

## LOCTITE ABLESTIK ICP 2120

July 2022

**PRODUCT DESCRIPTION**

LOCTITE ABLESTIK ICP 2120 provides the following product characteristics:

|                                |   |
|--------------------------------|---|
| <b>Technology</b>              | MS Polymer  |
| Appearance                     | Silver liquid   |
| <b>Cure</b>                    | Moisture cure, Air humidity   |
| Product Benefits               | <ul style="list-style-type: none"> <li>One component</li> <li>Sn free</li> <li>Fast cure at room temperature</li> <li>Excellent electrical conductivity</li> <li>Good dispensing characteristics</li> <li>Good adhesion</li> <li>Low contact resistance</li> <li>High thermal conductivity</li> </ul> |
| <b>Application</b>             | Component assembly<br>Electrically Conductive Adhesive  |
| Typical Package Application(s) | Camera module assembly  |

LOCTITE ABLESTIK ICP 2120 electrically conductive adhesive is specially formulated as a Pb/Sn free alternative to solder. This material cures upon exposure to atmospheric moisture making it suitable for use in the assembly of heat sensitive components such as bracket and VCM assembly for camera modules. LOCTITE ABLESTIK ICP 2120 is also designed to enhance DCR (Direct Contact Resistance) performance on metal surfaces like SUS and Ni.

**TYPICAL PROPERTIES OF UNCURED MATERIAL**

|  |        |
|--|--------|
| Viscosity, Brookfield CP51, 25 °C, mPa·s (cP): |        |
| Speed 5.0 rpm                                  | 28,000 |
| Thixotropic Index (0.5/5.0 rpm)                | 2.5    |
| Work Life @ 25°C, hours                        | 24     |
| Shelf Life @ -40°C, days                       | 180    |

**TYPICAL CURING PERFORMANCE****Cure Schedule**

1.8 mm/day @ 25 °C (@ 50% RH)

**Alternative Cure Schedule**

60 minutes @ 50°C

**Skin Over Time**

Skin over time is the time the surface of the adhesive forms a skin upon exposure to atmospheric moisture at 25°C, 50% RH.

|                         |    |
|-------------------------|----|
| Skin Over Time, minutes | 20 |
|-------------------------|----|

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**

Sample cured 24 hours atmospheric moisture at 25°C (± 2°C), 50 RH (±5% RH).

**Physical Properties**

|                   |    |
|-------------------|----|
| Hardness, Shore D | 28 |
|-------------------|----|

Tensile Modulus, DMTA, DMTA :

|         |                   |           |
|---------|-------------------|-----------|
| @ 25°C  | N/mm <sup>2</sup> | 900       |
|         | (psi)             | (130,530) |
| @ 100°C | N/mm <sup>2</sup> | 290       |
|         | (psi)             | (42,060)  |
| @ 250°C | N/mm <sup>2</sup> | 310       |
|         | (psi)             | (44,960)  |

**Thermal Properties**

|  |     |
|--|-----|
| Thermal Conductivity, Laser Flash, W/(m-K) | 7.0 |
|--|-----|

**Electrical Properties**

|                            |        |
|----------------------------|--------|
| Volume Resistivity, ohm-cm | 0.0001 |
|----------------------------|--------|

Contact Resistance :

|                            |      |
|----------------------------|------|
| 2 X 2 mm Nickel pad, ohms: |      |
| on SS304                   | 1.4  |
| on Ni                      | 0.15 |
| on Au                      | 0.03 |
| on Cu                      | 0.05 |

**Adhesion Properties**

Die Shear Strength :

|   |     |
|---|-----|
| 1 x 1 mm Si die on SS304, N/mm <sup>2</sup> : |     |
| @ 2 hours after attach                        | 1.0 |
| @ 4 hours after attach                        | 1.5 |
| @ 24 hours after attach                       | 4.0 |



## GENERAL INFORMATION

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

## DIRECTIONS FOR USE

1. Complete cleaning of the substrates should be performed to remove contamination such as oxide layers, dust, moisture, 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 use.
3. For best performance bond surfaces should be clean and free from grease.
4. Usable shelf life may vary depending on method of application and storage conditions.

## STORAGE

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

**Optimal Storage: -40°C. Storage below -40°C or greater than -40°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 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/mm<sup>2</sup> x 145 = psi  
N/mm<sup>2</sup> = 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

## 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.

## Disclaimer

Reference 1