HERNON®
Formulating Solutions

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Dripstop® 940

Product Description

Hernon® Dripstop® 940 is a thread sealant, which contains Teflon®, and for use on inactive metals such as stainless steel and aluminum used in chemical process piping. The properties of this Dripstop prevents galling on Stainless Steel, Aluminum, and other metal pipe fittings. **Dripstop® 940** is formulated to cure without the necessity of a primer.

Dripstop® 940 has been shown to be compatible for use within diesel exhaust systems using DEF according to ISO-22241 through independent 3rd party verification.

Dripstop® 940 withstands high pressures, sealing up to 250 psig steam at 400°F (204°C) continuous service while maintaining its chemical inertness.

UL Classification – File MH14222
Classified by Underwriters Laboratories Inc.® for use in devices handling gasoline, petroleum oils, natural gas (pressure not to exceed 300 psig), butane and propane not exceeding 2 in. pipe size. 29R9.

Product Benefits

- Instant seal (moderate pressures)
- Seals against liquid and gas leaks
- Lubricates parts for easy assembly
- Prevents Galling on metal pipe threads and fittings
- Does not cure until joint is assembled
- Eliminates waste. No dripping or running
- Easy disassembly
- Single component
- Solventless, won't crack or shrink

Typical Applications

- Plated flare fittings
- Pulp and paper mills
- Refinery piping
- Instrumentation fittings
- Waste treatment plants
- Textile equipment
- Utilities and Power generation
- Automotive

Typical Properties (Uncured)

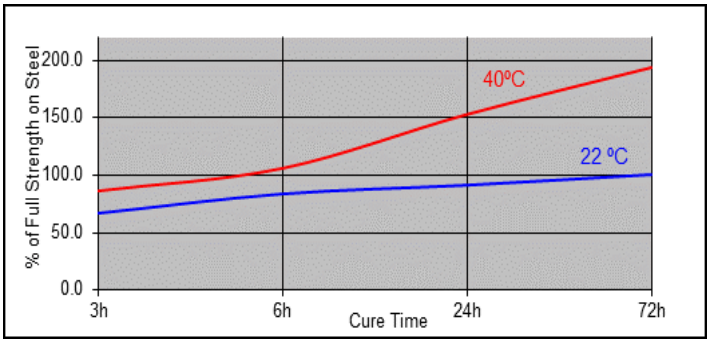
Property	Value
Chemical Type	Dimethacrylate Ester
Appearance	White Paste
Viscosity @ 25ºC, cP	120,000-250,000
Specific Gravity	1.16
Flash Point	See SDS

Typical Properties (Cured)

Property	Value
Pressure Resistance, psi	up to 10,000
Temperature Range, ºC (ºF)	-55 to 204 (-65 to 400)

Typical Curing Performance

Cure Speed vs Temperature
The graph below shows breakaway strength developed with time on 3/8inch NPT steel pipe tees and plugs and tested according to ASTM D6396.



The table below shows breakloose torque developed with time on 3/8inch NPT steel pipe tees and plugs, pre-torqued to 238 in-lb and tested according to ASTM D6396.

Substrate	Cure Time (hours)	Breakloose Torque, (in-lb)
3/8inch NPT steel pipe tees and plugs at 22ºC	24	100 - 160
	72	210 - 290
	168	210 - 290
3/8inch NPT steel pipe tees and plugs at 40ºC	24	80 - 130
	72	180 - 250
	168	180 - 250
3/8inch NPT steel	24	50 - 120

pipe tees and plugs at -5ºC	72	120 - 180
	168	120 - 180

Cure Speed vs. Primer
When cure speed is unacceptably long (because of substrate, temperature or gap), performance may be improved by treating the surface with primer**.** The graph below shows breakaway strength developed with time using **Hernon® Primer 50** on M10 steel nuts and bolts and tested according to ISO 10964.

Substrate	Cure Time (hours)	Breakaway Strength, (in-lb)
M10 Steel Nuts and Bolts – (No activator was used)	24	5 - 25
	72	5 - 25
	168	5 - 25
M10 Steel Nuts and Bolts – (**Primer 50** was used)	24	≥ 25
	72	≥ 75
	168	≥ 75

Typical Cured Performance

Cured for 24 hours at 22ºC.

Substrate	Strength, (in-lb)	
3/8inch NPT steel pipe tees and plugs, ASTM D6396	Breakaway torque:	55 - 65
	Prevailing torque:	180 - 240
3/8 x 24 Grade 2 Steel Nuts and Bolts, ISO 10964	Breakaway torque:	10 - 55
	Prevailing torque:	5 - 25

Other Adhesive Properties:

- Cured for 4 hours at 22ºC. (unseated)

3/8 x 24 Grade 2 Steel Nuts and Bolts	Breakaway torque (in-lb):	≥ 2.5

- Cured for 24 hours at 22ºC. (unseated)

M10 Zinc Phosphate Nuts and Bolts	Breakaway torque (in-lb):	15 - 30
	Prevailing torque (in-lb):	5 - 15
M10 Stainless steel Nuts and Bolts	Breakaway torque (in-lb):	20 - 45
	Prevailing torque (in-lb):	5 - 15

- Cured for 24 hours at 22ºC.Pretorqued to 45 in-lb.

M10 Black Oxide Steel Nuts and Bolts	Breakaway torque (in-lb):	40 - 60
	Prevailing torque (in-lb):	5 - 15

- Cured for 168 hours at 22ºC.

Pretorqued to 45 in-lb.

M10 Zinc Phosphate Nuts and Bolts	Breakaway torque (in-lb):	50 - 90

Typical Environmental Resistance

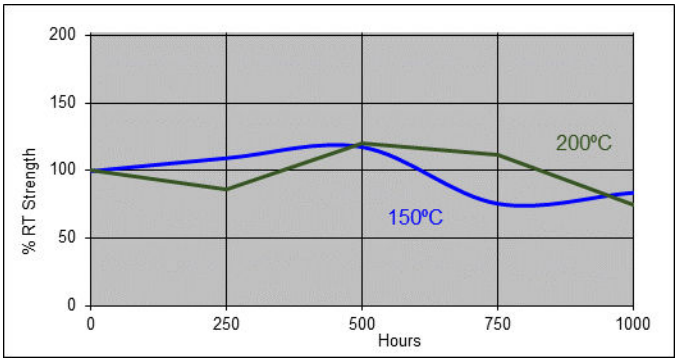
Heat Aging
Cured for 72 hours at 22ºC.
Aged under condition indicated, tested at 22ºC, using 3/8inch NPT steel pipe tees and plugs, according to ASTM D6396.

Conditions	Strength, (in-lb)	
168 hours @ 200 ºC	Breakaway torque:	≥ 250
	Prevailing torque:	≥ 250

Cured for 168 hours at 22ºC.
Aged under condition indicated, tested at 22ºC, using M10 Zinc Phosphate Nuts and Bolts, according to ISO 10964.

Conditions	Strength, (in-lb)	
1000 hours @ 150 ºC	Breakaway torque:	25 - 40
1000 hours @ 200 ºC	Breakaway torque:	2.5 - 10
1000 hours @ 250 ºC	Breakaway torque:	2.5 - 10

Cured for 168 hours at 22ºC.
Breakloose strength was measured using M10 Zinc phosphate steel nuts and bolts, pre-torqued to 45 in-lb.
Tested according to ISO 10964.



Chemical/Solvent Resistance
Aged under conditions indicated, tested at 22ºC.
Breakaway strength was measured on 3/8inch NPT steel pipe tees and plugs and tested according to ASTM D6396.

		1000 Hours of Exposure

Chemical/Solvent	ºC	Strength, (in-lb)	Sealability
Diesel Exhaust Fluid	22	75 - 105	Pass
Motor oil	125	235 - 265	Pass
Water/glycol 50/50	87	310 - 340	Pass
Air (Heated)	87	100 - 130	Pass
Air (reference)	22	295 - 325	Pass
Distilled Water	87	335 - 365	Pass

Breakloose strength was measured M10 Zinc phosphate steel nuts and bolts, pre-torqued to 45 in-lb.

Tested according to ISO 10964.

Chemical/Solvent	ºC	% of Initial Strength		
		100 hours	500 hours	1000 hours
Diesel Exhaust Fluid	22	111	128	134
Motor oil	125	152	143	124
Water/glycol 50/50	87	100	92	107
Ethanol	22	80	101	100
Brake Fluid	22	66	82	83
Gasoline	22	77	71	64
Ethanol Fuel	22	107	85	60
Diesel Fuel	22	124	131	96
Acetone	22	72	70	41

General Information

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

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 case, these aqueous washes can affect the cue 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 prior to use.

Directions for use

For Assembly

1. For best results, clean all surfaces (external and internal) with **Hernon® Cleaner 62** or/and with a solvent such as Acetone or MEK and then allow to dry.
2. If a faster cure speed is desired, spray with **Hernon® Primer 49 or 50** and allow to dry.
3. Apply a 360° bead of product to the leading threads of the male pipe fitting, leaving the first thread free. Force the material into the threads to thoroughly fill the voids. For pipe sizes larger than 1 in fill the threads and voids on both the male and female ends.
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 250ºC. Disassemble while hot.
3. Once disassembled, cured adhesive can be removed with **Hernon® Chemical Stripper 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® 940 should be stored in a cool, dry location in unopened containers at a temperature between 45ºF to 85ºF (7ºC to 29ºC) 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.

Teflon® is a registered trademark of DuPont