

3M

Scotch-Seal™

Clear Sealant

1103

Technical Data

February, 1995

Supersedes October 1, 1966

Product Description

A clear, quick drying sealant for many glass, aluminum, steel (cold rolled or galvanized), rubber, and wood surfaces used to help seal against air, dust, and moisture.

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.

Base:	Synthetic Resin
Color:	Clear
Net Weight:	7.0 - 7.4 lbs./gallon
Solids Content:	43-47%
Consistency:	Thin Syrup
Solvent:	Naphthol Spirits and Toluene
Flash Point:	40°F (4°C)
Viscosity: Brookfield Viscometer:	3200-5200 cps RVF #4 sp. @ 10 rpm

Typical Application Characteristics

Coverage: (per gallon) 1500 lineal feet of 1/8 in. diameter wet bead.

Tack Free Time: 10-15 minutes.

Dry Time: 10 mil wet film – 2 to 4 hours, 1/8 in. bead – 1 to 2 days.

Directions for Use

Surface Preparation: Best results are obtained on clean, dry surfaces. Grease, oil and other contaminants may be removed by wiping with solvent such as Scotch-Grip™ Solvent No. 2.*

Application: Production handling is best achieved with pressure-flow equipment. A minimum 4:1 ratio pump is appropriate. A hand applicator or brush may also be used.

Clean-up: Equipment and excess sealer may be cleaned with solvent such as Scotch-Grip™ Solvent No. 2.*

***Note:** When using solvents, be sure to extinguish all ignition sources and follow the manufacturer's precautions and directions for use when handling such materials.

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Equipment Suggestions

Pump: 5 to 1 minimum ratio, double acting, ball checks, divorced style, with 3 in. diameter air motor. Drum to be covered to reduce solvent loss.

Nose: Nylon lined, 500 psi working pressure.

Note: Synthetic materials in contact with this product must be resistant to Naphthol Spirits and Toluene. Nylon, Teflon® and Compar® are suitable for use with this product.

Teflon is a registered trademark of E.I. DuPont de Nemours Co.

Compar is a registered trademark of Engineering Plastics Co., Inc.

Performance Characteristics

Adhesion: Peel-back specimens of canvas to glass, canvas to rubber were tested at 2 in. per minute after aging at 75°F (24°C). Values expressed are in lbs. per inch width.

SPECIMEN	1 Week at 75°F (24°C)	3 Weeks at 75°F (24°C)	1 Week at 160°F (71°C)
Canvas/Glass	2-4	5-6	8-10
Canvas/Steel or Aluminum	2-4	6-7	10-12
Canvas/Wood	8-10	12-13	14-16

Resistance to Potassium Hydroxide: Thoroughly dried films of sealant on glass have withstood immersion in a 41% KOH solution at room temperature for a period of 10 days with no whitening, blistering or loss of adhesion.

Water Resistance: Under conditions of complete immersion in water, Scotch-Seal Clear Sealant 1103 will whiten, and soften, while adhesion to common substrates (glass, aluminum, etc.) is greatly reduced. On removal from water the sealant will normally regain its clarity and its adhesion.

MVT: The moisture vapor transmission properties of Scotch-Seal Clear Sealant 1103 is about 4.65 grams per square meter per 24 hours when tested at a film thickness of 28 mils per Federal Specification UU-P-31b Method 182.

Low Temperature Flexibility: A film about 12 mils thick on a 1 in. x 6 in. x 020 in. thick aluminum panel can be bent around a 2.0 in. diameter mandrel at -20°F (-29°C) without cracking or loss of adhesion.

Storage and Handling

Storage: Store product at 60-80°F (16-27°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.

Shelf life: When stored at recommended temperature in original, unopened container, this product has a shelf life of 15 months after 3M ships the product to a customer or distributor.

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Precautionary Information

Refer to Product Label and Material Safety Data Sheet for Health and Safety information before using product.

Important Notice

3M MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. User is responsible for determining whether the 3M product is fit for a particular purpose and suitable for user's method of application. Please remember that many factors can affect the use and performance of a 3M ITSD product in a particular application. The materials to be bonded with the product, the surface preparation of those materials, the product selected for use, the conditions in which the product is used, and the time and environmental conditions in which the product is expected to perform are among the many factors that can affect the use and performance of a 3M ITSD product. Given the variety of factors that can affect the use and performance of a 3M ITSD product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M ITSD product to determine whether it is fit for a particular purpose and suitable for the user's method of application.

Limitation of Remedies and Liability

If the 3M product is proved to be defective, THE EXCLUSIVE REMEDY, AT 3M'S OPTION, SHALL BE TO REFUND THE PURCHASE PRICE OF OR TO REPAIR OR REPLACE THE DEFECTIVE 3M PRODUCT. 3M shall not otherwise be liable for loss or damages, whether direct, indirect, special, incidental, or consequential, regardless of the legal theory asserted, including negligence, warranty, or strict liability.

For Additional Information

To request additional product information or to arrange for sales assistance, call toll free 1-800-362-3550. Address correspondence to: 3M Industrial Tape and Specialties Division, 3M Center, Building 220-7E-01, St. Paul, MN 55144-1000. Our fax number is 612-733-9175. In Canada, phone: 1-800-364-3577. In Puerto Rico, phone: 1-809-750-3000. In Mexico, phone: 5-728-2180.

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For Additional Product Safety and Health Information, See Material Safety Data Sheet, or call:

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Adhesive Systems
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