

Thermosil 3005

Fast Curing, All-Purpose Adhesive Sealant

Thermosil 3005 is a red, thixotropic, 2-part (RTV-2), all-purpose, silicone adhesive sealant that facilitates faster throughput in aircraft manufacturing, maintenance, repair, and overhaul applications. Thermosil 3005 provides:

- Reduced preparation time with void-free A/B injection cartridges; pre-measured for easy mixing
- Primer-free application on a wide variety of clean materials (a primer can be used if required)*
- Fast, 4-hour cure time with full adhesion within 24 hours at room temperature
- Secure bonding to a wide range of surfaces in ambient conditions, reducing fixture requirements and eliminating special curing conditions
- Reliable, temperature-resistant performance; capable of withstanding operating temperatures from -65°F to 500°F (-54°C to 260°C)
- Outstanding performance in deep-section applications with large-area bonding capability

Thermosil 3005 is an environmentally friendly, fast curing silicone elastomer formulated to provide rapid, same-day curing and a secure bond without releasing hazardous by-products.

* See *Applying The Product*, below.



Application Information

Curing Inhibition

Thermosil 3005 is a dual-cure addition reaction silicone rubber. Avoid contact with common silicone inhibitors or poisons such as amines, sulfur, organometallic compounds, or tin-catalyzed rubbers.

Curing and Bonding

Thermosil 3005 cures in 4 hours and exhibits full adhesion within 24 hours at 75°F (24°C). Accelerated curing can be achieved with the application of heat.

Mixing and Handling

Thermosil 3005 cartridges are designed to be mixed by automated mixing equipment specific to that purpose. The following containers and tools are approved for handling this material:

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

Clean all tools and equipment thoroughly after use.
Clean with mineral spirits, followed by a solvent rinse.

Applying The Product

Thermosil 3005 bonds to a wide range of clean materials without the need for a primer. Clean and prepare surfaces with a solvent wash, degreaser, or abrasion.

Application Note: A primer can be used if indicated for the application. Specific surface preparation may be required for optimal bonding performance on some plastics or composite materials. Please contact FMI Chemical if you have questions about a particular application of this product.

Component Matching

Thermosil 3005 is supplied as a 2-part (A/B), precision metered, injection cartridge kit. Mix the product 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.



Automated Mixing

The following are general mixing instructions using an industry-standard automated mixer. FMI Chemical recommends the use of automated mixing equipment for Thermosil 3005 A/B injection cartridges. Thread the Part B dasher rod into the spoker at the top of the Part A cartridge. If applicable, use a ramrod to inject Part B into the middle of Part A. Install the joined cartridge and dasher rod unit into the mixer and adjust the mixer's settings for the correct cartridge size. Mix the material for 70 strokes, or 2.5 minutes (00:02:30) at 90 rpm. When mixing is complete, pull the spoker to the top of the cartridge, unthread the dasher rod, and install the cartridge in a pneumatic or mechanical dispensing gun. For more information about automated mixing procedures, mixing various cartridge sizes, or alternative mixing methods, please contact FMI Chemical.

Tooling

Thermosil 3005 can be tooled with acetone, methyl ethyl ketone (MEK), or isopropyl alcohol (IPA).

Storage, Shelf Life and Recertification

Thermosil 3005 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 recertification of its products where permitted. Please contact FMI Chemical for details.

PLEASE READ THE SAFETY DATA SHEET BEFORE USING THIS PRODUCT.

Technical Data

Thermosil 3005 Uncured Properties	Part A	Part B
Consistency	Thixotropic	N/A
Color	Red	Clear
Parts A and B mixed at 75°F (24°C) at 50% relative humidity		
Mix ratio A:B (Parts by weight)	As Supplied	
Flow (Inches after 15 minutes)	0.15 in.	
Working Life	1 hour	
Extrusion Rate	150 g/min.	
Thermosil 3005 Cured Properties — Cured 24 hours at room temperature		
Color	Red	
Specific Gravity	1.14	
Tensile Strength	800 psi	
Elongation	750%	
Lap Shear Strength	300 psi	
Cohesive Failure	100%	
Peel Strength	60 psi	
Hardness (Cured 4 hours at room temperature)	25 Shore A	
Hardness (Cured 24 hours at room temperature)	30 Shore A	

Typical manufactured properties should not be used as specifications.



Have a question? Please call (+1) 860-243-3222

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ISO 9001:2015 and AS9100D certified | Nadcap™ accredited (nonmetallic testing) | ANAB® accredited per ISO/IEC 17025:2017

