

# ABLESTIK A 316

November 2015

## PRODUCT DESCRIPTION

ABLESTIK A 316 provides the following product characteristics:

Technology	Epoxy Paste
Product Benefits	<ul style="list-style-type: none"> <li>One component</li> <li>Fast heat cure</li> <li>100% Solids material</li> <li>Excellent thermal stability</li> <li>Exhibits resistance to acids and solvents</li> <li>Maximum heat and thermal stability after cure</li> </ul>
Operating Temperature	-40 to +155 °C
Cure	Heat cure
Filler Type	Oxide
Application	Assembly
Typical Assembly Applications	Magnet and speaker assembly, Batteries and Compressors
Other Application Areas	Sealant and end-cap adhesive for assembly of hydraulic fluid and other filters and bonding phenolics and other heat resistant plastics

ABLESTIK A 316 pourable, oxide filled, epoxy adhesive and sealant is designed for high throughput assembly operations.

## TYPICAL PROPERTIES OF UNCURED MATERIAL

Viscosity, Brookfield, 25 °C, mPa·s (cP):

ABLESTIK A 316	38,000
ABLESTIK A 316-7	40,000
ABLESTIK A 316-8	10,000
ABLESTIK A 316-34	43,000
ABLESTIK A 316-54	100,000

Density, g/cm<sup>3</sup> 1.38

Appearance:

ABLESTIK A 316	Beige
ABLESTIK A 316-7	Black
ABLESTIK A 316-8	Beige
ABLESTIK A 316-34	Beige
ABLESTIK A 316-54	Beige

Shelf Life @ 0 to 8°C, months 6

Flash Point - See SDS

## TYPICAL CURING PERFORMANCE

### Recommended Cure Schedule

Gel, 20 seconds @ 180°C, cure, 2 minutes @ 180°C or  
 Gel, 60 seconds @ 160°C, cure, 5 minutes @ 160°C or  
 Gel, 90 seconds @ 140°C, cure, 10 minutes @ 140°C or  
 Gel, 5 minutes @ 120°C, cure, 20 minutes @ 120°C or  
 Gel, 1 hour @ 100°C, cure, 20 minutes @ 100°C or  
 Gel, 4 hours @ 80°C, cure, 90 minutes @ 80°C

Films of 0.2mm thick ABLESTIK A316 showed no significant attach and less than 1% weight gain after 30 days immersed in the following: 10% H<sub>2</sub>SO<sub>4</sub>, 10% KOH and 33% KOH @ RT; Skydrol500 or Freon22 vapour @ 120°C; JP-4 or Xylene @ 80°C.

ABLESTIK A 316 may be cured in thicknesses up to 2 cm and cured rapidly without adverse heat effects due to exotherm.

ABLESTIK A 316 may be cured in 5 or 10 seconds, in thin films, by induction heat.

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

Hardness, Shore D	85
Coefficient of Linear Thermal Expansion, ppm/°C	50
Glass Transition Temperature, °C:	
(Tg) by TMA	125
(Tg) by DMA	185
Young's Modulus (E):	
@ 50°C	N/mm <sup>2</sup> 2,600 (psi) (377,100)
@ 100°C	N/mm <sup>2</sup> 2,350 (psi) (340,840)
@ 150°C	N/mm <sup>2</sup> 1,634 (psi) (236,990)
@ 200°C	N/mm <sup>2</sup> 509 (psi) (73,825)
Thermal Conductivity, W/(m·K)	0.5

## TYPICAL PERFORMANCE OF CURED MATERIAL

### Shear Strength

Tensile Lap Shear Strength:

Al to Al:	
@ 25°C	N/mm <sup>2</sup> 12.7 (psi) (1,840)
@ 125°C	N/mm <sup>2</sup> 15.5 (psi) (2,250)
@ 150°C	N/mm <sup>2</sup> 15.4 (psi) (2,235)
@ 180°C	N/mm <sup>2</sup> 13.2 (psi) (1,915)

PBT to PBT:

@ 25°C	N/mm <sup>2</sup> 5.4 (psi) (780)
@ 125°C	N/mm <sup>2</sup> 2.7 (psi) (390)
@ 150°C	N/mm <sup>2</sup> 2.6 (psi) (380)
@ 180°C	N/mm <sup>2</sup> 2.2 (psi) (320)

## GENERAL INFORMATION

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

## DIRECTIONS FOR USE

1. Oxide-filler may settle after long storage. If settling occurs, stir to re-suspend filler before using.

### 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 specifications for 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 8 °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 Technical Service Center or Customer Service Representative.

## Disclaimer

### Note:

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Reference **N/A**

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