Technical Data Sheet

LOCTITE ABLESTIK A 401-12

October 2014

PRODUCT DESCRIPTION

LOCTITE ABLESTIK A 401-12 provides the following product characteristics:

Technology	Epoxy
Appearance	Black
Product Benefits	• One component • Thermally conductive • High strength • Solvent-free
Cure	Heat cure
Filler Type	Aluminum Oxide
Application	Assembly
Operating Temperature	120 °C

LOCTITE ABLESTIK A 401-12 is designed for high strength structural bonding applications. LOCTITE ABLESTIK A 401-12 is an lower viscosity version of ECCOBOND A401 adhesive.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Viscosity @ 25 °C, mPa·s (cP)	43,000
Density , g/cm³	1.8
Pot Life:	
@ 40ºC, days	4
@ 50ºC, hours	10
@ 60ºC, hours	4
Shelf Life @ 0 to 8°C (from date of manufacture), months	6
Flash Point - See SDS	

TYPICAL CURING PERFORMANCE

Cure Schedule

20 minute gel @ 120ºC, 1 hour @ 120°C
3 minute gel @ 160ºC, 10 minutes @ 160°C
1 minute gel @ 180ºC, 5 minutes @ 180°C

This product generates moderate heat during cure. No adverse exotherm effects are obtained when cured at 120ºC in masses up to approximately 20 grams.

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:	
@ 25ºC (minimum)	80
@ 120ºC (minimum)	75
Glass Transition Temperature, °C	118
Coefficient of Linear Thermal Expansion, 10^{-6} K^{-1}	40
Thermal Conductivity , W/(m-K)	0.57
Stroke Cure @ 160ºC, seconds	40

TYPICAL PERFORMANCE OF CURED MATERIAL

Miscellaneous

Tensile Lap Shear Strength @ 25ºC	N/mm²	12
	(psi)	(1,740)

GENERAL INFORMATION

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

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. Heat up to 40ºC to decrystallise product (maximum 3 hours, depending on packaging.

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
N/mm² x 145 = psi
MPa = N/mm²
MPa x 145 = psi
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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Reference 0.1