

# Technical Data Sheet

## Dripstop<sup>®</sup> 921

June 2010

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### Product Description

Hernon<sup>®</sup> Dripstop<sup>®</sup> 921 is a single component multiple purpose anaerobic adhesive gel for locking, lubricating and sealing threaded fasteners and pipe fittings.

### Product Benefits

- Locks threads against vibrational loosening
- Lubricates threads to aid in assembly and eliminate thread damage
- Allows easy disassembly with normal hand tools
- Seals out air and moisture that cause corrosion –no more frozen or rust locked parts.
- Seals both liquids and gases in pipe threads and fittings
- Non-run gel consistency. Won't drip or run onto nearby components
- Replaces teflon tape, grease, anti-seize and mechanical thread lockers

### Typical Applications

Seals and locks most hydraulic and pneumatic fittings up to a 1" diameter. Seals and locks pipe threads and fittings up to a 1" diameter.

Seals and locks fasteners subject to vibration and shock or corrosive and harsh environments.

### Typical Properties (Uncured)

Property	Value
Resin	Dimethacrylate ester
Appearance	Yellow gel
Viscosity @ 25°C, cP	100,000
Specific gravity	1.09
Flash point	See MSDS

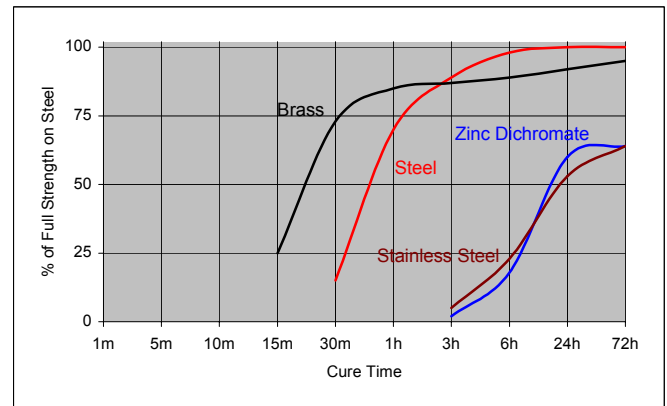
### Typical Properties (Cured)

Property	Value
Coefficient of thermal expansion, ASTM D696, K <sup>-1</sup>	80 × 10 <sup>-6</sup>
Coefficient of thermal conductivity, ASTM C177, W / m <sup>o</sup> K	0.1
Specific Heat, kJ/(kg·K)	0.3
Pressure Resistance, psi	10,000
Temperature Range, °C (°F)	-73 to 149 (-100 to 300)

### Typical Curing Performance

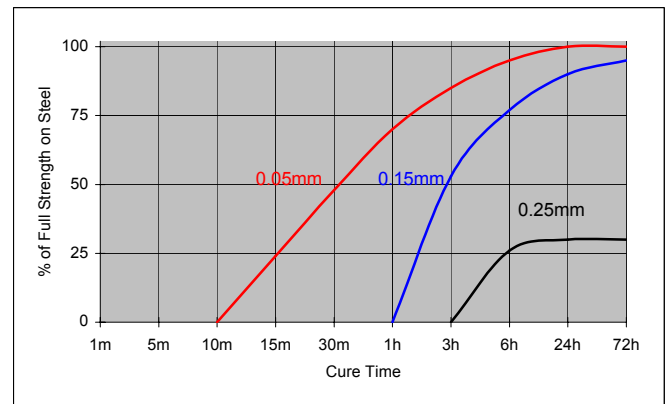
#### **Cure Speed vs. Substrate**

The rate of cure will depend on the substrate used. The graph below shows the breakaway strength developed with time on M10 steel nuts and bolts compared to different materials and tested according to ISO 10964.



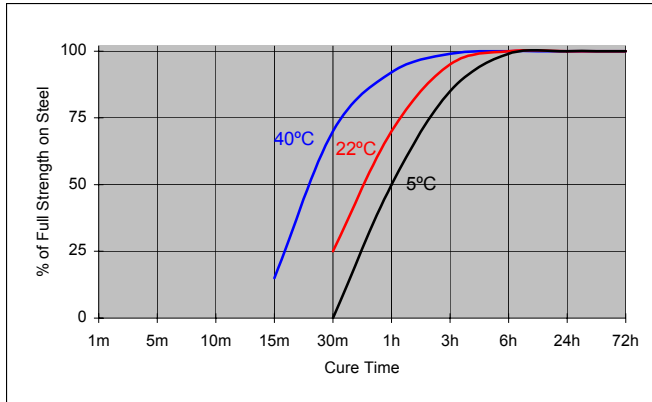
#### **Cure Speed vs. Bond Gap**

The rate of cure will depend on the bondline gap. Gaps in threaded fasteners depends on thread type, quality and size. The following graph shows shear strength developed with time on steel pins and collars at different controlled gaps and tested according to ISO 10123.



#### **Cure Speed vs. Temperature**

The rate of cure will depend on the temperature. The graph below shows the breakaway strength developed with time at different temperatures on M10 steel nuts and bolts and tested according to ISO 10964.

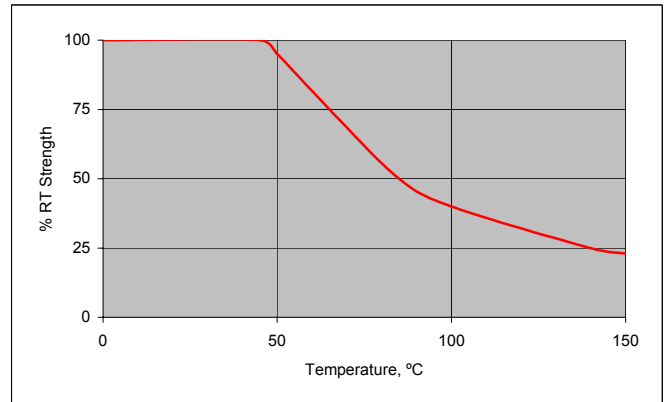


**Typical Environmental Resistance**

Cured for 1 week @ 22°C  
Breakloose Torque, ISO 10964, pretorqued to 5 N•m  
M10 zinc phosphate nuts and bolts

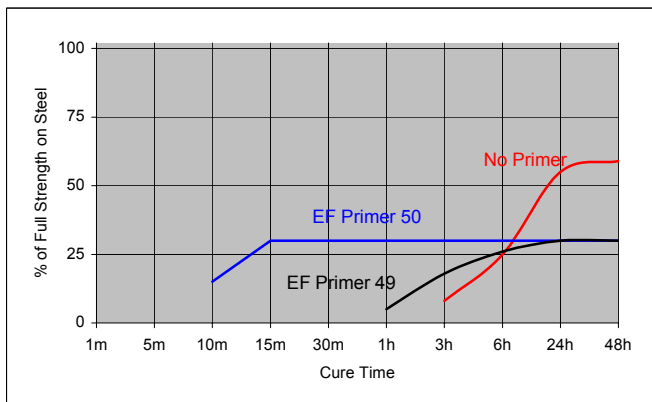
**Hot Strength**

Tested at temperature



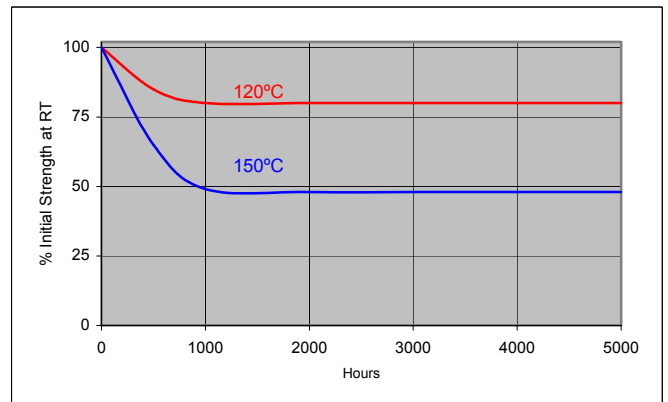
**Cure Speed vs. Primer**

Where cure speed is unacceptably long, or large gaps are present, applying primer to the surface will improve cure speed. The graph below shows breakaway strength developed with time using Heron® EF® Primer 49 and Heron® EF® Primer 50 on M10 zinc dichromate steel nuts and bolts and tested according to ISO 10964.



**Heat Aging**

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



**Typical Cured Performance**

Tested on M10 steel nuts and bolts according to ISO 10964.

RT Cure	Torque	N•m (in-lb)
24 Hours	Breakaway	11.3 (100)
	Prevailing	5.6 (50)
	Breakloose Pretorqued to 5 N•m (45 in-lbs)	16.9 (150)
	Maximum Prevailing Pretorqued to 5 N•m (45 in-lbs)	16.9 (150)

**Chemical/Solvent Resistance**

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

Chemical/Solvent	Temp (°C)	% of Initial Strength		
		100 h	500 h	1000 h
Gasoline	22	100	100	100
Motor oil	125	100	100	100
Brake fluid	22	100	100	95
Ethanol	22	100	100	95
Acetone	22	90	80	65
Water/glycol 50/50	87	100	90	90

## 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 Assembly**

1. For best results, clean all surfaces (external and internal) with **Hernon® Cleaner 62** and allow to dry.
2. If the material is an inactive metal or the cure speed is too slow, spray with **EF® Primer 49 or 50** and allow to dry.
3. Apply a 360° bead of product to the leading threads of the male fitting, leaving the first thread free. Force the material into the threads to thoroughly fill the voids. For bigger threads and voids, adjust product amount accordingly and apply a 360° bead of product on the female threads also.
4. Using accepted trade practices, assemble and wrench tighten fittings until proper alignment is obtained.
5. Properly tightened fittings will seal instantly to moderate pressures. For maximum pressure resistance and solvent resistance allow the product to cure a minimum of 24 hours.

### **For Disassembly**

1. Remove with standard hand tools.
2. Where hand tools do not work because of excessive engagement length or large diameters (over 1"), apply localized heat to approximately 250°C. Disassemble while hot.
3. Once disassembled, cured adhesive can be removed with **Hernon® Gasket Remover 30**.

## **For Cleanup**

1. Cured product can be removed with a combination of soaking in **Hernon® Cleaner 62** and mechanical abrasion such as a wire brush.

## **Storage**

**Dripstop® 921** 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**

**Hernon®** offers a complete line of semi and fully automated dispensing equipment. Contact **Hernon® 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. Hernon's Quality Management System for the design and manufacture of high performance adhesives and sealants is registered to the ISO 9001 Quality Standard.