Technical Data Sheet

LOCTITE ABLESTIK A 316-7

November 2015

PRODUCT DESCRIPTION

LOCTITE ABLESTIK A 316-7 provides the following product characteristics:

Technology	Epoxy
Appearance	Black
Product Benefits	• One component • Thermally stable • 100% Solids • Fast cure • Chemical resistant
Operating Temperature	-40 to +155 °C
Cure	Heat cure
Filler Type	Oxide
Application	Assembly
Typical Assembly Applications	• Magnet and speaker assembly • Batteries • Compressors
Other Application Areas	• Sealant and end-cap adhesive for assembly of hydraulic fluid and other filters • bonding phenolics and other heat resistant plastics

LOCTITE ABLESTIK A 316-7 epoxy adhesive and sealant is designed for high throughput assembly operations requiring rapid cure cycles.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Viscosity, Brookfield , 25 °C, mPa·s (cP)	42,000
Density , g/cm³	1.38
Shelf Life @ 0 to 8°C, days	180
Flash Point - See SDS	

TYPICAL CURING PERFORMANCE

Gel Time

20 seconds @ 180°C
60 seconds @ 160°C
90 seconds @ 140°C
5 minutes @ 120°C
20 minutes @ 100°C
90 minutes @ 80°C

Cure Schedule

2 minutes @ 180°C
5 minutes @ 160°C
5 minutes @ 140°C
20 minutes @ 120°C
1 hour @ 100°C
4 hours @ 80°C

Films of 0.2mm thick STYCAST A316 showed no significant attach and less than 1% weight gain after 30 days immersed in the following: 10% H2SO4, 10% KOH and 33% KOH @ RT; Skydrol 500 or Freon 22 vapour @ 120ºC; JP-4 or Xylene @ 80ºC.

LOCTITE ABLESTIK A 316-7 may be cured in thicknesses up to 2 cm and cured rapidly without adverse heat effects due to exotherm.

LOCTITE ABLESTIK A 316-7 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		90
Coefficient of Linear Thermal Expansion, ppm/ºC		50
Glass Transition Temperature, °C:		
(Tg) by TMA		125
(Tg) by DMA		185
Young's Modulus (E)Unit}:		
@ 50°C	N/mm² (psi)	2,600 (377,098)
@ 100°C	N/mm² (psi)	2,350 (340,838)
@ 150°C	N/mm² (psi)	1,630 (236,411)
@ 200°C	N/mm² (psi)	509 (73,824)
Thermal Conductivity , W/(m-K)		0.4

TYPICAL PERFORMANCE OF CURED MATERIAL

Shear Strength

Tensile Lap Shear Strength:

Al to Al @ 25 °C	N/mm² (psi)	12.61 (1,828)
Al to Al @ 125 °C	N/mm² (psi)	15.5 (2,248)
Al to Al @ 150 °C	N/mm² (psi)	15.4 (2,233)
Al to Al @ 180 °C	N/mm² (psi)	13.2 (1,914)
Al to Al, after 2 weeks @ 150 °C	N/mm² (psi)	11.7 (1,696)
Al to Al, after 6 weeks @ 150 °C	N/mm² (psi)	11.3 (1,638)

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.

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:

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