Technical Data Sheet

LOCTITE ABLESTIK NCA 2286AD

June 2020

PRODUCT DESCRIPTION

LOCTITE ABLESTIK NCA 2286AD provides the following product characteristics:

Technology	Acrylate
Appearance	Black paste
Product Benefits	• One component • Low transmittance • Dual cure system • High thixotropic index • Fast UV cure • Good adhesion to various substrates
Cure	Ultraviolet (UV) light followed by heat cure
Application	Electronic Material, Component assembly
Typical Assembly Applications	Active alignment for camera module assembly
Key Substrates	PA, LCP, PC, SUS, Anodized Aluminum , PBT
Operating Temperature	25ºC

LOCTITE ABLESTIK NCA 2286AD dual cure adhesive is designed for use in active alignment applications in camera module assembly. This material's high viscosity and thixotropy formulation is ideal for high aspect ratio dispensing which allows for easier adjustments in the final assembly. LOCTITE ABLESTIK NCA 2286AD provides lower transmittance and higher adhesion after full cure.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Viscosity, Rheometer, Cone and Plate @ 25°C, mPa·s (cP):	
Angle 2º @ Shear rate 20 s^{-1}	35,000
Thixotropic Index	5.4
Work Life @ 25°C, hours	72
Shelf Life @ -20°C, days	180
Flash Point - See SDS	

TYPICAL CURING PERFORMANCE

Recommended Cure Condition

UV Light

UV Wavelength, nm	220 to 405
Radiation Intensity, LED, mW/cm²	1,500
Radiation Time, seconds	2 to 3

Secondary Heat Cure

1 hour @ 80°C in Conventional oven

Depth of Cure

Depth of Cure, after UV 2 seconds @ 365nm UV Cure, mm	0.3

Shrinkage on Cure

Cure Shrinkage, %	5

With all curing systems, the time required for cure depends on the rate of heating. Cure rate depends on the mass of material to be heated and intimate contact with the heat source. Use suggested cure conditions as general guidelines. Other cure conditions may yield satisfactory results.

The above cure profile is a guideline recommendation. Cure rate and ultimate depth of cure depend on light intensity, spectral distribution of light source, exposure time and the light transmittance of the substrate.

TYPICAL PROPERTIES OF CURED MATERIAL

Sample cured at the recommended cure conditions.

Physical Properties

Coefficient of Thermal Expansion, TMA, ppm/°C:	
Below Tg	63
Above Tg	203
Glass Transition Temperature, °C:	
Tg by TMA	43
Tg by DMA	80
Young's modulus (E) @ 25 °C, DMA, MPa	3,200
Transmittance @ 550 nm, 0.2 mm thickness, UV-Vis, %	10

TYPICAL PERFORMANCE OF CURED MATERIAL

Sample cured at the recommended cure conditions using 3x3 mm² glass die on LCP substrate.

Shear Strength

Die Shear Strength:

3 x 3 mm² Glass die on LCP:

After UV Cure, kg	5.2
After UV cure followed by heat cure, kg	16.4
After UV + thermal cure, aging test 120 hours, 85%/85°C	12.1

Sample cured at the recommended thermal cure condition (60 minutes @ 80ºC in conventional oven) using 5x5 mm² various substrate on LCP substrate.

Shear Strength

Die Shear Strength:

5 x 5 mm² die, after UV + thermal cure:

PC on LCP, kg	20.8
Anodized aluminum on LCP, kg	47.9
PBT on LCP, kg	20.7
PA on LCP, kg	24.5
SUS 304 on LCP, kg	40.7

GENERAL INFORMATION

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

THAWING: (if applicable)

1. Allow container to reach room temperature before use.

DIRECTIONS FOR USE

1. Complete cleaning of the substrate should be performed to remove contamination such as dust, salt and oils which can cause poor adhesion or corrosion in a bonded part..
2. Some filler settling is common during shipping and storage. for this reason, it is recommended that the contents of the shipping container be thoroughly mixed prior to us.
3. For best performance, bond surface should be clean and free from grease.
4. Useable shelf life may vary depending on method of application and storage conditions.

STORAGE:

Store in original, tightly covered containers in clean, dry areas. Storage information may be indicated on the product container labeling.

Optimal Storage : -20 °C

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
N x 0.225 = lb/F
N/mm x 5.71 = lb/in
psi x 145 = N/mm²
MPa = N/mm²
N·m x 8.851 = lb·in
N·m x 0.738 = lb·ft
N·mm x 0.142 = oz·in
mPa·s = 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. Any liability in respect of the information in the Technical Data Sheet or any other written or oral recommendation(s) regarding the concerned product is excluded, except if otherwise explicitly agreed and except in relation to death or personal injury caused by our negligence and any liability under any applicable mandatory product liability law.

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