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English
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Technical Data Sheet

3M™ Nitrile High Performance Rubber & Gasket Adhesive 847H

Product Features

- 3M™ Nitrile High Performance Rubber & Gasket Adhesives 847 and 847H provide strong flexible bonds.
- Rubber & gasket adhesive 847 is a medium viscosity grade adhesive for many brush or flow applications.
- Rubber & gasket adhesive 847 meets the requirements of Mil-C-4003.
- Rubber & gasket adhesive 847H is a high viscosity grade adhesive for many brush or flow applications requiring gap filling or reduced soak-in
- Quick drying.
- Excellent resistance to many fuels and oils.
- Bond leather, nitrile rubber, most plastics, and gasketing materials to a variety of substrates.
- May be heat cured to obtain improved physical properties.

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	46 to 55 %	
Color	Dark Brown	
Flash Point	0 °F	View
Notes: Closed Cup		
Flash Point	-18 °C	View
Notes: Closed Cup		
Carrier Solvent	Acetone	
Viscosity	35,000-90,000 cP	View
Notes: Brookfield Viscometer RVF #6 sp @ 4 rpm		
Bonding Range	Up to 10 min	View
Notes: 10 mil wet film 2 surfaces		

Typical Uncured Physical Properties

Property	Values	Additional Information
Base	Nitrile Rubber	
Net Weight	7.5 to 7.9 lb/gal	

Typical Performance Characteristics

Property	Values	Additional Information
180° Peel Adhesion	208 oz/in	View
Dwell/Cure Time: 24.0 Dwell Time Units: hr Temp C: 23C Temp F: 72F Environmental Condition: 50%RH Substrate: Canvas to Steel		
180° Peel Adhesion	376 oz/in	View
Dwell/Cure Time: 72.0 Dwell Time Units: hr Temp C: 23C Temp F: 72F Environmental Condition: 50%RH Substrate: Canvas to Steel		
180° Peel Adhesion	440 oz/in	View
Dwell/Cure Time: 120.0 Dwell Time Units: hr Temp C: 23C Temp F: 72F Environmental Condition: 50%RH Substrate: Canvas to Steel		
180° Peel Adhesion	496 oz/in	View
Dwell/Cure Time: 168.0 Dwell Time Units: hr Temp C: 23C Temp F: 72F Environmental Condition: 50%RH Substrate: Canvas to Steel		
180° Peel Adhesion	560 oz/in	View
Dwell/Cure Time: 2.0 Dwell Time Units: week Temp C: 23C Temp F: 72F Environmental Condition: 50%RH Substrate: Canvas to Steel		
180° Peel Adhesion	640 oz/in	View
Dwell/Cure Time: 3.0		

Dwell Time Units: week
Temp C: 23C
Temp F: 72F
Environmental Condition: 50%RH
Substrate: Canvas to Steel

180° Peel Adhesion	320 oz/in	View

Dwell/Cure Time: 3.0
Dwell Time Units: week
Temp C: 1C
Temp F: 34F
Environmental Condition: 50%RH
Substrate: Canvas to Steel

180° Peel Adhesion	256 oz/in	View

Dwell/Cure Time: 3.0
Dwell Time Units: week
Temp C: 66C
Temp F: 150F
Environmental Condition: 50%RH
Substrate: Canvas to Steel

180° Peel Adhesion	144 oz/in	View

Dwell/Cure Time: 3.0
Dwell Time Units: week
Temp C: 82C
Temp F: 180F
Environmental Condition: 50%RH
Substrate: Canvas to Steel

Overlap Shear Strength	200 lb/in²	View

Dwell/Cure Time: 3.0
Dwell Time Units: week
Temp C: 23C
Temp F: 72F
Substrate: Birch to Birch

Overlap Shear Strength	152 lb/in²	View

Dwell/Cure Time: 3.0
Dwell Time Units: week
Temp C: 23C
Temp F: 72F
Substrate: Birch to Birch

Overlap Shear Strength	20 lb/in²	View

Dwell/Cure Time: 3.0
Dwell Time Units: week
Temp C: 23C
Temp F: 72F
Substrate: Birch to Birch

Overlap Shear Strength	9 lb/in²	View

Dwell/Cure Time: 3.0
Dwell Time Units: week
Temp C: 23C
Temp F: 72F
Substrate: Birch to Birch

Storage and Shelf Life

Store product at 60-80°F (15-27°C) for maximum storage life. Higher temperatures reduce normal storage life. Lower temperatures cause increased viscosity of a temporary nature. Rotate stock on a “first in-first out” basis.
When stored in the original unopened container, under the conditions recommended, this product has a shelf life of 24 months from date of manufacture.

Industry Specifications

Mil-C-4003

Bottom Matter

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Trademarks

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Handling/Application Information

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:

3M™ Nitrile High Performance Rubber & Gasket Adhesives 847 and 847H

5 Gallon Pail Dispensing System:

1. Pump – 4:1 double acting ball type check pump, 4 cu. in/cycle 3 in air motor.

2. Pail cover required to reduce solvent loss.

55 Gallon Drum Dispensing System:

1. Pump – 4:1 ratio double acting ball type check pump, 4 cu. in/cycle 3 in air motor, bung style pump.

Accessories:

1. Hose – nylon lined, 500 psi working pressure minimum.

2. Spray: Rubber & Gasket Adhesive 847 Production Type Spray Equipment

Airless Spray:

This adhesive is not recommended for airless spraying.

*2 H.P. Compressor for intermittent use. 3 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.

All material hoses should be nylon or PVA lined.

3. Brush: Typical brushes designed for oil based paints may be used.

Directions for Use

1. Surface Preparation: Remove all dust, dirt, oil, grease, wax, loose paint, etc.

Wiping with a solvent such as methyl ethyl ketone (MEK) or 3M™ Citrus Base Cleaner will aid in preparing the surface for bonding.*

2. Application Temperature: For best results the temperature of the adhesive and surfaces to be bonded should be at least 65°F (18°C).

3. Application: Stir well before using

Porous Surface(s): Brush, flow or spray a thin, even coat of adhesive to one or both surfaces. Coating both surfaces is preferred since it gives greater strength and permits longer open time before bonding. Very absorbent materials may require more than one coat. Bond while adhesive is still wet or aggressively tacky. Join surfaces with firm pressure.

Non-Porous Surfaces: Brush, flow or spray a thin, even coat of adhesive to both surfaces. Allow adhesive to dry until tacky. Join surfaces with firm pressure.

4. Drying Time: Drying time depends on temperature, humidity, air movement, and porosity of the materials bonded. Greater immediate strength may be obtained by heat or solvent reactivation. See Reactivation below.

5. Reactivation: To solvent reactivate, coat both surfaces with adhesive. Allow to dry tack-free. Lightly wipe one surface with a solvent such as methyl ethyl ketone

(MEK)*.

Complete bond within 30 seconds.

To heat activate, coat both surfaces with adhesive. Allow adhesive to dry completely. Reactivate by heating one or both surfaces to a minimum of 180°F (82°C). Assemble immediately (while hot), using firm pressure to ensure contact.

6. Curing: 3M™ Nitrile High Performance Rubber & Gasket Adhesives 847 and 847H may be heat cured to obtain improved physical properties. Cure assembled parts at time and temperature listed using 100 psi pressure on the bond line.

Temperature of Bondline Time for Minimum Cure

200°F (93°C) 120 minutes

240°F (115°C) 40 minutes

280°F (138°C) 12 minutes

320°F (160°C) 8 minutes

360°F (182°C) 5 minutes

400°F (204°C) 2 minutes

7. Cleanup: Excess adhesive may be removed with a solvent such as methyl ethyl ketone (MEK) or acetone, preferably while adhesive is still wet.*

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

References

Property	Values
3m.com Product Page	https://www.3m.com/3M/en_US/p/d/b5005321068/
Safety Data Sheet SDS	https://www.3m.com/3M/en_US/company-us/SDS-search/results/?gsaAction=msdsSRA&msdsLocale=en_US&co=ptn&q=847H

Family Group

Link Tags:

847H

Products	Solids Content by Weight
847H	46 to 55 %

ISO Statement

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

Information

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