Technical Data Sheet

LOCTITE® 425™

February 2011

PRODUCT DESCRIPTION

LOCTITE® 425™ provides the following product characteristics:

Technology	Cyanoacrylate
Chemical Type	Ethyl cyanoacrylate / Aliphatic ester
Appearance	Dark blue liquid[LMS]
Components	One part - requires no mixing
Viscosity	Low
Cure	Humidity
Application	Low strength threadlocking / retaining
Key Substrates	Metals and Plastics

LOCTITE® 425™ is designed as a fast curing, low strength adhesive for locking metal and plastics fasteners. The product is designed for pre- or post-application. LOCTITE® 425™ cures quickly on plated metal and plastics fasteners; fixturing is achieved in less than 2 minutes and full strength within 24 hours. This product is commonly used for tamperproofing the head of screws or potentiometers. Fixture speed can be increased by application of a LOCTITE® Cyanoacrylate activator - e.g. 7113™. This product is typically used in applications with an operating range of -54 °C to +85 °C.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Specific Gravity @ 25 °C	1.1
Viscosity, Brookfield - LVF, 25 °C, mPa·s (cP):	
Spindle 1, speed 30 rpm,	40 to 80[LMS]
Flash Point - See SDS	

TYPICAL CURING PERFORMANCE

Under normal conditions, the atmospheric moisture initiates the curing process. Although full functional strength is developed in a relatively short time, curing continues for at least 24 hours before full chemical/solvent resistance is developed.

TYPICAL PROPERTIES OF CURED MATERIAL

Electrical Properties:

Volume Resistivity, IEC 60093, Ω·cm	$>1\times10^{15}$
Surface Resistivity, IEC 60093, Ω	$>1\times10^{15}$
Dielectric Breakdown Strength, IEC 60243-1, kV/mm	19.7
Dielectric Constant / Dissipation Factor, IEC 60250:	
100 Hz	4.5 / 0.037
10 kHz	4.2 / 0.04

TYPICAL PERFORMANCE OF CURED MATERIAL

Adhesive Properties

Cured for 24 hours @ 22 °C, on untorqued zinc plated fasteners

Fastener Size	Breakaway Torque	Prevail Torque
2 - 56	N·m 0.02 (lb.in.) (0.25)	N·m 0.02 (lb.in.) (0.25)
4 - 40	N·m 0.12 (lb.in.) (1.1)	N·m 0.14 (lb.in.) (1.3)
6 - 32	N·m 0.25 (lb.in.) (2.2)	N·m 0.23 (lb.in.) (2.0)
8 - 32	N·m 0.29 (lb.in.) (2.6)	N·m 0.24 (lb.in.) (2.1)
10 - 32	N·m 0.36 (lb.in.) (3.2)	N·m 0.23 (lb.in.) (2.0)
3/8 x 24	N·m 1.1 to 8.5[LMS] (lb.in.) (9.7 to 75.2)	N·m 1.1 to 8.5[LMS] (lb.in.) (9.7 to 75.2)

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. For best performance bond surfaces should be clean and free from grease.
2. This product performs best in thin bond gaps (0.05 mm).
3. Excess adhesive can be dissolved with Loctite cleanup solvents, nitromethane or acetone.

Loctite Material Specification[LMS]

LMS dated September 01, 1995. 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: 2 °C to 8 °C. Storage below 2 °C or greater than 8 °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.

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

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Reference 1.3