LOCTITE® 5045™

January 2010

PRODUCT DESCRIPTION

LOCTITE® 5045™ provides the following product characteristics:

Technology	Silicone
Chemical Type	Alkoxy silicone
Appearance (uncured)	Translucent liquid[LMS]
Components	One component - requires no mixing
Cure	Room temperature vulcanizing (RTV)
Application	Bonding, Sealing or Coating
Specific Benefit	Non-corrosive
Flexibility	Enhances load bearing & shock absorbing characteristics of the bond area.
Strength	High

LOCTITE® 5045™ is specifically formulated for bonding, sealing, and coating of components especially for the military, automotive and industrial markets. The non-slumping nature of this product makes it ideal for reinforcing and strain relieving delicate components. LOCTITE® 5045™ resists weathering, moisture, ozone and retains its properities through severe environments. This product is typically used in applications up to 200 °C.

Mil-A-46146B

LOCTITE® 5045™ is tested to the lot requirements of Military Specification Mil-A-46146B. **Note:** This is a regional approval. Please contact your local Technical Service Center for more information and clarification.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Specific Gravity @ 25 °C	1.14
Solids/Non-Volatile Content, %	≥92[LMS]
Extrusion Rate, g/min:	
Pressure 0.62 MPa, temperature 25 °C:	
Semco Cartridge	≥40[LMS]

TYPICAL CURING PERFORMANCE

Surface Cure

Tack Free Time is the time required to achieve a tack free surface

Tack Free Time, hours:	
Cured @ 25 °C / 50±5 % RH	≤5[LMS]

TYPICAL PROPERTIES OF CURED MATERIAL

Cured for 1 week @ 21 to 26 °C / 50±5 % RH

Physical Properties:

Coefficient of Thermal Expansion, ISO 11359-2, K^{-1}	2.8×10^{-4}
Coefficient of Thermal Conductivity ASTM E 1225, W/(m·K)	0.2
Water Vapor Trans. Rate, ASTM E96, g/(h·m²)	0.48
Water Absorption, ISO 62, %:	
24 hours in water @ 23 °C	0.01
Shore Hardness, ISO 868, Durometer A	≥25[LMS]
Elongation, ISO 37, %	≥500[LMS]
Tensile Strength, ISO 37	N/mm² ≥3.4[LMS] (psi) (≥493)
Tear Strength, ISO 34-1 , Die B	N/mm 40 (lb/in) (230)

Electrical Properties:

Dielectric Breakdown Strength, IEC 60243-1, kV/mm	18
Volume Resistivity, IEC 60093, Ω·cm	4×10^{15}
Dielectric Constant / Dissipation Factor, IEC 60250:	
100 Hz	3.0 / 0.006
1 MHz	3.1 / 0.01

TYPICAL PERFORMANCE OF CURED MATERIAL

Adhesive Properties

Cured for 1 week @ 23 °C / 50±5 % RH

Peel Adhesion (pli method), ASTM D 903:

Aluminum (primed)	N/mm 13 (lb/in) (75)
Steel (primed)	N/mm 8.7 (lb/in) (50)

TYPICAL ENVIRONMENTAL RESISTANCE

Heat Resistance

Cured for 1 week @ 200 °C

Shore Hardness, ISO 868, Durometer A	45
Elongation, ISO 37, %	330
Tensile Strength, ISO 37	N/mm² 3 (psi) (435)

Hydrolytic Stability

Cured for 28 days @ 95 °C / 98% RH

Shore Hardness, ISO 868, Durometer A	29
Elongation, ISO 37, %	500
Tensile Strength, ISO 37	N/mm² 5 (psi) (725)

GENERAL INFORMATION

For safe handling information on this product, consult the Material Safety Data Sheet (MSDS).

Directions for use:

1. For best performance bond surfaces should be clean and free from grease.
2. Full performance properties will develop over 72 hours.
3. Moisture curing begins immediately after the product is exposed to the atmosphere, therefore parts to be assembled should be mated within a few minutes after the product is dispensed.
4. Excess material can be easily wiped away with non-polar solvents.

Loctite Material Specification[LMS]

LMS dated September 1, 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: 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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Reference 1.2