess adhesive can be cleaned with 3M Adhesive Remover. Note: Extinguish ignition sources when handling solvents.

#### **Application:**

The color indicator adhesive is recommended when possible to minimize the amount of adhesive necessary. Only a slight indication of green is needed to bond most materials. See photo for approximate appearance on fiberglass fabric:



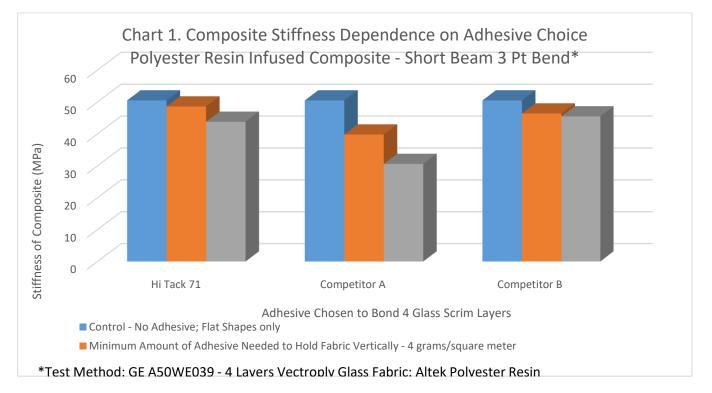
Green color indicator image (not enough, just right, too much)

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Hi Tack Adhesive 71 is formulated to be compatible with the resins used in the manufacturing of vacuum infused composite parts. Chart 1. Compares the effects Hi Tack 71 on the strength of a polyester infused composite.



#### **Product Information:**

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Product:	3M Product Number	Color	Net Weight	
Aerosol Can	62-4876-4930-2	Green	18.0 oz / 511 g	
	62-4865-4930-6	Clear	18.0 oz / 511 g	
Cylinder	US 62-4866-8031-7 INTL 62-4866-8030-9	Green	30 lbs / 66 Kg	
	US 62-4854-8031-2 INTL 62-4864-8030-4	Clear	30 lbs / 66 Kg	

Cylinder Accessories				
Spray Applicator	Nozzles / 3M #	Hoses / 3M#		
	650050 62-9880-8173- 3	6 Foot 62-9880-0006-3		
Regular 62-9880-9930- 5		12 Foot 62-9880-0012-1		
	250050 62-9880- 8133-7	25 Foot 62-9880-0025-3		

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

Shelf Life	When stored at the recommended conditions in original, unopened container, this product has a shelf life if 15 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.
Technical Information	The technical information, recommendations and other statements contained in this
	document are based upon testes 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.
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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.
	ISO 9001)
	This Industrial Adhesives and Tapes Division product was manufactured under a 3M quality system registered to ISO 9001 standards.

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