

3M Industrial Adhesive 1870

Technical Data

February, 2015

Features

- A fast drying, highly flexible adhesive with very long tack range and good water resistance.
- For bonding fabrics and most other lightweight materials with little or no tendency to stain or bleed through.

Typical Physical Properties

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

Viscosity (approx.):	450 - 1250 cps
Brookfield Viscometer:	RVF #3 Sp. @ 20 rpm @ 80°F (27°C)
Solids (by wt.):	26 - 30%
Base:	SBR
Color:	Tan
Net weight (approx.):	6.1 - 6.5 lbs./gal.
Flash point:	-7°F [-22°C] (T.C.C.)
Solvent:	Hexane (n-hexane), ethyl alcohol
Coverage (approx.): @ 2.5 gms. (dry wt.)/ft. ²	320 ft. ² /gal.

Handling/Application Information

Directions For Use:

1. **Surface Preparation:** Surfaces must be clean, dry and dust free. Wiping with a solvent such as methyl ethyl ketone (MEK)* will aid in removing oil and dirt.
 2. **Application Temperature:** For best results, temperature of adhesive and surfaces being bonded should be at least 65°F (18°C).
 3. **Application:** Stir well before using.
 Porous Surface: Brush, spray or flow a uniform coat on the least porous surface to be bonded. Bond immediately, applying pressure to ensure contact.
 Non-Porous Surface (or for higher immediate strength): Apply a uniform light coat on each surface. Allow the adhesive to dry until it is tacky but does not transfer to the knuckle upon touching. Then apply sufficient pressure to ensure intimate contact.
 4. **Drying Time:** Drying time depends on temperature, humidity, air movement and porosity of the materials bonded.
 5. **Cleanup:** Excess adhesive may be removed with solvent such as 3M™ Scotch-Weld™ Solvent No. 2 or 3M™ Citrus Base Cleaner.*
- *Note:** When using solvents, extinguish all ignition sources, including pilot lights, and follow manufacturer's precautions and directions for use.

Application Equipment Suggestions

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. Packings and glands in contact with the adhesive should be PTFE.
2. **Spray:**

Spray Gun	Air Cap	Fluid Tip	Air Pressure	Approximate Air Requirement*	Fluid Flow**
DeVilbiss, JGA	24	E	65 psi	17½ CFM	5 fl. oz./min.
Binks No. 95 or 2001	66PH	66	65 psi	17½ CFM	5 fl. oz./min.

This adhesive is not recommended for Airless Spraying.

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

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1870

**Typical Adhesive
Performance
Characteristics**

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Adhesive was brush applied to both surfaces and bonded while tacky. Bonds were pulled in 180° peel at 2 inches/minute after aging for times indicated.

180° Peel Strength – Canvas/Steel

Time @75°F (24°C)	Test Temperature	Value (lbs./in. width)
1 day	75°F (24°C)	8
3 days	75°F (24°C)	7
5 days	75°F (24°C)	7
7 days	75°F (24°C)	7
2 weeks	75°F (24°C)	7
3 weeks	75°F (24°C)	7
after 3 weeks	-30°F (-34°C)	15
after 3 weeks	150°F (66°C)	4
after 3 weeks	180°F (82°C)	3

Storage

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.

Shelf Life

When stored at the recommended conditions in original, unopened containers, this product has a shelf life of seven months from date of shipment.

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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 tests 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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ISO 9001:2000

This Industrial Adhesives and Tapes Division product was manufactured under a 3M quality system registered to ISO 9001:2000 standards.



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