



# Henkel Automotive Display Solutions



# HENKEL AUTOMOTIVE DISPLAY SOLUTIONS

Henkel has developed dedicated solutions to support the manufacture of Automotive Display modules. Supplying innovative solutions across the full assembly process including structural bonding, liquid optically clear adhesives and gasketing of LCD/OLED, touch sensors and cover lenses right through to frames and brackets.

Henkel also provides high specification application equipment designed to make your process more efficient. Developed in partnership with leading global lamination equipment manufacturers. Our innovative design approach towards mass production equipment offers significant benefits in terms of process flexibility and optimized footprint with focus on consistent quality and manufacturing cost efficiency.

As the global technology leader in adhesives and sealants, Henkel has abundant experience in the display industry.

We provide innovative display solutions, knowhow and application equipment designed to meet the highest requirements of this market segment.

## Target automotive components and devices

- Center information displays
- Instrument clusters
- Front and rear (seat) entertainment displays
- Side and rear view mirrors
- Head up displays (HUD)



# HENKEL'S CAPABILITIES

Henkel is the Market Leader in Adhesives, Sealants and functional coating solutions for the automotive industry. With more than 80 years of automotive experience, proven brands and best-in-class technologies, we are proud to develop and deliver total solutions to every automotive manufacturer in the world.

## Innovative & Sustainable Solutions

We enable customers' innovation to meet fast design changes and development with green solutions.

## Cost Saving & Reliability

Our superior adhesives and equipment improve productivity, durability and reduce overall cost.

## Design Partnership

Our large experienced team of engineers provide documented design and application support.

## Best-in-Class Technical Support

Our professional engineering support empowers our customers to improve their quality and efficiency.

## Global Capabilities

We are the global technology leader with extensive network to support customers' value chain.



# LOCTITE® LIQUID OPTICALLY CLEAR ADHESIVES (LOCAs)

Loctite® Liquid Optically Clear Adhesives are designed to achieve high optical and bonding performance on display modules, especially those using multiple substrates or with unique curved design. Henkel LOCA is a low or medium viscosity adhesive which cures instantaneously when exposed to UV light.

## LOCA are used for optical lamination of

- Cover lens bonding - Touch sensor to Cover lens
- Direct bonding - Displays (LCD, OLED) to Touch sensor/Cover lens



## Features & Benefits

- **Improve optical performance**  
Increase contrast ratio by 400% in sunlight
- **Increase display ruggedness & head impact resistance**  
Increase in the impact test by up to 3X
- **Extend display reliability**  
Optical bonding makes a display more durable to heat, moisture, temperature cycling
- **Offer greater design flexibility**  
Bonding uneven surface and design shape (3D)
- **The opportunity to introduce fully automated optical bonding process**  
Increased quality, yield rate, lower cycle time



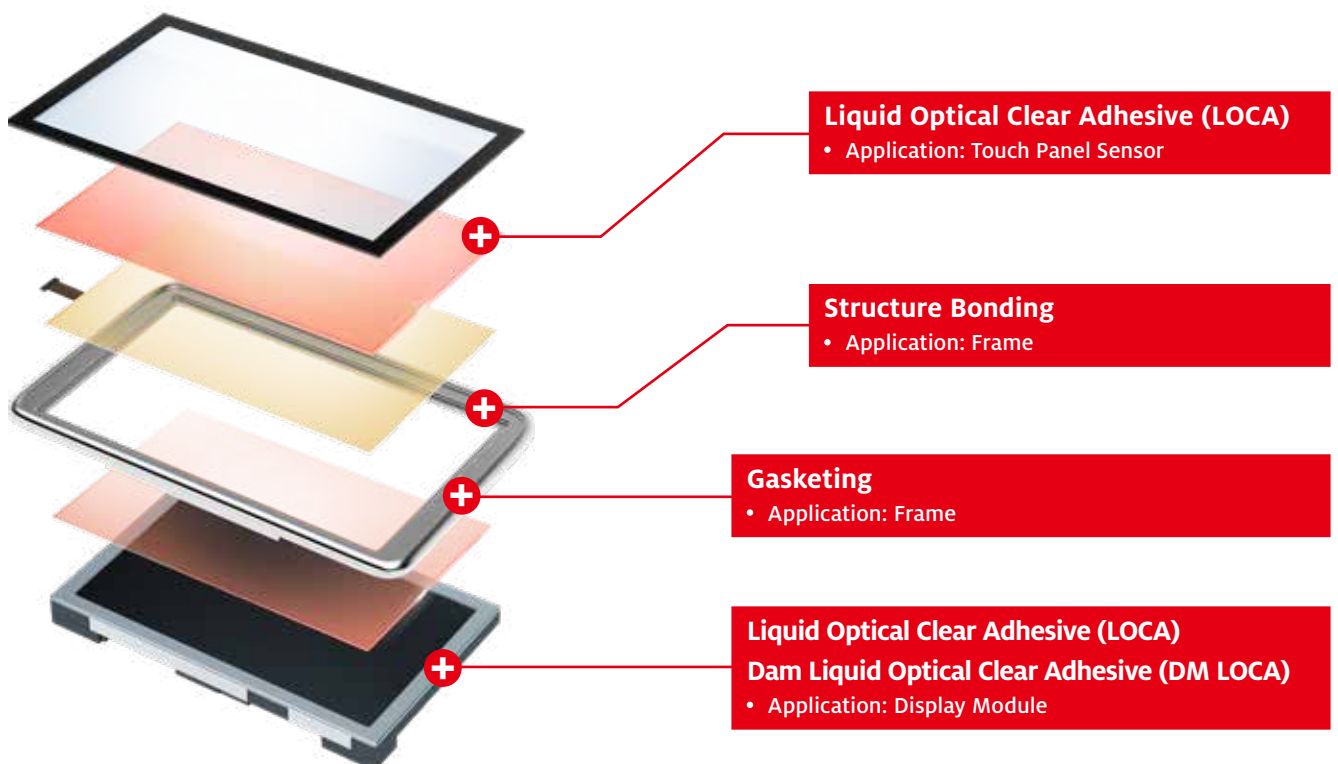


## Main benefits for automotive devices

- Excellent multiple substrate bonding with high adhesion to plastic and glass
- Very good resistance to QUV and to thermal cycle/shock (-40 °C to 95 °C)
- High elongation, low and constant modulus across a wide temperature range
- Curable with both UV and Visible light, therefore compatible with glass and plastics demonstrating no/low UV transparency
- Shadow cure capabilities

### Available technologies

- Silicone
- Acrylics



# LOCTITE® STRUCTURAL BONDING

Loctite® one and two component structural bonding solutions can be supplied with a range of curing mechanisms, designed to offer flexibility in your assembly process.

These available curing mechanisms include ultraviolet light, heat and moisture.

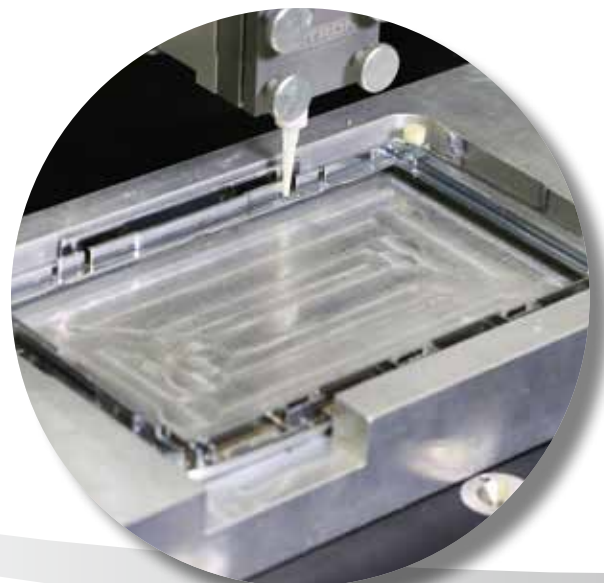


## Features & Benefits

- Excellent adhesion
- Chemical resistance
- High peel strength
- High impact strength
- Variety of cure speeds
- Allow automation

## Technologies

- 2-Part Acrylic Structural Adhesives
- PUR Hotmelt Structural Adhesives
- Light Cure Adhesives



# LOCTITE® GASKETING

Loctite® Gasketing innovation and application technology allows you to precision apply high-performance compression gaskets directly onto parts within just a few seconds.

## Features & Benefits

- **Process Automation**  
Robot applied gaskets to achieve precision fit in bonding
- **Emission Improvement**  
Lower gas permeability with new materials
- **Improved Chemical Resistance**  
Fulfills new market requirements for water / glycol exposure
- **Cost Efficiency**  
Simplified process compared to current compression gasket application

## Technologies

- Silicone
- Anaerobic
- Polyacrylate





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APH-ATT-085 (12/2016)

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