Technical Data Sheet

LOCTITE® DRI 503HV™

Known as LOCTITE® 503HV™ Vibra-Seal™
January 2017

PRODUCT DESCRIPTION

LOCTITE® DRI 503HV™ provides the following product characteristics:

Technology	Acrylic
Chemical Type	Acrylic
Appearance (uncured)	Off-white liquid[LMS]
Components	One component - requires no mixing
Viscosity	High, thixotropic
Cure	Air dry
Application	Thread sealing
Specific Benefit	• Reusable up to five times • Excellent environmental resistance

LOCTITE® DRI 503HV™ is a high viscosity, non-toxic, thixotropic, preapplied, water-based thread sealant for automatic dispensing applications. When dried, it becomes a resilient, tight-clinging, non-curing sealant for tapered or straight threads. LOCTITE® DRI 503HV™ provides positive sealing and resistence to vibrational loosening. The thread-filling ability and prevailing torque characteristics of this product are effective for use on sealing applications, particularly where re-adjustments are required, e.g. rear axle filler plugs, bearing adjuster nuts, pressure gauges and sensors, brake fittings, pipe fittings, and compressor pipe plugs. Other devices that this product is designed for includes; cable connectors, screws for plastic assemblies, adjustment screws, overhead fire sprinklers, shower heads, and door closure hardware. This product is typically used in applications with an operating range of -54 °C to +150 °C.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Specific Gravity @ 25 °C 1.1 to 1.4[LMS]

Flash Point - See SDS

Viscosity, Brookfield - RVT, 25 °C, mPa·s (cP):
Spindle 7,, speed 20 rpm 30,000 to 50,000[LMS]

Solids/Non-Volatile Content, % 35.5 to 46.7[LMS]

On Part Life, years (when stored in a cool, dry area) 4

TYPICAL CURING INSTRUCTIONS

Production Drying Requirements for North American Customers

Thin film coating requires 15 to 20 minutes at 85°C (185F) with an airflow of not less than 17,000 liter/min (600 cubic feet/min).

NOTE: For smaller, non-production applications and other regions, contact Henkel for assistance.

TYPICAL PERFORMANCE OF CURED MATERIAL

Adhesive Properties

Instant seal 12.7 mm NPT fittings to 830 kPa

Torque Strength

Seating Torque, :
3/8 x 16 nuts and bolts N·m (lb.in.) 40.7 (369)

Breakloose Torque, :
3/8 x 16 nuts and bolts N·m (lb.in.) 19.8 (175)

Prevail Torque, :
3/8 x 16 nuts and bolts N·m (lb.in.) 2.4 (21)

TYPICAL ENVIRONMENTAL RESISTANCE

Chemical/Solvent Resistance

Test performed on 12.7mm NPT tee's and malleable plugs test at 830 kPa air after 30 days immersion in solvents indicated.

		% of initial strength
Environment	**°C**	**Results h**
Motor oil (10W30)	120	No leakage
Water/glycol 1:1	100	No leakage
Diesel fuel	50	No leakage
Dextron III	120	No leakage
Hydraulic Steering Fluid	120	No leakage

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 Safety Data Sheet (SDS).

Directions for use:

1. LOCTITE® DRI 503HV™ is applied to threaded parts by authorized process centers who have automatic fastener cleaning, feeding, coating, rust proofing and drying equipment. Quantities can be handled promptly with minimum turnaround time. Sample fittings should be sent to the nearest authorized process center where they will coat your parts and return them to you for evaluation. SAMPLE TESTS ARE RECOMMENDED TO OBTAIN DESIRED RESULTS ON YOUR PARTS. Contact the nearest Loctite Sales Representative for the authorized process center nearest to you..

Loctite Material Specification[LMS]
LMS dated November 09, 2000. Test reports for each batch are available for the indicated properties. LMS test reports include selected QC test parameters considered appropriate to specifications for customer use. Additionally, comprehensive controls are in place to assure product quality and consistency. Special customer specification requirements may be coordinated through Henkel Quality.

Storage
Store product in the unopened container in a dry location. Storage information may be indicated on the product container labeling.
Optimal Storage: 8 °C to 21 °C. Storage below 8 °C or greater than 28 °C can adversely affect product properties. Material removed from containers may be contaminated during use. Do not return product to the original container. Henkel Corporation cannot assume responsibility for product which has been contaminated or stored under conditions other than those previously indicated. If additional information is required, please contact your local Technical Service Center or Customer Service Representative.

Conversions
(°C x 1.8) + 32 = °F
kV/mm x 25.4 = V/mil
mm / 25.4 = inches
µm / 25.4 = mil
N x 0.225 = lb
N/mm x 5.71 = lb/in
N/mm² x 145 = psi
MPa x 145 = psi
N·m x 8.851 = lb·in
N·m x 0.738 = lb·ft
N·mm x 0.142 = oz·in
mPa·s = cP

Note:
The information provided in this Technical Data Sheet (TDS) including the recommendations for use and application of the product are based on our knowledge and experience of the product as at the date of this TDS. The product can have a variety of different applications as well as differing application and working conditions in your environment that are beyond our control. Henkel is, therefore, not liable for the suitability of our product for the production processes and conditions in respect of which you use them, as well as the intended applications and results. We strongly recommend that you carry out your own prior trials to confirm such suitability of our product.
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