



Technical Data Sheet

3M™ Scotch-Weld™ Retaining Compound Anaerobic Adhesive RT09



[Regulatory Info/SDS](#)

Product Description

3M™ Scotch-Weld™ Retaining Compound Anaerobic Adhesives are one-component anaerobic adhesives designed to secure cylindrical metal assemblies such as bearings on shafts, bushings, sleeves, housings, and keyways. They prevent loosening, corrosion and leakage caused by shock and vibration.

Product Features

3M™ Scotch-Weld™ General Purpose Retaining Compound RT09 is a general purpose, medium strength, removable, low viscosity retaining compound that prevents spin-out for rigid assemblies such as locking bushings and sleeves in housings or on shafts, bonding rotors to shafts, and as an augment to press fits.

Technical Information Note

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

Typical Uncured Physical Properties

Attribute Name	Test Method	Value
Color		Green ¹
Viscosity		90 — 140 cP ²
Chemistry		Dimethacrylate
Fixture Time	ISO 10964	25min (avg time) (≤35min range)

¹ Colors may vary from nearly white to yellow/amber. Adhesive performance is not affected by color variation.

² Brookfield Viscometer spindle LVF#1 at 12 rpm

Typical Mixed Physical Properties

Temperature: 23 °C (73 °F)

Attribute Name	Value
Time to Full Cure	24 h ¹

¹ The cure time is defined as that time required for the adhesive to achieve a minimum of 80% of the ultimate strength as measured by aluminum-aluminum OLS.

Typical Physical Properties

Attribute Name	Value
Appearance	Liquid

Typical Cured Characteristics

Attribute Name	Test Condition	Value
Compressive Shear		3,770 lb/in ²
Temperature Range	Continuous	-54 — 149 °C

Typical Performance Characteristics

Attribute Name	Test Method	Value
Breakaway Torque	ISO 10964	230in-lb- typical value (≥ 175 in-lb range)
Prevailing Torque		260in-lb- typical value (≥ 220 in-lb range) ¹
Long Term Temperature Resistance		149 °C (300 °F) ²
Minimum Long Term Temperature Resistance		-54 °C (-65 °F) ²

¹ Reference ISO 10964. To convert to (N.m) divide (in.lb) by 8.851.

² Long Term (day, weeks)

Handling/Application Information

Directions for Use

3MTM Scotch-Weld™ Retaining Compounds Anaerobic Adhesives are not recommended for use on most plastics due to potential cracking of plastic parts. Also, they are not recommended for use in piping systems that contain pure oxygen or an oxygen-rich environment, chlorine, or strong oxidizing substances.

For Assembly:

1. Ensure parts are clean, dry and free from oil, grease and dirt. For best results, clean and dry parts with solvent or 3MTM Scotch-Weld™ Activator. (Activator can also be used on inactive surfaces or to accelerate the cure on active surfaces.) Note: Use of 3MTM Scotch-Weld™ Activator may reduce bond strength depending on substrates and gap. Testing is recommended to evaluate the effect.

2. If not sure of surface type, always use activator. Refer to Material surface Activity and Cure Speed section for more information.

3. Avoid touching the metal surfaces with the bottle tip since the metal ions may react with the adhesive upon contact and eventually may clog the bottle tip

4. Apply a bead of adhesive onto the shaft and inside the collar where the contact area will finally be assembled. For larger parts use more adhesive. Assemble parts and rotate to spread adhesive evenly around contact area

For Assembly:

5. Allow assemblies to set for sufficient time so that handling strength or full cure will occur before further processing or testing.

For Disassembly:

Apply localized heat (approximately 490oF / 254oC) to bonded parts then disassemble while parts are still hot. Use extreme caution when working with heat sources (e.g. heat gun, flame, etc.)

Storage and Shelf Life

Store under normal conditions of 16° to 27°C (60° to 80°F) in the original, unopened packaging, out of direct sunlight. For best performance, use this product within 18 months from date of manufacture.

Precautionary Information

Refer to 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

Automotive Disclaimer

Select Automotive Applications:

This product is an industrial product and has not been designed or tested for use in certain automotive applications, such as automotive electric powertrain battery or high voltage applications, which may require the product to be manufactured in a IATF certified facility, meet a Ppk of 1.33 for all properties, undergo an automotive production part approval process (PPAP), or fully adhere to automotive design or quality system requirements (e.g., IATF 16949 or VDA 6.3). Customer assumes all responsibility and risk if customer chooses to use this product in these applications.

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ISO Statement

This product was manufactured under a 3M quality system registered to ISO 9001 standards.

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