Technical Data Sheet

LOCTITE ABLESTIK CDF 500

September 2021

PRODUCT DESCRIPTION

LOCTITE ABLESTIK CDF 500 provides the following product characteristics:

Technology	Hybrid chemistry
Appearance	Silver film
Cure	Heat cure
Product Benefits	• High MSL reliability • Controlled fillet size • No resin bleed-out • Consistent bondline thickness • Pre-cut wafer lamination equipment compatible • Recommended for thin wafer handling applications • Good wetting and low warpage for large die
Film Thickness	15µm and 30µm
Application	Die attach
Typical Package Application(s)	QFN, TQFP, eTQFP

LOCTITE ABLESTIK CDF 500 highly filled, conductive die attach adhesive is designed to provide high thermal and electrical conductivity in the attachment of integrated circuits and components onto metal leadframes. This adhesive exhibits strong adhesion to various wafer metallizations and leadframe finishes. It can be used in a variety of die sizes ranging from 3mm x 3mm to 8mm x 8mm .

TYPICAL PROPERTIES OF UNCURED MATERIAL

Filler Content %	84.5
Work Life @ 25°C, days:	
Before lamination	30
After lamination	30
TOTAL WORK LIFE	60
Shelf Life @ 0 to 5ºC , days	365

TYPICAL CURING PERFORMANCE

Cure Schedule

30 minute ramp from 25°C to 200°C, hold 60 minutes @ 200 °C

Alternate Cure Schedule

30 minute ramp from 25°C to 175°C, hold 60 minutes @ 175 °C

The above cure profiles are guideline recommendations. Cure 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

Physical Properties

Coefficient of Thermal Expansion, :		
Below Tg, ppm/°C		75
Above Tg, ppm/°C		274
Glass Transition Temperature, °C		5
Tensile Modulus:		
@ 25°C	N/mm² (psi)	6,530 (947,242)
@ 250°C	N/mm² (psi)	182 (26,397)

Thermal Properties

Thermal Conductivity (Bulk), ASTM E1461, W/(m-K)	1.8
Thermal Resistance (Rth), In-package:	
Thermal Die (Ti/Ni/Ag) on QFN, K/W	1.4

Electrical Properties

Volume Resistivity (Bulk), ohm-cm	0.0004
Electrical Resistance , RDSon Testing:	
MOSFET Die on TO-220, ohms	0.053

Refer to Data Package for In-Package Thermal and Electrical Performance testing details.

TYPICAL PERFORMANCE OF CURED MATERIAL

Shear Strength

Hot Die Shear Strength @ 260°C:	
2 X 2 mm (80 x 80 mil) die on PPF LF, kg/mm²	>0.5

GENERAL INFORMATION

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

DIRECTIONS FOR USE

1. Refrigerator storage is recommended.
2. Care must be exercised to avoid entrapment of contaminants.
3. Avoid overheating.
4. Alternate thicknesses may be used depending on the application requirements.
5. Recommended silicon wafer backside lamination temperature is 65ºC or higher.
6. Please contact your Henkel Technical Service representative for details regarding ideal lamination temperatures for your specific wafer and dicing tape recommendation.

Not for product specifications

The technical data contained herein are intended as reference only. Please contact your local Henkel representative for assistance and recommendations on the specifications of this product.

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

Optimal Storage : 0 to 5 °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 Henkel 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
N/mm² x 145 = psi
N/mm² = MPa
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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