

LOCTITE® AA 8671 PSA AD

June 2022

PRODUCT DESCRIPTION

LOCTITE® AA 8671 PSA AD provides the following product characteristics:

Technology	1K UV Curable Acrylic
Appearance (uncured)	Light yellow ~Colorless, Transparent liquid
Viscosity	Medium
Cure	Ultraviolet (UV) / Visible light
Application	Optical lamination
Specific Benefits	<ul style="list-style-type: none"> • High optical performance • Low modulus • Siloxane free • Applicable for many types of display designs

LOCTITE® AA 8671 PSA AD a single component UV/Visible light curable, acrylic Liquid Optical Clear Adhesive (LOCA), specifically designed for gap filling of display devices for improved optical performance and durability. Upon exposure to UV/Visible light it cures into a clear, transparent resin.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Appearance	Colorless (Clear) Transparent solid
Specific Gravity @ 25°C	1.0
Refractive Index	1.46
Viscosity @25°C, mPa.s	10,000 to 30,000
Cone & Plate @20/s	

TYPICAL CURING PERFORMANCE

Typical processing conditions include an exposure to a UVA 300 mW/cm² or more (320 to 390 nm UVA) or UVV 300 mW/cm² or more (395 to 445 nm UVV), measured using an EIT UV Power Puck II, for a time determined by the application to effectively cure the material. For standard condition, 4.5 J/cm² of dosage is recommended.

TYPICAL PERFORMANCE OF CURED MATERIAL

Cured with LED365 nm flood @ 450 mW/cm² for 10 seconds.

Hardness, Shore 00, ASTM D2240	<15
Curing Ratio,%	>90
Refractive Index	1.48
Elongation @break, ASTM D412, %	>500
Volume shrinkage, Henkel STM 753, %	<3.0
Dielectric constant, IEC 62631-2-1, 1 MHz	4.5 to 5.0
Shear storage modulus G', kPa	46
Shear loss modulus G'', kPa	39

Optical Properties

300 µm-thick LOCA between non-alkali glasses cured with LED 365 nm flood @ 450 mw/cm² for 10 seconds.

Light transmission @550 nm, %	>99
b* (yellowness)	0.08
Haze, %	0.1

Reliability Testing (1,000 h)

300 µm-thick LOCA between non-alkali glasses cured with LED 365 nm flood @450 mW/cm² for 10 seconds.

QUV @37 W/m ² UV 300 to 400 nm, 50 °C Lamination	no delamination
Light transmission @550 nm, %	>98
b* (yellowness)	1.06
Haze, %	0.1

High temperature @95°C Lamination	no delamination
Light transmission @550 nm, %	>98
b* (yellowness)	0.61
Haze, %	0.1

High temperature/high humidity @85°C/85 %RH Lamination	no delamination
Light transmission @550 nm, %	>98
b* (yellowness)	0.68
Haze, %	0.1

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).

Directions for use

1. The product is light sensitive; exposure to daylight, UV light and artificial lighting should be kept to a minimum during storage and handling.
2. For best performance bond surface should be clean and free from contamination.
3. Cure with an appropriate light source (metal halide lamp, UVV LED) for a time and intensity suitable for your application.
4. Functional strength is achieved after proper light cure and cooling for parts handling.
5. Excess material can be easily wiped away with non-polar solvents.



Storage

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

Optimal Storage: <25°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 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 a 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

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.

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