Technical Data Sheet

# LOCTITE ABLESTIK CT 4042-30

May 2015

## PRODUCT DESCRIPTION

LOCTITE ABLESTIK CT 4042-30 provides the following product characteristics:

| | |
|---|---|
| **Technology** | Epoxy |
| Appearance | Silver |
| Filler Type | Silver |
| Components | Two components - requires mixing |
| Mix Ratio, Part A:Part B | 1 : 1 |
| **Cure** | Heat cure |
| Product Benefits | • Two component<br>• Easy mixing<br>• Fast cure at high temperatures |
| Application Method | Dispense or stencil/screen printing |
| Operating Temperature | -45 to +150ºC |
| **Application** | Assembly |

LOCTITE ABLESTIK CT 4042-30 silver filled epoxy adhesive is designed for high throughput assembly operations. It is suited for die and component bonding in microelectronic applications.

LOCTITE ABLESTIK CT 4042-30 is also available in premixed and frozen version, LOCTITE ABLESTIK CT 4042-30. LOCTITE ABLESTIK CT 4042-30 is the faster curing version of LOCTITE ABLESTIK CT4042-1 PTA, PTB.

## TYPICAL PROPERTIES OF UNCURED MATERIAL

**Part A Properties LOCTITE ABLESTIK CT 4042-30 PTA**

| | |
|---|---|
| Viscosity Brookfield # TC, 10 rpm @ 25°C, mPa·s (cP) | 100,000 |

**Part B Properties LOCTITE ABLESTIK CT 4042-30 PTB**

| | |
|---|---|
| Viscosity Brookfield # TC, 10 rpm @ 25°C, mPa·s (cP) | 70,000 |

**Mixed Properties LOCTITE ABLESTIK CT 4042-30 PTA, PTB**

| | |
|---|---|
| Mixed Viscosity Brookfield # TD, 10 rpm @ 25°C, mPa·s (cP) | 50,000 |
| Density, g/cm³ | 3.3 |
| Percent Silver, % | 71 |
| Shelf Life (from date of qualification in original seal): | |
| In kits @ 0 to 8ºC, days | 365 |
| Premixed & Frozen @ -25 to -18ºC, days | 91 |
| Flash Point - See MSDS | |

## TYPICAL CURING PERFORMANCE

**Cure Schedule**

60 minutes @ 100°C
20 minutes @ 120°C
10 minutes @ 150°C
30 to 60 seconds @ 190°C (Hot plate cure)

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

## TYPICAL PROPERTIES OF CURED MATERIAL

**Physical Properties**

| | |
|---|---|
| Glass Transition Temperature, °C | 90 |
| Coefficient of Linear Thermal Expansion, ppm/ºC | 167 |
| Thermal Conductivity , W/(m-K) | 2.5 |
| Extractable Ionic Content, : | |
| Chloride (Cl-) | 50 |
| Sodium (Na+) | 5 |
| Potassium (K+) | 1 |
| Ammonium (NH4+) | 200 |

**Electrical Properties**

| | |
|---|---|
| Volume Resistivity, ohms-cm | $2\times10^{-4}$ |

## TYPICAL PERFORMANCE OF CURED MATERIAL

**Shear Strength**

| | | |
|---|---|---|
| Tensile Lap Shear Strength | N/mm² (psi) | 9 (1,310) |
| Die Shear Strength: | | |
| 1.27 x 1.27 mm die, Kg | | 3 |

## GENERAL INFORMATION

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

## DIRECTIONS FOR USE

1. Mix equal parts by weight of Part A and Part B.
2. Mix correct proportions of A and B components by weight, using a clean metal mixer.
3. Avoid entrapment of air or moisture.
4. Check A and B containers for silver settling before use. If settling occurs, stir gently to resuspend silver before use.

## STORAGE:

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

**Optimal Storage:** LOCTITE ABLESTIK CT 4042-30 adhesive packaged in kits may be stored at 0 to 8ºC for up to one year. Premixed and frozen adhesive must be contiually stored at -25 to -18 ºC.

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
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.
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Reference 1