

LOCTITE 190024LV

December 2016

PRODUCT DESCRIPTION

LOCTITE 190024LV provides the following product characteristics:

Technology	Acrylate
Appearance	Bone-white to beige translucent paste
Product Benefits	- One component, requires no mixing - Fast UV cure - Low viscosity - Flexible - Thixotropic
Cure	Ultraviolet (UV) light, Visible light
Application	Edgebond
Typical Package Application	BGA
Key Substrates	Variety of substrates, Glass, Most plastics and Most metals

LOCTITE 190024LV single component, UV curable adhesive is designed to improve reliability in electronic component BGA edgebonding applications. Its thixotropic nature reduces migration of the liquid product after application to the substrate. This flexible material is engineered to enhance the load bearing and shock absorbing properties of the bonded area.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Viscosity, Brookfield CP51, 25 °C, mPa·s (cP):

Speed 5 rpm 7,000

Thixotropic Index (0.5/5 rpm) 2.6

Specific Gravity @ 25 °C 1.12

Flash Point - See SDS

TYPICAL CURING PERFORMANCE

Recommended UV Cure

Light Source and Condition:

UV or visible light

LOCTITE 190024LV can be cured by exposure to UV and/or visible light of sufficient intensity. Surface cure is enhanced by exposure to UV light in the 220 to 260 nm range. Cure rate and ultimate depth of cure depend on light intensity, spectral distribution of light source, exposure time and light transmittance of the substrate through which the light must pass.

Fixture Time

UV fixture time is defined as the light exposure time required to develop a shear strength of 0.1 N/mm².

UV Fixture Time, Glass microscope slides, seconds:

6 mW/cm², measured @ 365 nm <10

TYPICAL PROPERTIES OF CURED MATERIAL

Sample cured 30 mW/cm² @ 365 nm for 30 seconds (Typical Cure Recommendation)

Physical Properties :

Elongation, ISO 527, %	93
Tensile Modulus, ISO 527	N/mm ² 440 (psi) (64,105)
Tensile Strength, ISO 527	N/mm ² 12.5 (psi) (1,810)

TYPICAL PERFORMANCE OF CURED MATERIAL

Shear Strength :

Lap Shear Strength, ISO 4587:	
Polycarbonate	N/mm ² 5.0 (psi) (725)

GENERAL INFORMATION

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

Not for product specifications

The technical data contained herein are intended as reference only. Please contact your local quality department for assistance and recommendations on specifications for this product.

DIRECTIONS FOR USE

1. This product is light sensitive; exposure to daylight, UV light and artificial lighting should be kept to a minimum during storage and handling.
2. The product should be dispensed from application with black feedlines.
3. For best performance bond surfaces should be clean and free from grease.
4. Apply adhesive to one of the bond surfaces and assemble immediately.
5. Cure rate is dependent on lamp intensity, distance from light source, depth of cure needed or bondline gap and light transmission of the substrate through which the radiation must pass.
6. Cooling should be provided for temperature sensitive substrates such as thermoplastics.
7. Crystalline and semi-crystalline thermoplastics should be checked for risk of stress cracking when exposed to liquid adhesive.
8. Excess uncured adhesive can be wiped away with organic solvent (e.g. Acetone).
9. Bonds should be allowed to cool before subjecting to any service loads.

STORAGE:

Store product in the unopened container in a dry location. Storage information may be indicated on the product container labeling.

Optimal Storage: 8 to 28°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

$(^{\circ}\text{C} \times 1.8) + 32 = ^{\circ}\text{F}$

$\text{kV/mm} \times 25.4 = \text{V/mil}$

$\text{mm} / 25.4 = \text{inches}$

$\text{N} \times 0.225 = \text{lb}$

$\text{N/mm} \times 5.71 = \text{lb/in}$

$\text{psi} \times 145 = \text{N/mm}^2$

$\text{MPa} = \text{N/mm}^2$

$\text{N}\cdot\text{m} \times 8.851 = \text{lb}\cdot\text{in}$

$\text{N}\cdot\text{m} \times 0.738 = \text{lb}\cdot\text{ft}$

$\text{m}\cdot\text{mm} \times 0.142 = \text{oz}\cdot\text{in}$

$\text{mPa}\cdot\text{s} = \text{cP}$

Disclaimer

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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