

## Technical Data Sheet Cylinlock<sup>®</sup> 840

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### Product Description

**Hernon<sup>®</sup> Cylinlock<sup>®</sup> 840** is a general purpose, single-component, anaerobic adhesive used primarily for joining cylindrical assemblies of all types. It is a low viscosity, self-hardening adhesive that cures when confined between ferrous or copper alloy metals. The cured adhesive is a thermoset plastic suitable for exposure to most solvents.

### Typical Applications

- Retains keys and splines. Eliminates backlash in worn assemblies.
- Retains bearings in place, preventing spin out.
- Retains rotor to shafts in fractional and subfractional horsepower motors.
- Retains bushing and sleeves in housings and on shafts.
- Augments press fits.
- Restores the fit to worn assemblies or out of tolerance parts.

### Product Benefits

- Allow the use of slip fits instead of press and interference fits.
- Restores the fit to worn or out of tolerance assemblies.
- Easily joins dissimilar materials.
- Eliminates resizing of bushings due to close-in from pressing.
- Eliminates set screws.
- Prevents fretting and corrosion from occurring by strengthening and completely sealing assemblies.
- Increases the strength of interference fits and mechanical assemblies.

### Typical Properties (Uncured)

Property	Value
Resin	Dimethacrylate ester
Appearance	Green liquid
Viscosity @ 25°C, cP	125
Specific gravity	1.06
Flash point	See MSDS

### Typical Properties (Cured)

Property	Value
Coefficient of thermal expansion, ASTM D696, K <sup>-1</sup>	0.1
Coefficient of thermal conductivity, ASTM C177, W / m <sup>2</sup> K	0.1
Temperature range, °C	-55 to 150

### Curing Specifications

Curing occurs when the resin is confined between metallic surfaces. The metal acts as a catalyst for the curing process. On nonmetallic surfaces the use of **Hernon<sup>®</sup> EF<sup>®</sup> Primer 49 or 50** or heat is necessary to effect a cure. Hot air oven heat or induction heat will fully cure these compounds.

### Performance Testing

Each batch of **Cylinlock<sup>®</sup> 840** is tested to the lot requirements of MIL-R-46082B (Type I), and to the detail requirements of ASTM D5363 (AN0411).

### Typical Cured Performance

Shear Strength, ISO 10123  
Steel Pins and Collars

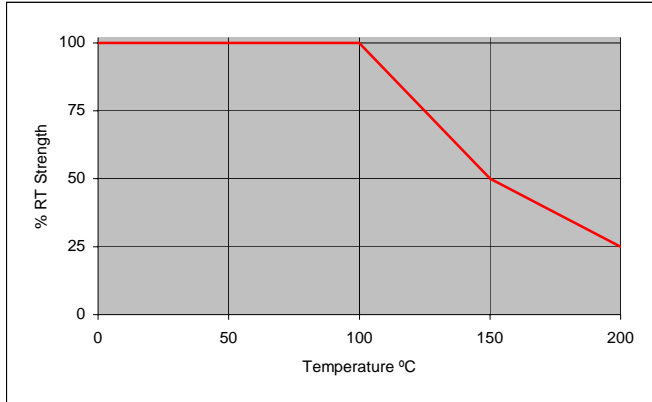
Cure Conditions	Shear Strength, N/mm <sup>2</sup> (psi)
24 hours at 22°C	20.7 (3000)
1 hour at 93°C, tested at RT	22.7 (3290)

**Typical Environmental Resistance**

Cured for 1 week @ 22°C  
 Shear Strength, ISO 10123  
 Steel Pins and Collars

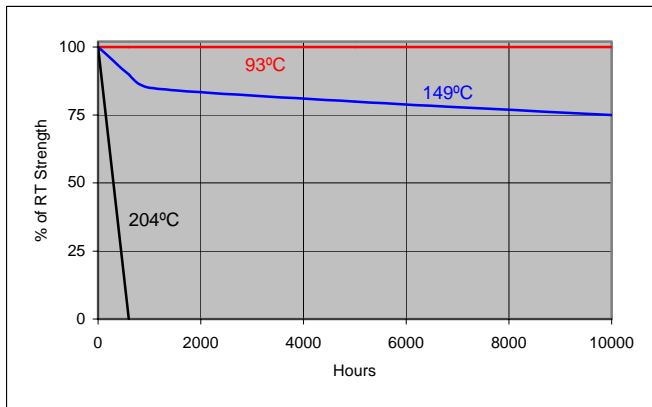
**Hot Strength**

Tested at temperature



**Heat Aging**

Aged at temperature indicated - Tested at (22°C).



**Chemical/Solvent Resistance**

Aged under condition indicated - Tested at 72°F (22°C).

Chemical/Solvent	Temp, °C	% of Initial Strength
Water	87	56
Butyl Alcohol	87	92
Toluene	87	83
SAE 10W Oil	87	100
Mil. Oil Type #6	87	100
JP-4	87	100
JP-5	87	100
Air Reference	87	100

**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).**

Where aqueous washing systems are used to clean the surfaces before bonding, it is important to check for compatibility of the washing solution with the adhesive. In some cases these aqueous washes can affect the cure and performance of the adhesive.

This product is not normally recommended for use on plastics (particularly thermoplastic materials where stress cracking of the plastic could result). It is recommended to confirm compatibility of the product with such substrates.

**Directions For Use**

For best results, clean all surfaces (external and internal) with a **Hernon®** cleaning solvent and allow to dry. If the material is an inactive metal or the cure speed is too slow, apply **EF® Primer 49 or 50** and allow to dry.

**For Slip Fitted Assemblies**, apply adhesive around the leading edge of the pin and the inside of the collar and use a rotating motion during assembly to ensure good coverage.

**For Press Fitted Assemblies**, apply adhesive thoroughly to both bond surfaces and assemble at high press on rates.

**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.

Parts should not be disturbed until sufficient handling strength is achieved.

**Disassembly and Cleanup**

To aid in disassembly anaerobic compounds can be weakened by heating to at least 500°F (260°C). Once disassembled, cured adhesive can be removed with **Hernon® Gasket Remover 30**.

**Storage**

**Cylinlock® 840** should be stored in a cool, dry location in unopened containers at a temperature between 46°F to 82°F (8°C to 28°C) unless otherwise labeled. Optimal storage is at the lower half of this temperature range. To prevent contamination of unused material, do not return any material to its original container.

**Dispensing Equipment**

**Heron<sup>®</sup>** offers a complete line of semi and fully automated dispensing equipment. Contact **Heron<sup>®</sup> Sales** for additional information.

These suggestions and data are based on information we believe to be reliable and accurate, but no guarantee of their accuracy is made. HERNON MANUFACTURING, INC. shall not be liable for any damage, loss or injury, direct or consequential arising out of the use or the inability to use the product. In every case, we urge and recommend that purchasers, before using any product in full scale production, make their own tests to determine whether the product is of satisfactory quality and suitability for their operations, and the user assumes all risk and liability whatsoever, in connection therewith. Heron's Quality Management System for the design and manufacture of high performance adhesives and sealants is registered to the ISO9001:2000 Quality Standard.