

# 3M

## Scotch-Seal™

### Tamper Proof Sealant

#### 1252

#### Technical Data

Issue No. 5

#### Advantages

- 3M™ Scotch-Seal™ Tamper Proof Sealant 1252 is a one-part, fast drying, anti-tamper sealer.
- Self-extinguishing.
- It can be applied over adjustable or removable parts to indicate changes in position. A break in the seal indicates tampering or movement.
- Scotch-Seal 1252 is used in the electronics industry to protect settings and calibrations of hydraulic, pneumatic, and electronic equipment against tampering. Scotch-Seal 1252 is also used to seal components between stages of assembly and parts which are restricted to adjustment, alteration, or access by qualified personnel.
- Will not support fungus growth.
- Exposed surfaces of Scotch-Seal 1252 will accept ink from an inspector's approval stamp within 20 seconds of application.
- Commonly used by aircraft industry to indicate sabotage, tampering, alteration or vibration loosening.

#### 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.**

<b>Viscosity:</b>	500-2500 poise
<b>Brookfield Viscometer:</b>	RVF #6 Spindle @ 4 rpm @ 77°F (26°C)
<b>Solids (by weight):</b>	61-73%
<b>Base:</b>	Nitrile-Phenolic
<b>Colors Available (wet and dry):</b>	White, Blue, Red, Orange, Green, Gray, Pink, Yellow
<b>Net Weight:</b>	12.3-13.3 lbs/gal
<b>Flash Point (closed cup):</b>	20°F (-4°C)

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#### Handling/Application

**Application:** Scotch-Seal 1252 is a one-part, air drying compound suitable for hand extruding. Surfaces must be clean, dry and dust free.

**Cleanup:** Excess may be removed with a solvent such as 3M™ Scotch-Grip™ Solvent #3 or methyl ethyl ketone (MEK).\*

\***Note:** When using solvents, extinguish all ignition sources and follow the manufacturer's precautions and directions for use.

#### Typical Performance Characteristics

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

- **Drying Time:** An 1/8" thick layer of Scotch-Seal 1252 will dry tack free in 20 seconds.
- **Hardness:** Shore A Hardness of 97-99 after drying for 24 hours @ 77°F (25°C)/50% relative humidity.
- **Friability:** Scotch-Seal 1252 will easily crumble when flexed or twisted.
- **Flammability:** Dry film of Scotch-Seal 1252 is self-extinguishing and flame will self-extinguish within 15 seconds.
- **Dielectric Strength (minimum):** 100 volts/mil (Fed. Standard #406, Method 4031).
- **Surface Resistivity (minimum):** 10<sup>10</sup> ohms (Fed. Standard #406, Method 4041).
- **Volume Resistivity (minimum):** 10<sup>10</sup> ohms-cm (Fed. Standard #406 Method 4041).
- **Heat Resistance:** 1252 Sealant dried for 24 hours @ 77°F (25°C)/50% relative humidity will withstand 200°F (93.3°C) for 72 hours without loss of adhesion or sagging.
- **Fluid Resistance:** Scotch-Seal 1252 was cured 24 hours @ 77°F (25°C)/50% R.H. and then immersed in the following fluids:
 

Pure Oxygen	No effect
MIL-L-7808 Oil	Moderate softening; good adhesion
Aviation Gas (115/145)	Slight softening; good adhesion
3% Salt Water	No effect
Tap Water	No effect
JP-4 Fuel	Slight softening; good adhesion
Skydrol® Splash	Slight softening; good adhesion
- **Adhesion Overlap (Shear Strength)**

	<b>Aluminum (Alclad)</b>	<b>Steel</b>
Average of 6	173 psi	164 psi

1" x 1/2" overlap – 10 mil thick bond line. Specimens were cured for 24 hours @ 77°F (25°C).
- **Corrosion:** After 72 hours @ 77°F (25°C) there was no evidence of corrosion on steel, aluminum, brass or silver.
- **Low Temp. Shock:** Dried films 1/16" thick withstand 3 foot-lbs. shock at -20°F (-29°C) without loss or adhesion.

# Scotch-Seal™ Tamper Proof Sealant 1252

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**Storage and Handling**

**Storage:** Store product at 40°F (4°C) for maximum storage life. Higher temperatures reduce normal storage life. Lower storage temperatures temporarily increase viscosity.

Rotate stock on a “first in-first out” basis.

Tubes must be stored tips down.

**Shelf life:** 3M Standard shelf life of Scotch-Seal 1252 is 12 months from date of shipment from 3M when stored @ 40°F (4°C) or below. 3M Standard shelf life of Scotch-Seal 1252 is 9 months from date of shipment from 3M when stored @ 60-80°C (16-27°C).

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**Note:**

3M Scotch-Seal 1252 is identical to 3M EC-1252 in chemical composition. EC-1252 has been labeled, packaged, tested, and certified for aircraft and aerospace application. Scotch-Seal 1252 may be used for aircraft and aerospace application if proper Certificates of Test have been issued and material meets all specification requirements.

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## Tamper Proof Sealant

### 1252

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#### Precautionary Information

See 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.

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#### For Additional Information

To request additional product information or to arrange for sales assistance, call toll free (800) 235-2376. Our fax number is (417) 869-5219. Address correspondence to: 3M Aerospace Central, 3211 E. Chestnut Expressway, Springfield, MO 65802.

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#### 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 Adhesives Division 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 product. Given the variety of factors that can affect the use and performance of a 3M product, some of which 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 of application.

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#### 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.

ISO 9002

This Adhesives Division product was manufactured under a 3M quality system registered to ISO 9002 standards.

# 3M

#### Adhesives Division

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