

Thermosil 4000

Heat-Resistant Thixotropic Silicone Sealant

Technical Data and Instructions



PRODUCT DESCRIPTION

Thermosil 4000 is a thixotropic, two-part (A/B), silicone sealant that is applied as a potting compound for low-pressure compressor stator vanes in jet aircraft engines. Its superior elastic properties also allow it to function as a damping compound to minimize vane vibration and stress.

Thermosil 4000 meets the requirements of Pratt & Whitney specification PWA 404-2. It can withstand operating temperatures up to 350°F (177°C).

Thermosil 4000 is available in pre-measured void-free A/B component injection cartridges.

Please read the Safety Data Sheet before use.

IMPORTANT APPLICATION INFORMATION

Component Matching

Thermosil 4000 is supplied as a two-part (A/B), precision metered, component injection cartridge kit. The product should be mixed using the specific Part A and Part B components supplied with the kit. Using a different Part A or Part B component may affect product properties.

Curing Inhibition

Thermosil 4000 is a platinum-catalyzed addition reaction silicone rubber. The curing mechanism is sensitive to inhibition by amines, sulfur, or tin-catalyzed rubbers.

Mixing, Containers, and Tools

Thermosil 4000 cartridges are designed to be mixed by automated mixing equipment specific to that purpose. The following materials/tools are approved for mixing and handling:

- Stainless steel, glass, or high-density polyethylene (HDPE) containers
- Stainless steel or HDPE hand tools
- Stainless steel mixing equipment

All tools and equipment must be thoroughly cleaned after use. Clean with mineral spirits, followed by a solvent rinse.

Storage, Shelf Life, and Recertification

Thermosil 4000 has a shelf-life of six (6) months from the date of shipment when stored in its original, unopened containers at temperatures not exceeding 90°F (32°C). FMI Chemical offers free recertification of its products where permitted. Please contact FMI Chemical for details.

THERMOSIL 4000 A/B TECHNICAL DATA*

UNCURED PROPERTIES	Part A	Part B
Consistency	Thixotropic	N/A
Color	Beige	Black
Parts A and B mixed at 75°F (24°C) at 50% relative humidity		
Mix ratio A:B (Parts by weight)	10:1	
Flow (Inches after 15 minutes)	0.05 in.	
Working Life	1.5 hours	
Extrusion Rate	230 g/min.	
CURED PROPERTIES	Cured 1 hour at 300°F (149°C) in mold	
Color	Black	
Specific Gravity	1.25	
Tensile Strength	850 psi	
Elongation	350%	
Lap Shear Strength	700 psi	
Cohesive Failure	100%	
Hardness	65 Shore A	
Hardness (16 hours at room temperature)	45 Shore A	

* Typical manufactured properties should not be used as specifications.

MIXING and APPLICATION INSTRUCTIONS

Automated Mixing

Thread the Part B dasher rod into the Part A cartridge. Use a ramrod to inject Part B into the middle of the cartridge containing Part A. Install the cartridge on an automatic mixer and set the mixer's stroke length so that the open spoke mixer will contact the plunger without displacing it. Mix for 2 1/2 minutes. When mixing is complete, unthread the dasher rod and install the cartridge in a pneumatic or mechanical dispensing gun.

Tooling

Tool Thermosil 4000 with acetone, methyl ethyl ketone (MEK), or isopropyl alcohol (IPA).

Have a question? Please contact us at:

FMi Chemical, Inc.
4 Northwood Drive
Bloomfield, CT 06002 USA
Phone: (+1) 860-243-3222
Email: info@fmichemical.com

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