

LOCTITE® AA 5832

April 2024

Product description

LOCTITE® AA 5832 provides the following product characteristics:

Technology	
Chemical type	Polyacrylate
Appearance (uncured)	Transparent, yellow to light amber liquid
Fluorescence	Positive (blue)
Components	One component – requires no mixing
Viscosity, mPa·s	3400 to 6400
Cure	UV cure
Secondary cure	Moisture cure
Application	Potting

LOCTITE® AA 5832 is a dual cure UV/moisture polyacrylate potting sealant that is designed for automatic transmission fluid (ATF) resistance.

Typical applications

LOCTITE® AA 5832 a transparent, fluorescent, low viscosity material used for potting and sealing various automotive and electronic components. This product is designed for high performance in sealing against automatic transmission fluids and oil. This product should not be used in applications requiring immersion in water.

Typical properties of uncured material

Specific gravity @ 25°C	1.08
Solids/non-volatile content, %	79.1
Flash point, °C	82
Parallel plate viscosity, BS 5350 B8, mPa·s	3400-6400

Typical curing performance

Depth of cure, mm	≥10
-------------------	-----

Medium pressure Hg-arc, 60 s @ 70 mW/cm² measured @ 365 nm, or LED 405 nm, 60 s @ 700 mW/cm²

Normal processing conditions will include exposure to sufficient UV light irradiance to effectively cure the material. Although functional strength is developed almost instantly due to the UV curing nature of LOCTITE® AA 5832 increased cure properties are developed during 72 hours at ambient conditions.

Typical properties of cured material

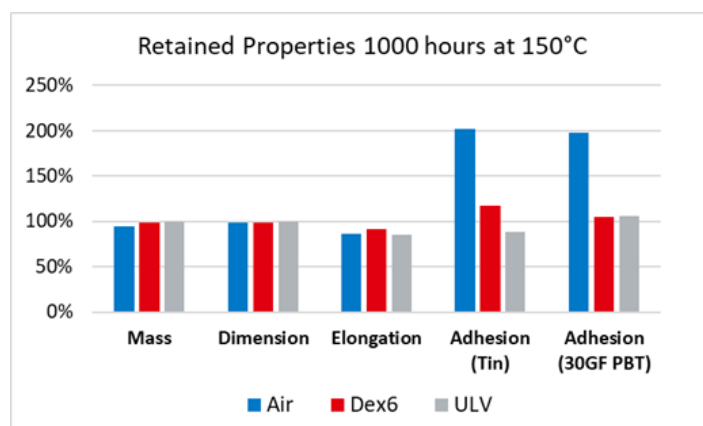
Two times 30 seconds in medium pressure Hg-arc lamp @ 70 mW/cm², measured @ 365 nm, followed by 7 days @ 25±2 °C/50±5 % RH, 2 mm thick film, tested at 25 °C.

Physical properties

Shore hardness, ISO 868, Durometer A	60-75
Tensile strength, ISO 37, MPa	4.5-6
Elongation at break, %	200-275
Tg Onset by DMA, °C	-30
Tg Peak Tan Delta by DMA, °C	-10
CTE (pre-Tg, -100 to -6 °C)	85
CTE post-Tg	245
Water absorption, ISO 62 (wt. %)	14.5
24 hrs @ 23°C / 50% RH	
Thermal conductivity, W/mK	0.18
Horizontal burn rate, SAE J369, mm/min	19.7 (Class B)

Physical Properties after aging

Below is summarized the retained physical and adhesive properties for LOCTITE® AA 5832 aged for 1000 hours at 150°C in air, Dexron VI, or ULV transmission fluid.



Physical properties after 1000 hours @ 150°C in air

Shore hardness, ISO 868, Durometer A	69
Tensile strength, ISO 37, MPa	6.2
Elongation at break, %	232
Weight change, %	-5.5

Physical Properties after 1000 hours @ 150°C in Dexron VI transmission fluid

Shore hardness, ISO 868, Durometer A	63
Tensile strength, ISO 37, MPa	5.9
Elongation at break, %	246
Weight change, %	1.4

Physical properties after 1000 hours @ 150°C in ULV transmission fluid

Shore hardness, ISO 868, Durometer A	65
Tensile strength, ISO 37, MPa	6.0
Elongation at break, %	228
Weight change, %	0.1

Adhesive properties

Shear strength, ASTM D3163

Hg-Arc cured @ 70 mW/cm², measured @ 365 nm, for 30 seconds followed by 7 days @ 25°C /50 % RH prior to any aging conditions described below.

Tin (Bright, 0.002" thick on CRS) (psi)	320
Tin, 220 hr @ 1000°C air (psi)	500
Tin, 500 hr @ 1000°C Dex6 (psi)	210
Tin, 210 hr @ 1000°C ULV (psi)	200

Alclad Aluminum (psi)

Alclad Al, 1000 hr @ 150°C air (psi) 640

Alclad Al, 1000 hr @ 150°C Dex6 (psi) 370

Copper (psi) 290

Copper, 1000 hr @ 85°C / 85% RH (psi) 240

PBT (30 %GF, Plasma Treated) (psi) 150

PBT 30% GF, 1000 hr @ 150°C air (psi) 490

PBT 30% GF, 1000 hr @ 150°C Dex6 (psi) 230

PBT 30% GF, 1000 hr @ 150°C ULV (psi) 200

PBT 30% GF, 1000 hr @ 85°C /85% RH (psi) 260

PPS (40% GF, Plasma Treated) (psi) 160

PPS 40%GF, 1000 hr @ 150°C air (psi) 90

PPS 40% GF, 1000 hr @ 150°C Dex6 (psi) 250

PPS 40%GF, 1000 hr @ 150°C ULV (psi) 180

PPS 40% GF, 1000 hr @ 85°C / 85% RH (psi) 170

PA6 (40% GF, Plasma Treated) (psi) 300

PA6 40% GF, 1000 hr @ 150°C air (psi) 540

PA6 40% GF, 1000 hr @ 150°C Dex6 (psi) 260

PA6 40% GF, 1000 hr @ 150°C ULV (psi) 150

PA6 40% GF, 1000 hr @ 85°C / 85% RH (psi) 250

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 Material Safety Data Sheet.

Direction for use

This product is UV light sensitive: exposure to daylight, UV light, and artificial lighting should be kept to a minimum during storage and handling.

This product is sensitive to atmospheric moisture: exposure to air should be kept to a minimum during storage and handling.

Storage

Store product in the unopened container in a dry location. Storage information may be indicated on the product container labeling.

Optimal Storage: 8°C to 28°C. Storage below 8°C or greater than 28°C can adversely affect product properties.

Material removed from containers may be contaminated during use. Do not return product to the original container. Henkel 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 Henkel representative.

Product specification

The technical data contained herein are intended as reference only and are not considered specifications for the product. Product specifications are located on the Certificate of Analysis or please contact Henkel representative.

Approval and certificate

Please contact Henkel representative for related approval or certificate of this product.

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.

Temperature/Humidity Ranges: 23°C / 50% RH = 23±2°C / 50±5% RH

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



Additional Information

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 2