RUDOLPH BROS. & CO.
ADHERING TO QUALITY

1-800-375-0605
Option 8 for 24/7 Service

6550 Oley Speaks Way
Canal Winchester, OH 43110

www.RudolphBros.Com
RBCsupport@RudBro.Com

Technical Data Sheet

LOCTITE

LOCTITE® EA 9396.6MD AERO

February 2021

PRODUCT DESCRIPTION

LOCTITE® EA 9396.6MD AERO provides the following product characteristics:

Technology	Epoxy
Chemical Type	Epoxy
Appearance (Resin)	Light blue
Appearance (Hardener)	White
Appearance (Mixed)	Light blue
Components	Two components - requires mixing
Mix Ratio, by weight - Resin : Hardener	100 : 31
Cure	5 days at Room Temperature
Secondary Cure	60 minutes at 82°C / 180°F
Application	Potting or Edge Fill
Service Temperature	149ºC (300ºF)
Specific Benefits	• Good High Temp. Properties • Easy to mix • Low Density • Good for Potting, Edge Filling • Available in a 6oz Cartridge

LOCTITE® EA 9396.6MD AERO is an easy mixing, two-part syntactic epoxy adhesive with good compressive strength at higher temperatures. LOCTITE® EA 9396.6MD AERO can be cured at room temperature (25°C / 77°F). Good for Potting and Edge Fill applications.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Part A Properties

Density	0.72
Shelf Life, days:	
@ 4 °C (<40 °F)	365
@ -18 °C (<0 °F)	365

Part B Properties

Density, g/ml	0.5
Shelf Life, days:	
@ 4 °C (<40 °F)	365
@ ≤28 °C (≤82 °F)	180

Mixed Properties

Density, g/ml	0.63
Pot life 100 gram mass, @ 25°C (77ºF), in water bath, ASTM D2471, minutes	120

TYPICAL CURING PERFORMANCE

Recommended Curing Conditions

5 days @ 25°C (77ºF) or
60 minutes @ 82°C (180ºF)

This adhesive should be cured to the above minimum recommended cure condition to achieve normal performance.

The above cure profile(s) are guideline recommendation(s). These conditions (time and temperature) may vary based on customers' experience and specific application requirements, as well as customer curing equipment, oven loading and actual oven temperatures.

TYPICAL PROPERTIES OF CURED MATERIAL

Physical Properties

Shore Hardness Durometer D:	
Cured 5 days @ 25°C (77°F)	70
Approx. 6.35 mm / 0.25 inch thick	
Glass Transition Temperature (1), °C:	
Tg Dry (E'):	
Cured 5 days @ 25°C (77°F)	64°C / 147 °F
Cured 1 hour @ 82°C (180°F)	112°C / 234 °F
Coefficient of Thermal Expansion, ASTM E831-05 cure 5 days @ 25ºC / 77 °F:	
Above Tg, ppm	40
Below Tg, ppm	78
Thermal Conductivity, ASTM E1461 cure 5 days @ 25ºC / 77 °F:	
Diffusivity, cm² /s	0.0015
Specific Heat, J/g	0.99
Conductivity, W/mK	0.147

Henkel

Dielectric Constant and Loss Tangentat X-Band, ASTM D2520-95 Method A, cure 7 days @ 25ºC / 77 °F:

Test Frequency, GHz	9.375
Specimen Thickness, mm / inch	19.1 / 0.75
Wave Length Coefficient	0.7428
Dielectric Constant	2.05
Loss Tangent	0.0239

Mechanical Properties

Tensile Properties [2]:

Tensile Strength @ 25 °C / 77 °F	MPa (psi)	20.7 (3,000)
Tensile Modulus @ 25 °C / 77 °F	MPa (psi)	2,000 (290)
Elongation at break, %		2 to 3

Compressive Properties [3]:

Compression Strength:		
Ultimate:		
@ 25°C (77ºF)	MPa (psi)	44.8 (6,500)
@ 149°C (300ºF)	MPa (psi)	26.9 (3,900)
2% offset:		
@ 25°C (77ºF)	MPa (psi)	41.4 (6,000)
@ 149°C (300ºF)	MPa (psi)	20.7 (3,000)

Bond Strength Performance [4]:

Tensile Lap Shear Strength :		
@ 25°C (77ºF)	MPa (psi)	18.6 (2,700)
@ 149°C (300ºF)	MPa (psi)	9.7 (1,400)

[1] Rheometric Scientific DMTA IV, heat-up rate: 5°C/min., frequency: 1 Hz, strain: 0.1%, sample dimension: 25.4 mm / 1 inch x 12.4 mm / 0.49 inch x 1.6 mm / 0.063 inch.

[2] Tested using 3.18 mm / 0.125 inch castings per ASTM D638. Adhesive cure was 90 minutes at 82°C / 180°F.

[3] Tested using cylindrical 25.4 mm / 1 inch tall x 12.7 mm / 0.5 inch diameter per ASTM D695. Adhesive cure was 5 days at 25°C / 77°F.

[4] Tested per ASTM D1002 after curing 5 days at 25°C / 77°F or 60 minutes at 71°C / 160°F. Adherends are 2024-T3 Bare aluminum treated with phosphoric acid anodized per ASTM D3933.

GENERAL INFORMATION

This product is not recommended for use in pure oxygen and/or oxygen rich systems and should not be selected as a sealant for chlorine or other strong oxidizing materials.

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

PRECAUTIONARY INFORMATION

As with most epoxy based systems, use this product with adequate ventilation. Do not get in eyes or on skin. Avoid breathing the vapors. Wash thoroughly with soap and water after handling. Empty containers retain product residue and vapors so obey all precautions when handling empty containers.

CAUTION! This material may cause eye and skin irritation or allergic dermatitis. It contains epoxy resins.

WARNING! This material causes eye and skin irritation or allergic dermatitis. It contains amines.

Before using this product refer to container label and HENKEL TECHNOLOGIES MATERIAL SAFETY DATA SHEET for additional precautionary, handling and first aid information.

DIRECTION FOR USE:

Mixing:

1. Mixing the individual adhesive component just prior to use is recommended. The temperature of the separate components prior to mixing is not critical, but should be close to room temperature: 25ºC (77ºF).
2. Combine 100 parts resin to 31 parts hardener by weight and mix thoroughly.
3. Do not mix quantities greater than 450 grams as dangerous heat buildup can occur causing uncontrolled decomposition of the mixed adhesive. Toxic fumes can occur, resulting in personal injury.
4. Mixing smaller quantities will minimize the heat buildup.

Application:

1. Bonding surfaces should be clean, dry and properly prepared.
2. The bonded parts should be held in contact until the adhesive is set.
3. Handling strength for this adhesive will occur in 24 hours at 25°C (77°F), after which the support tooling or pressure used during cure may be removed. Since full bond strength has not yet been attained, load application should be small at this time.

Clean-up:

1. It is important to remove excess adhesive from the work area and application equipment before it hardens.
2. Denatured alcohol and many common industrial solvents are suitable for removing uncured adhesive.
3. Consult your solvent supplier's information pertaining to the safe and proper use of solvents.

Disposal:

1. Dispose of spent remover and paint residue per local, state and regional regulations. Refer to HENKEL TECHNOLOGIES MATERIAL SAFETY DATA SHEET for additional disposal information.

STORAGE / SHELF LIFE

Store product in the unopened container in a dry location. Material removed from containers may be contaminated during use. Do not return liquid to original container. Storage information may be indicated on the product container labeling.

Shelf life is 12 months when stored at or below -18°C (0 ºF) in original, unopened containers.

Service Temperature

Service temperature is defined as that temperature at which this adhesive still retains 6.9 MPa / 1,000 psi using test method ASTM D1002 and is 149°C / >300°F**.**

Henkel cannot assume responsibility for product which has been contaminated or stored under conditions other than those recommended. If additional information is required, please contact your local Technical Service Center or Customer Service Representative.

DATA RANGES

The data contained herein may be reported as a typical value. Values are based on actual test data and are verified on a periodic basis.

Conversions

(°C x 1.8) + 32 = °F
kV/mm x 25.4 = V/mil
mm / 25.4 = inches
µm / 25.4 = mil
N x 0.225 = lb
N/mm x 5.71 = lb/in
N/mm² x 145 = psi
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

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. Any liability in respect of the information in the Technical Data Sheet or any other written or oral recommendation(s) regarding the concerned product is excluded, except if otherwise explicitly agreed and except in relation to death or personal injury caused by our negligence and any liability under any applicable mandatory product liability law.

In case products are delivered by Henkel Belgium NV, Henkel Electronic Materials NV, Henkel Nederland BV, Henkel Technologies France SAS and Henkel France SA please additionally note the following:
In case Henkel would be nevertheless held liable, on whatever legal ground, Henkel's liability will in no event exceed the amount of the concerned delivery.

In case products are delivered by Henkel Colombiana, S.A.S. the following disclaimer is applicable:
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. 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.
Any liability in respect of the information in the Technical Data Sheet or any other written or oral recommendation(s) regarding the concerned product is excluded, except if otherwise explicitly agreed and except in relation to death or personal injury caused by our negligence and any liability under any applicable mandatory product liability law.

In case products are delivered by Henkel Corporation, or Henkel Canada Corporation, the following disclaimer is applicable:
The data contained herein are furnished for information only and are believed to be reliable. We cannot assume responsibility for the results obtained by others over whose methods we have no control. It is the user's responsibility to determine suitability for the user's purpose of any production methods mentioned herein and to adopt such precautions as may be advisable for the protection of property and of persons against any hazards that may be involved in the handling and use thereof. In light of the foregoing, **Henkel Corporation specifically disclaims all warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation specifically disclaims any liability for consequential or incidental damages of any kind, including lost profits.** The discussion herein of various processes or compositions is not to be interpreted as representation that they are free from domination of patents owned by others or as a license under any Henkel Corporation patents that may cover such processes or compositions. We recommend that each prospective user test his proposed application before repetitive use, using this data as a guide. This product may be covered by one or more United States or foreign patents or patent applications.

Trademark usage
Except as otherwise noted, all trademarks in this document are trademarks of Henkel Corporation in the U.S. and elsewhere. ® denotes a trademark registered in the U.S. Patent and Trademark Office.

Reference 1.0