



# Scotch-Seal™

## Tamper Proof Sealant

### 1252

Technical Data

November, 2009

#### Product Description

3M™ Scotch-Seal™ Tamper Proof Sealant 1252 is a fast drying, anti-tamper sealer which is fire retardant.

#### Features

- Can be applied over adjustable or removable parts to indicate changes in adjustment or other evidence of tampering by a break in the seal when the part is altered in position.
- Has been effectively used in the electronics industry to protect settings and calibrations of electronic equipment against tampering, to seal electronic components between stages of assembly, to aid in the visual inspection of subassembly components, equipment and parts which are restricted to adjustment, alteration, or access by qualified personnel.
- Exposed surfaces will accept ink from an inspector's approval stamp and can be marked as soon as 20 seconds after the sealer application.

#### 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 (approx.):</b>	500 - 2500 cps
<b>Brookfield Viscometer:</b>	RVF #6 sp. @ 4 rpm @ 77°F (26°C)
<b>Solids (by wt):</b>	61 - 73%
<b>Base:</b>	Nitrile
<b>Color (wet and dry):</b>	White
<b>Net weight (approx.):</b>	13.1 - 14.1 lbs.
<b>Flash point:</b>	20°F (-4°C)
<b>Solvent:</b>	Methyl ethyl ketone (MEK)

#### Handling/Application Information

**Application:** One-part, air drying compound suitable for hand extruding from a collapsible metal tube. Surfaces must be clean, dry and dust free.

**Cleanup:** Excess sealant may be removed from application equipment with a solvent such as 3M™ Scotch-Grip™ Solvent No. 3 or methyl ethyl ketone (MEK).\*

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

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## 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:** A 1/8" layer of 3M™ Scotch-Seal Tamper Proof Sealant 1252 is tack-free in 20 seconds and suitable for stamping with ink.
- **Hardness:** After 24 hours @ 77°F (25°C), 50% R.H., has a Shore A hardness of 97-99.
- **Friability:** Easily crumbled when the surface to which it is applied is flexed or twisted.
- **Flammability:** Dry film of the sealant is fire retardant and flames will extinguish themselves within 15 seconds.
- **Dielectric Strength:** 100 volts/mil, minimum, Fed. Standard #406, Method 4031.
- **Surface Resistivity:** 10<sup>10</sup> ohms, minimum, Fed. Standard #406, Method 4041.
- **Volume Resistivity:** 10<sup>10</sup> ohms-cm, minimum, Fed. Standard #406, Method 4041.
- **Heat Resistance:** Dried for 24 hours @ 77°F (25°C) 50% R.H., withstands 200°F (93.3°C) for 72 hours without loss of adhesion or sagging.
- **Fluid Resistance:** Cured 24 hours @ 77°F (25°C) 50% R.H. was immersed in the following fluids:
 

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
- **Adhesion Overlap (Shear Strength)**

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

1" x 1 1/2" overlap – 10 mil thick bond line. Specimens were cured for 24 hours @ 77°F (25°C).
- **Overlap Shear:** 1" x 1 1/2" – 10 mil thick films cured 24 hours @ 77°F (25°C).
- **Corrosion:** After 72 hours @ 77°F (25°C) there is 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 of adhesion.

## Storage

Store 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. Tubes must be stored in an inverted position (tips down). Rotate stock on a "first in-first-out" basis.

## Shelf Life

When stored in the original unopened container, under the conditions recommended, this product has a shelf life of 9-12 months @ 40°F (4°C).

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## 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.

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## 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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