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Technical Data Sheet

High Temperature Sleeve Retainer

INDUSTRIAL

PRODUCT DESCRIPTION

S.I.N.: 834-300

Permatex® High Temperature Sleeve Retainer is a one component, solventless, fast curing, anaerobic adhesive/sealant. It is a green colored liquid resin that hardens and cures in the absence of air. Permatex® High Temperature Sleeve Retainer self-hardens into a tough plastic material when it is confined between close-fitting metal parts. The cured adhesive is a thermoset plastic suitable for exposure to most solvents and engine fluids. Meets or exceeds the requirements of Military Specification Mil-R-46082B, Type II.

PRODUCT BENEFITS

- No mixing
- No curing outside of joint
- No on-torque adjustments needed
- Restores fit to worn assemblies
- Prevents fretting and corrosion
- Allows the use of slip fit or press fit
- For use on assemblies with gaps up to 0.007" diametral

TYPICAL APPLICATIONS

- Retains keys and splines
- Retains bearings in place, preventing spin out
- Retains rotor to shafts in fractional hp motors
- Retains bushings and sleeves in housings and on shafts
- Augments press fits

DIRECTIONS FOR USE

1. Remove any grease or oil by using Permatex® Brake & Parts Cleaner.
2. For slip fitted assemblies, apply adhesive around the leading edge of the collar and use a rotating motion during assembly.
3. For press fits, adhesive should be applied thoroughly to both bond surfaces and assembled at high press-on rates.
4. For shrink fitted assemblies, the adhesive should be coated onto the pin; the collar should then be heated to create sufficient clearance for free assembly.
5. For faster cure rates, use Permatex® Surface Prep on both surfaces.
6. Parts should not be disturbed until sufficient handling strength is achieved.
7. Any material that is on the outside of the assembly will not cure. Wipe off with a dry cloth.

PROPERTIES OF UNCURED MATERIAL

	Typical Value
Chemical Type	Anaerobic dimethacrylate ester
Appearance	Green liquid
Specific Gravity @ 77°F	1.12
Viscosity, cps	500 - 700
Flash Point, COC, °F	>200°
Cure Speed	Fixture - 1 hour Full cure - 24 hours

For Cleanup

1. Residual liquid films outside the joints are readily soluble in Permatex® Brake & Parts Cleaner.
2. Cured product can be removed with a combination of soaking in Permatex® Gasket Remover and mechanical abrasion such as a wire brush.

For Disassembly

1. Apply localized heat to assembly to approximately 232°C(450°F). Disassemble while hot.

For Reassembly

1. Remove any loose product from the assembly.
2. Apply primer to mating parts.
3. Assemble as per directions.

TYPICAL CURING PERFORMANCE

Cure speed vs. substrate

The rate of cure will depend on the material used. Permatex® High Temperature Sleeve Retainer will react faster and stronger with **Active Metals**. However, **Inactive Metals** will require the use of an activator (Surface Prep) to obtain maximum strength and cure speed at room temperature.

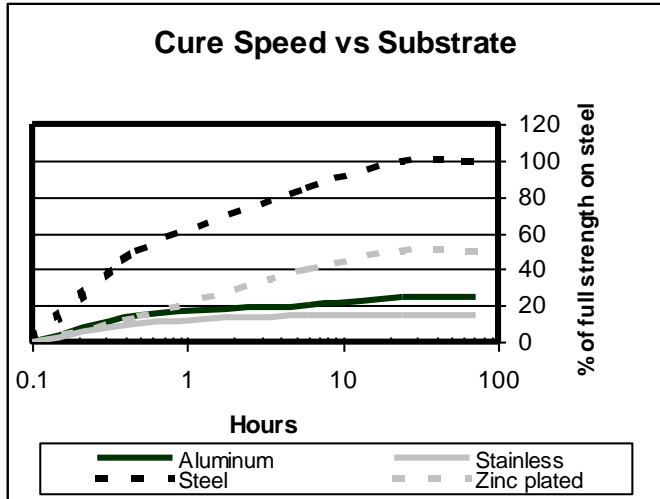
Active Metals	Inactive Metals
Soft Steel Iron	Bright Platings
Copper	Anodized Surfaces
Brass	Titanium
Manganese	Zinc
Bronze	Pure Aluminum
Nickel	Stainless Steel
Aluminum Alloy	Cadmium

NOT FOR PRODUCT SPECIFICATIONS.

THE TECHNICAL DATA CONTAINED HEREIN ARE INTENDED AS REFERENCE ONLY.

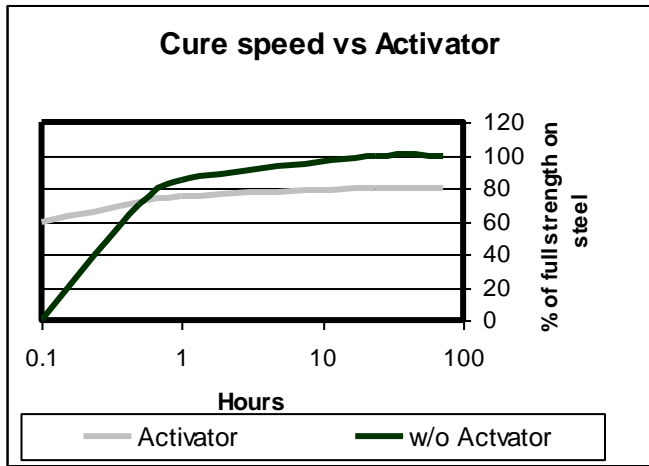
PLEASE CONTACT PERMATEX, INC., TECHNICAL SERVICE DEPARTMENT FOR ASSISTANCE AND RECOMMENDATIONS FOR YOUR SPECIFIC APPLICATION.
PERMATEX, INC., HARTFORD SQUARE NORTH, 10 COLUMBUS BOULEVARD, HARTFORD, CT 06106 PHONE -(1-87)PERMATEX Revised 11/04

The graph below shows the breakaway strength developed with time on 3/8" - 16 Grade 5 bolts and Grade 8 nuts compared to different materials.



Cure speed vs. activator

Where cure speed is unacceptably long, or large gaps are present, applying an activator (Surface Prep) to the surface will improve cure speed. A 3/8-16 steel nut and bolt assembly will fixture in about 5 minutes using an activator, while fixturing will occur in about 20 minutes without an activator. Full cure in 24 hours for both procedures. The graph below shows the breakaway strength developed with time using Permatex® Surface Prep Activator.



PERFORMANCE OF CURED MATERIAL

- Temperature Resistance - -65°F to 400°F (-54°C to +204°C)
- Corrosivity - None (Slightly acidic, may discolor some metals.)
- Shear Strength - >3000PSI
- Elongation <2%
- Maximum gap fill (diametral) 0.007inch

Chemical / Solvent Resistance

Aged under conditions and tested at 22°C(72°F)

% Initial Strength retained after time	Temp	500hr	700hr	1000hr
Heat aged	150°C		70%	
Motor oil(SL)	125°C			110%
Antifreeze	87°C	70%		
Gasoline	23°C	95%		
Ethanol	23°C	85%		
Acetone	23°C	105%		

GENERAL INFORMATION

This product is not recommended for use in pure oxygen and/or oxygen rich systems and should not be selected as a sealant for chlorine or other strong oxidizing materials.

For safe handling information on this product, consult the Material Safety Data Sheet, (MSDS).

ORDERING INFORMATION

Part Number	Container Size
64010	10 ml bottle, carded
64050	50 ml bottle
64025	250 ml. bottle

STORAGE

Products shall be ideally stored in a cool, dry location in unopened containers at a temperature between 8° to 28°C (46° to 82°F) unless otherwise labeled. Optimal storage is at the lower half of this temperature range. To prevent contamination of unused product, do not return any material to its original container.

NOTE

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