HERNON®
High Performance Adhesives and Sealants
ISO 9001 Registered

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Technical Data Sheet
Gasket Replacer 916

Product Description

Hernon® Gasket Replacer 916 is a single component room temperature cure gel-like anaerobic gasketing compound formulated to provide instant sealing capabilities. Once cured between mating metal flanges filling voids in the surface, **Gasket Replacer 916** provides a thin, flexible, solvent and temperature resistant seal. **Gasket Replacer 916** can replace or be used as a dressing for conventional gaskets.

Product Benefits

- Instant sealing
- Provides reliable seal
- No shrinkage due to solvent evaporation
- Excellent chemical resistance
- Eliminates need for retorquing

Typical Properties (Uncured)

Property		Value
Chemical Type		Methacrylate ester
Appearance		Red gel
Viscosity at 25°C, cP	TC @ 0.5 rpm	3,000,000 to 4,500,000
	TC @ 5.0 rpm	500,000 to 1,000,000
Specific gravity		1.13
Flash point		See MSDS

Instant Seal

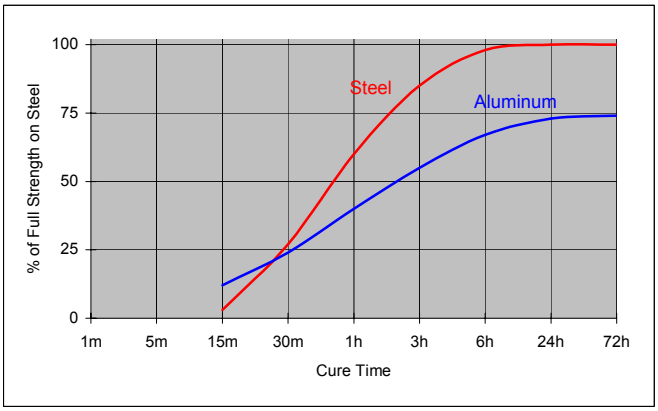
Anaerobic sealants have the ability to resist low on-line test pressures while uncured. This test was performed with uncured product immediately after assembly of an annular polycarbonate sealing surface with an internal diameter of 50 mm and an external diameter of 70 mm.

Induced Gap, mm	Pressure Resistance, MPa
0.000	0.30
0.125	0.15
0.250	0.05

Typical Curing Performance

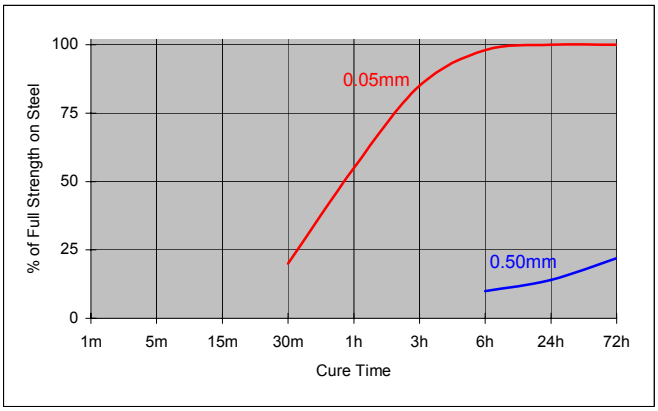
Cure Speed vs. Substrate

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 shears compared to different materials and tested according to ISO 4587.



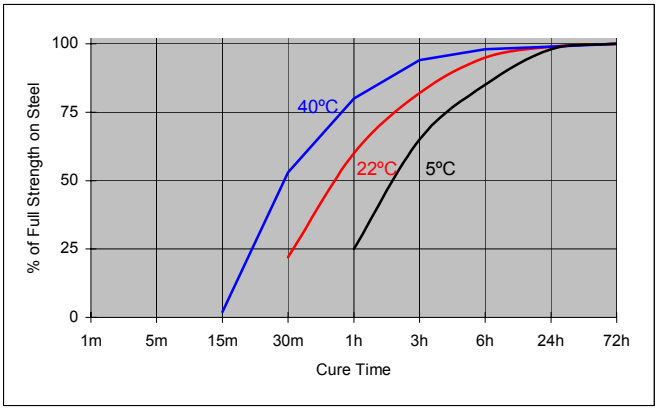
Cure Speed vs. Bond Gap

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

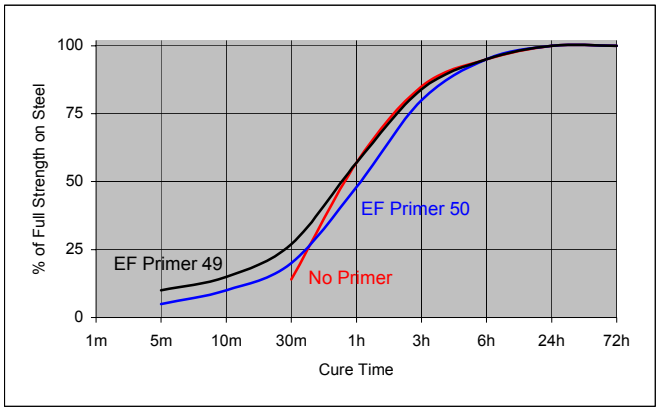


Cure Speed vs. Temperature

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



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
Maximum Sealing Pressure	5,000 psi
Gap Filing Ability - No Primer W / Primer	0.010 in. (0.254 mm) 0.050 in. (1.35 mm)
Percent Elongation (to 250ºF)	30%

Typical Cured Performance

Cured 24 hours at 22ºC

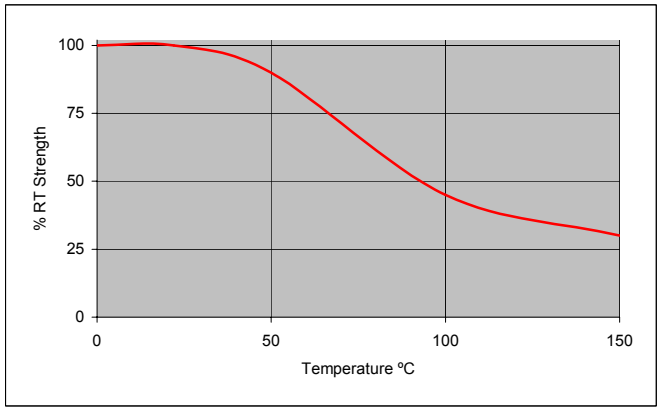
Test Method	Test Specimens	N/mm² (psi)
Shear Strength, ISO 4587	Gritblaste steel Lap-shears	7.5 (1100)
Compressive Shear Strength, ISO 10123	Steel pins and collars	≥5.0 (≥725)
Tensile Strength, ISO 6922	Gritblasted steel pins	≥8.5 (≥1200)

TYPICAL ENVIRONMENTAL RESISTANCE

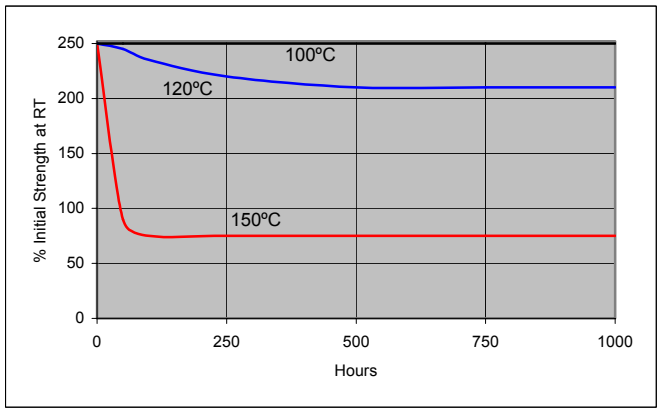
The following tests refer to the effect of environment on strength. This is not a measure of sealing performance.

Cured for 1 week @ 22 °C.
Shear Strength, ISO 4587, grit blasted steel

Hot Strength
Tested at temperature



Heat Aging
Aged at temperature indicated and tested @ 22ºC



Chemical/Solvent Resistance
Aged under condition indicated - Tested at 22ºC.

Chemical/Solvent	Temp (ºC)	% of Initial Strength 100 h	500 h	1000 h
Water Glycol 50/50	87	100	100	90
Gasoline	22	60	60	55
Motor Oil	125	100	160	140

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

To obtain the best results, clean the parts from contamination such as grease, dirt, and heavy oil. **Hernon® EF® Cleaner 62** or a similar chlorinated solvent can be used to clean parts.

1. **Screen Printing** - complex flange surfaces and shapes can be coated in seconds using specially designed screens. Screen printing gives the best results for precise control of sealant, quantity, and thickness.
2. **Hand** - material can easily be applied to the flange surfaces from a tube or a caulking cartridge. A break in the bead easily can be repaired. Small parts can be coated adequately by pressing them into a saturated polyester urethane sponge or by roll coating.
3. **Tracking -** material can be traced accurately and precisely by using a Hernon Dispensing Machine**.**

Storage

Hernon® Gasket Replacer 916 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.