LOCTITE® 55™

September 2005

PRODUCT DESCRIPTION

LOCTITE® 55™ provides the following product characteristics:

Technology	Coated multifilament thread
Chemical Type	Polyamide thread with inert proprietary paste
Appearance	White colored, coated cord[LMS]
Cure	Non-curing
Application	Thread sealing

LOCTITE® 55™ is a general purpose, threaded pipe and fitting sealant which is wound from the dispensing package onto the threads of the pipe. It is supplied in containers, which serve for both storage and dispensing purposes. Recommended for sealing metal and plastic tapered pipe threads and fittings up to 4" NPT (National Pipe Thread) for use in industrial applications in aqueous and non-aqueous fluids. Particularly suitable in threaded assembly applications that require immediate use and may undergo small readjustments before use. This product is typically used in applications up to 150 °C.

UL Classification

Classified by Underwriters Laboratories Inc.® for use on threaded joints of metal pipes not exceeding 1-1/2 inch pipe size in devices handling gasoline, petroleum oils and not exceeding 1 inch pipe size in devices handling natural gas (pressures not over 2.07 N/mm²), propane and butane.

NSF International

Certified to ANSI/NSF Standard 61 for use in commercial and residential potable water systems not exceeding 82° C (180° F).

CSA International

Certified to Requirement No. 4-90 for natural and L.P. gases up to 2.07 N/mm² for operating temperatures of -54 °C to +149 °C.

TYPICAL PROPERTIES

Specific Gravity @ 25 °C	1.25
Flash Point - See MSDS	
Coating Weight, g/m	0.54 to 0.74[LMS]
Spool Weight, g:	
12 meter spool	7.0 to 10.4[LMS]
50 meter spool	27.3 to 39.6[LMS]
100 meter spool	54.0 to 80.7[LMS]
150 meter spool	81.0 to 118.4[LMS]
Spool Length, m:	
12 meter spool	12.5 to 14.0[LMS]
50 meter spool	50.5 to 53.5[LMS]
100 meter spool	101.0 to 109.0[LMS]
150 meter spool	151.0 to 159.0[LMS]

Lubricity, ASTM D5648, K value:

3/8 x 16 fastener, using LOCTITE® 55™	0.15
3/8 x 16 fastener (degreased)	0.2
3/8 x 16 phosphate and oil nuts and bolts	0.16

(In critical applications, it is necessary to determine the K values independently. Henkel corporation makes no warranty of specific performance on any individual fastener):

TYPICAL PERFORMANCE OF CURED MATERIAL

Approval tests according to EN 751-2 for class ARP compound:

Soundness Test, section 7.2.1.2	No leaks
Soundness Test after 45° joint adjustment, section 7.2.1.3	No leaks
Resistance to gas condensates, section 7.2.1.4	No leaks
Hot water resistance test, section 7.2.1.5	No leaks
Temperature cycling test, section 7.2.1.6	No leaks
Vibration test, section 7.2.1.7	No leaks
Compatibility with foam forming leak tester, section 7.2.2	Pass
Test of hardening and dismantling, section 7.2.3	Pass

Pressure Resistance

LOCTITE® 55™ was successfully tested for pressure resistance and sealability to 69 N/mm² . 3/8 NPT steel pipe tees and plugs were assembled and pre-torqued to 27 N·m prior to testing at 69 N/mm² hydraulic pressure @ 23 °C according to ASTM D 1599.

TYPICAL ENVIRONMENTAL RESISTANCE

LOCTITE® 55™ has resistance to most common industrial fluids and gasses.

Steam Compatibility

LOCTITE® 55™ was successfully tested for steam compatiblity to 0.17 N/mm² . 1.5 " NPT were assembled and tested at 0.17 N/mm² pressure @ 130 °C for 1,000 hours.

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).

Directions for use

1. Clean parts with a wire brush prior to application of product.
2. Hold the end of the Pipe Sealing Cord against the male nipple with one finger approximately two threads away from the end.
3. Wind the fiber onto the pipe threads in the same direction of the thread helix starting from the end of the pipe. For optimum performance, the grooves of the threads should be filled without completely masking the pitches of the thread.
   NOTE: It is not necessary to follow the valley of the thread.
4. **CAUTION**: Do not over-apply the Pipe Sealing Cord. Excessive material tends to be pushed off as fittings are assembled, and it also becomes mechanically more difficult to complete the engagement.
5. Cut the required length off with the integrated cutting tool and smooth the loose end onto the pitches of the pipe thread.
6. LOCTITE® 55™ can be adjusted up to 90° after tightening.

Usage/Application Information

The following is a guideline for how much LOCTITE® 55™ to use per pipe diameter.

Pipe Diameter	Number of turns (wraps)	
	Metal	Plastic
½ "	6 to 8	12 to 15
¾ "	7 to 9	15 to 25
1 "	8 to 12	20 to 30
1½ "	10 to 15	25 to 35
2 "	15 to 25	----------
2½ "	20 to 30	----------
3 "	25 to 35	----------
3½ "	30 to 40	----------
4 "	35 to 45	----------

LOCTITE® 55™ provides sealing against cold water and compresed air on plastic pipe threads when applied properly in a sufficient amount.

Loctite Material Specification[LMS]

LMS dated January 26, 2005. 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

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Trademark usage

Reference 1.1