HERNON®
High Performance Adhesives and Sealants
ISO 9001 Registered

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Technical Data Sheet
Gasket Replacer 903

Product Description

Hernon® Gasket Replacer 903 is a single component room temperature cure, gel-like anaerobic gasketing compound formulated to provide instant sealing capabilities. Once cured between metal flanges, **Gasket Replacer 903** maintains a thin and rigid seal while providing solvent and temperature resistance.

Typical Applications

- Cover housings on gear reducers
- Pipe flanges
- Transmissions on trucks and tractors
- Marine engine crankcases
- Snow blower chaincase cover

Product Benefits

- Instant sealing
- No shrinkage due to solvent evaporation (100% solid)
- Excellent chemical resistance
- Does not migrate or drip
- Can be used on vertical surfaces
- Improves structural integrity of assembly

Typical Properties (Uncured)

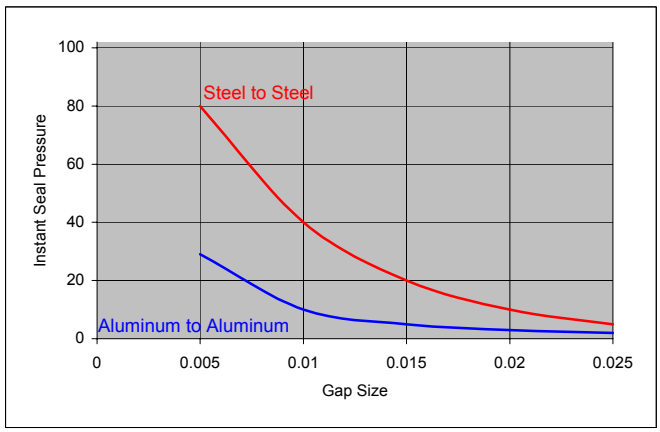
Property	Value
Resin	Dimethacrylate ester
Appearance	Orange gel
Viscosity @ 25°C, cP	800,000 to 1,200,000
Specific gravity	1.15
Flash point	See MSDS

Typical Properties (Cured)

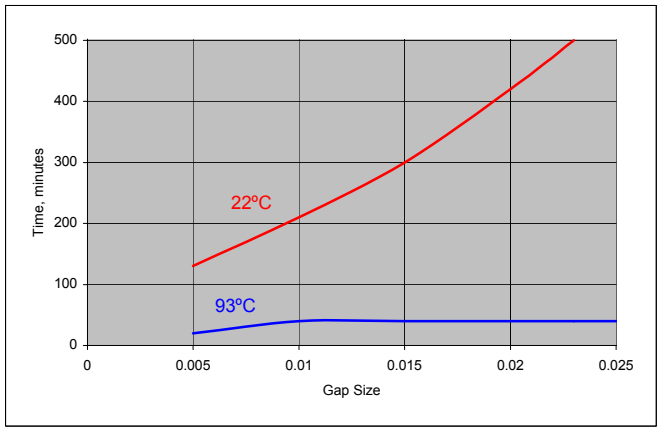
Property	Value
Coefficient of thermal expansion, ASTM D696 (K^{-1})	80 x 10^{-6}
Coefficient of thermal conductivity, ASTM C 177, W/(m·K)	0.1
Specific Heat, kJ/(kg·K)	0.3
Gap Fill, mm (in.)	0.254 (0.010)
Temperature range, °C (°F)	-55 to 150 (-65 to 300)

Typical Functional Properties

Instant Seal Pressure vs. Gap
3/8 in. (9.525 mm) flanges. 63 RMS finish



Time to Full Cure vs. Gap
Steel to steel. 63 RMS finish. No primer.



Sealing Capability
Sealing capability is measured for steel to steel and aluminum to aluminum flanges varying in width from 0.125 in. (3.18 mm) to 0.750 in. (19.08 mm) with gaps varying from 0.005" (0.127 mm) to 0.025" (0.635 mm). For all combinations the fully cured pressure sealing capability exceeded 5,000 psi (34.5 N/mm²).

Tensile Strength
Steel tensile buttons

Temperature Aging	Tensile Strength, N/mm² (psi)
1 hr at 250°F (121°C)	4.8 (700)
1000 hrs at 250°F (121°C)	9.3 (1350)
1000 hrs at 250°F (121°C)	6.2 (900)

Shear Strength
Steel lap-shear specimens

Temp. Cure Conditions	Shear Strength, N/mm² (psi)
1 hr at 72ºF (22ºC)	0.7 (100)
1 hr at 200ºF (93ºC)	9.0 (1300)
1 hr at 300ºF (149ºC)	7.6 (1100)

Temperature Aging	Shear Strength, N/mm² (psi)
2 hrs at 72ºF (22ºC)	8.3 (1200)
2 hrs at 200ºF (93ºC)	7.6 (1100)
2 hrs at 300ºF (149ºC)	5.5 (800)

Typical Environmental Resistance

Solvent Resistance
Listed below are the changes in Barcol hardness values of **Gasket Replacer 903** after immersion in various fluids for 200 hours at 188ºF (87ºC). The data indicates excellent solvent resistance.

Chemical/Solvent	% Hardness Change
Water	-3
Water/Glycol	-6
Type MS Engine Oil	+5
90 wt Hypoid Gear Oil	+5
Gasoline	-6
Diesal Fuel	+3

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.

Storage
Gasket Replacer 903 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.