HERNON®
High Performance Adhesives and Sealants
ISO 9001 Registered

121 Tech Drive
Sanford, FL 32771
(407) 322-4000
Fax: (407) 321-9700
www.hernonmfg.com

Technical Data Sheet
Gasket Replacer 905

Product Description

Hernon® Gasket Replacer 905 is a single component, room temperature cure sealant. It is a gel-like anaerobic gasketing compound formulated to cure through large gaps between mating metal flanges, filling large surface voids. **Gasket Replacer 905** provides a thin, flexible, solvent and temperature resistant seal.

Typical Applications

- Vacuum pump flanges
- Fuel and water pumps
- Fuel tanks on chain saws
- Carburetor gasketing
- Automotive and truck axle covers

Product Benefits

- Instant sealing
- No shrinkage due to solvent evaporation (100% solid)
- Excellent chemical resistance
- Eliminates need for re-torquing
- Cures at low temperature
- Cures through gaps up to 0.02” (0.5mm)

Typical Properties (Uncured)

Property		Value
Resin		Dimethacrylate ester
Appearance		Orange gel
Viscosity @ 25ºC, cP	Spindle 6 @ 2.5 rpm Spindle 6 @ 20 rpm	50,000 to 150,000 20,000 to 40,000
Specific gravity		1.16
Flash point		See MSDS

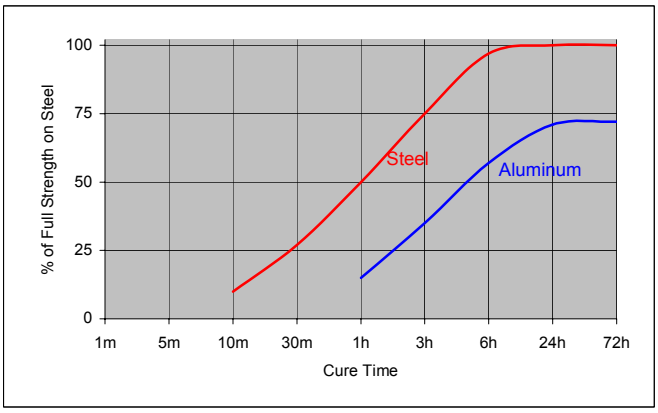
Typical Properties (Cured)

Property	Value
Coefficient of thermal expansion, ASTM D696 (K^{-1})	80 x 10^{-6}
Coefficient of thermal conductivity, ASTM C 177, W/(m·K)	0.1
Specific Heat, kJ/(kg·K)	0.3
Temperature range, ºC (ºF)	-55 to 150 (-65 to 300)

Typical Curing Properties

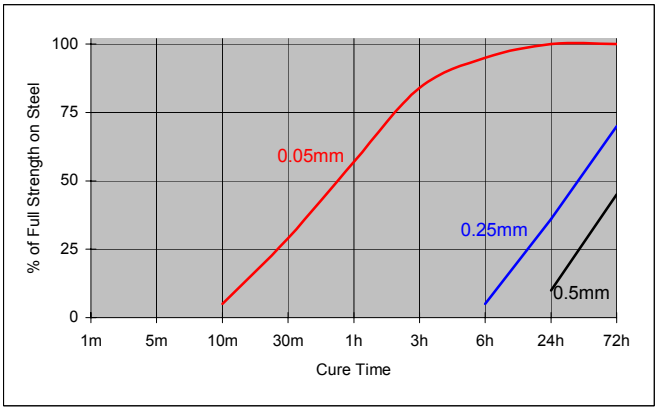
Cure Speed vs. Substrate

The rate of cure will depend on the substrate used. The graph below shows the shear strength developed with time on grit-blasted steel lap-shear specimens compared to different materials and tested according to ISO 4587.



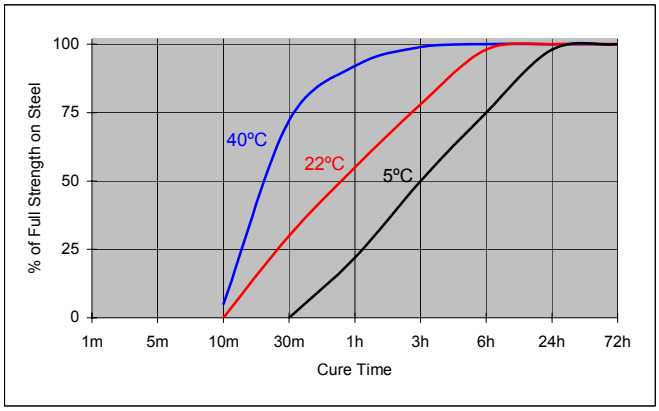
Cure Speed vs. Bond Gap

The rate of cure will depend on the bondline gap. The following graph shows shear strength developed with time on grit-blasted steel lap-shear specimens at different controlled gaps and tested according to ISO 4587.



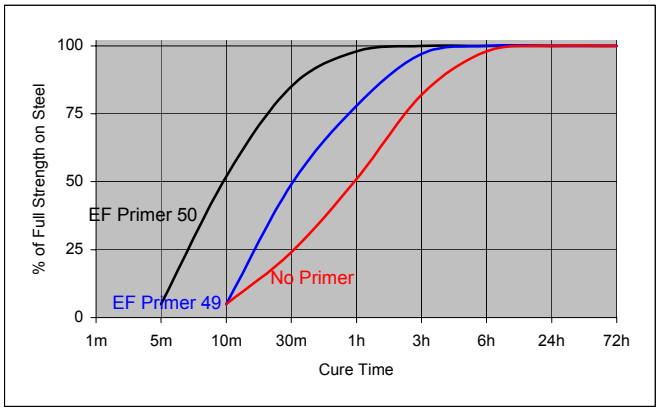
Cure Speed vs. Temperature

The rate of cure will depend on the ambient temperature. The graph below shows the shear strength developed with time on grit blasted steel lap shears at different temperatures and tested according to ISO 4587.



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 the shear strength developed with time on grit blasted steel lap shears using **Hernon® EF® Primer 49** and **EF® Primer 50** and tested according to ISO 4587.



Typical Cured Performance

Cured 24 hours at 22ºC

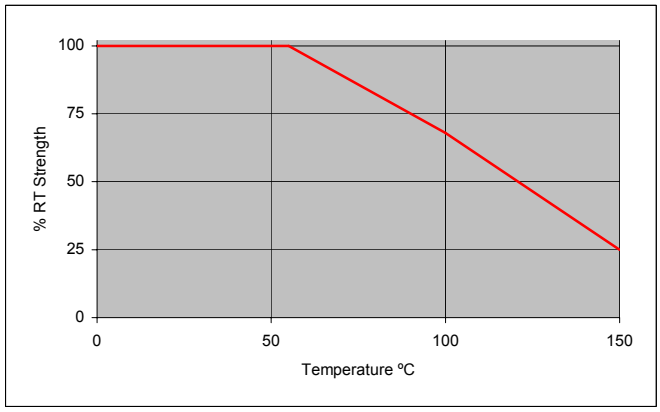
Property	Test Specimen	N/mm² (psi)
Shear Strength ISO 10123	Steel Pins & Collars	≥6.0 (≥870)
Lap-Shear Strength ISO 4587	Grit-Blasted Steel	8.6 (1250)
Tensile Strength ISO 6922	Grit-Blasted Steel	5 (725

Typical Environmental Resistance

Shear Strength, ISO 4587, Cured for 1 week at 22ºC, Grit-blasted steel.

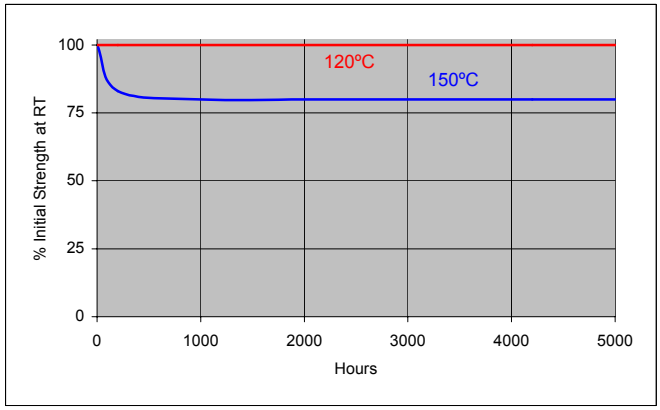
Hot Strength

Tested at temperature



Heat Aging

Aged at temperature indicated, tested @ 22ºC.



Chemical/Solvent Resistance

Aged under conditions indicated and tested at 22ºC.

Chemical/Solvent	Temp ºC	% of Initial Strength 100 h	500 h	1000 h
Water Glycol 50/50	87	85	85	85
Motor Oil	125	100	100	100
Gasoline	22	75	75	75

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 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.

Directions for use

1. For best performance bond surfaces should be clean and free from grease.
2. The product is designed for close fitting flanged parts with gaps up to 0.25 mm.
3. Apply manually as a continuous bead or by screen printing to one surface of the flanges.
4. Low pressures (<0.5 MPa) may be used when testing to confirm a complete seal immediately after assembly and before curing.
5. Flanges should be tightened as soon as possible after assembly to avoid shimming.

Storage
Gasket Replacer 905 should be stored in a cool, dry location in unopened containers at a temperature between 46ºF to 82ºF (8ºC to 28ºC) 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.