

# Technical Data Sheet

## TCA 300DC

### Product Description

TCA 300DC is a solvent-free, two-component thermally conductive, polyurethane-based adhesive. The material exhibits good adhesion on most substrates, excellent thermal & electrical insulation performance.

Technology	Polyurethane-based adhesive
Chemical Type	Two-component polyurethane
Appearance A/B	Blue/White
Appearance (Uncured)	Blue
Mix Ratio By Volume	100:100
Curing Condition	Room temperature
Application	Thermally conductive bonding

### Feature

- Solvent-free
- High thermal conductivity
- Long work time
- Good bond strength on Aluminum and PET film
- Excellent resistance to high temperature and humidity

### Curing Schedule & Property

Work time (time to double viscosity), min	≥20
Curing schedule@25°C, 90% curing degree, day	1
Curing schedule@25°C, fully curing, day	3

### Typical properties of Uncured material

Property	Typical Value
Viscosity, Part A, parallel plate 25mm @ 2.4s <sup>-1</sup> , Pa.s ASTM D2196	210
Viscosity, Part B, parallel plate 25mm @ 2.4 s <sup>-1</sup> , Pa.s ASTM D2196	190
Viscosity, Mixed, parallel plate 25mm @ 2.4 s <sup>-1</sup> , Pa.s ASTM D2196	195
Density, Part A, g/cm <sup>3</sup> ASTM D792	2.4
Density, Part B, g/cm <sup>3</sup> ASTM D792	2.9
Shelf life@ 5~30°C, month	4

### Typical Property Of Cured material

Property	Typical Value
Density, g/cm <sup>3</sup>	2.65
Hardness, Shore A ASTM D2240	94
Curing Speed, hardness check, Shore A 18°C/50%RH - 60min/80min 23°C/50%RH - 60min/80min	55/92 90/93
Thermal Conductivity, W/(m.k) ISO 22007-1	3.0
NVC (Non volatile content), 100°C@3h	99.90%
Shrinkage, % ASTM D6289	0.09%
Lap shear Strength, 3003Al-3003Al,1mm spacer, MPa ASTM D1002	2.1
Peel Shear Strength, 180° peel,6063 Al-PET film, gf/10mm	580
Dielectric Breakdown Voltage, kv/mm ASTM D149	13
Volume Resistivity, ohm-cm ASTM D257	> 1E+13
Flammability, UL 94 V0	Pass

### Available Package

Sunliky TCA 300DC is available for below packaging:

- 400CC two-component cartridge
- 20L pail
- 200L drum

Or customized according to customer requirements

### Direction For Use

This product is a polyurethane system. Before use, the surface of the substrate needs to be cleaned, and the adherend and environment must be kept dry. Curing at 25°C is recommended, curing conditions (time and temperature) may vary depending on customer experience, application requirements, and customer curing equipment. Customers should consider the usage conditions before actual application and conduct tests before production.

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### Storage

Product should be stored in dry, unopened containers. Storage information is detailed on the product container label.

Optimum storage temperature: 5~30°C. Exceeding this temperature range can adversely affect product performance. Materials removed from containers may become contaminated during use. Thence, do not return product to original container. The Company assumes no responsibility for contaminated product or for products stored under conditions other than those previously specified. If additional information is required, please contact your local Technical Service Center or Customer Service Representative.

### Disclaimer

The data provided in this Technical Data Sheet (TDS) are based on typical values from our laboratory test data.

The information in the TDS, including recommendations for product use and application, is based on our product knowledge and experience as the date of this TDS. The application and working conditions in your environment that are beyond our control. Therefore, Sunliky cannot guarantee the suitability of our products for the production processes and conditions used by you and for the intended applications and results. We strongly recommend that you carry out your own preliminary testing to confirm the suitability of our products.