Technical Data Sheet

LOCTITE® ABLESTIK NCA 3216AC

October 2024

PRODUCT DESCRIPTION

LOCTITE® ABLESTIK NCA 3216AC provides the following product characteristics:

Technology	Epoxy
Appearance	White
Product benefits	• Fast UV cure • High Tg and low CTE • Good SFR performance • High and stable RA reliability • Good dispensing capability • Excellent adhesion to different substrate
Cure	Ultraviolet (UV) light followed by heat cure
Application	Active alignment camera and Lidar module assembly
Typical assembly applications	Anodized Aluminum, PBT, PPS, PCB, LCP

LOCTITE® ABLESTIK NCA 3216AC is designed for security and Auto CCM for its high and stable RA performance (HTHH 85°C/85%,1,000h). LOCTITE® ABLESTIK NCA 3216AC is dual cure paste (UV + thermal), and it achieve initial adhesion by UV exposure, then secondary cured by thermal.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Viscosity, TA, Rheometer, Angle 2°, 25°C, mPa.s (cP)	
Plate 20 mm, Shear rate $20s^{-1}$	21,450
Thixotropic index ($2s^{-1}/20s^{-1}$)	4.4
Specific gravity, g/cm^3	1.55
Work life @ 25ºC, Viscosity increase ≤25%, days	3
Shelf life @ -20°C, days	180

TYPICAL CURING PERFORMANCE

Recommended cure condition

UV Light (LED Lamp)	
UV Wavelength, nm	365
Radiation intensity, mW/cm^2	400~1,000
Radiation time, seconds	2~5
Secondary heat cure	
Oven cure air @ 85°C, minutes	60
Weight loss during cure, %	
TGA, after 4 hours @ 110°C	0.2

The above cure profiles are guideline recommendations. These conditions (time and temperature) may vary based on customers' experience and specific application requirements, as well as customer curing equipment, oven loading and actual oven temperatures.

TYPICAL PROPERTIES OF CURED MATERIAL

Sample cured by UV (LED 365nm, 2S x 800 mW/cm^2) + thermal (85°C 60min)

Physical properties	
Coefficient of thermal expansion, TMA, ppm/°C	
Below Tg	29
Above Tg	116
Glass transition temperature, TMA, °C	134
Storage modulus @ 25°C, DMA, Mpa	7,335
Hardness shore D	88
Adhesion properties	
Die shear strength	
UV adhesion, 2S x 800 mW/cm^2 Glass (3x3mm) + An Al, kg	19.0
UV+Thermal adhesion, 2S x 800 mW/cm^2, 85°C, 1hour Glass (3x3mm) + An Al, kg	29.0

GENERAL INFORMATION

Please consult the Safety Data Sheet (SDS) for safe handling information of this product.

Thawing

1. Allow container to reach room temperature before use.
2. After removing from the freezer, set the syringes to stand vertically while thawing.
3. Thaw times depend on the syringe size.
4. Consult handling guide for more information.
5. DO NOT open the container before contents reach 25°C temperature. Any moisture that collects on the thawed container should be removed prior to opening the container.
6. DO NOT re-freeze. Once thawed to 25°C, the adhesive should not be re-frozen.

Direction for use

1. Thawed material should immediately be placed on dispense equipment for use.
2. If the adhesive is transferred to a final dispensing reservoir, care must be exercised to avoid entrapment of contaminants and/or air into the adhesive.
3. Adhesive must be completely used within the product's recommended work life.

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

Optimal storage: -20°C and away from light.

Material removed from containers may be contaminated during use. Do not return product to the original container. Henkel 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 Henkel representative.

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 the specifications of this product.

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

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