

3M™ Optically Clear Adhesive 8171 and 8172

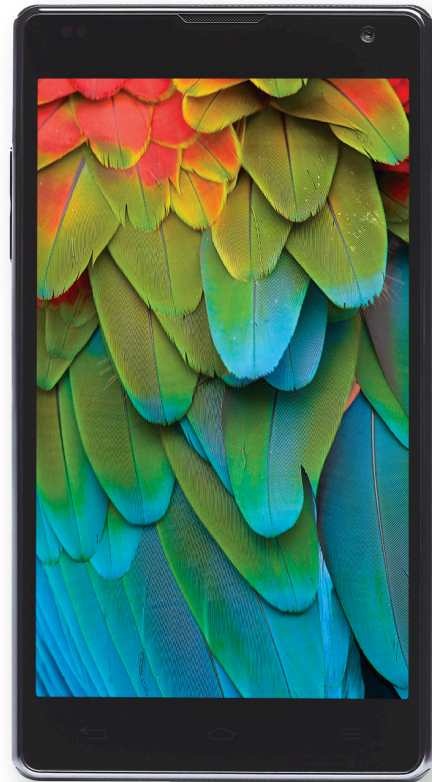
Product Description

3M™ Optically Clear Adhesive 8171 is an optically clear laminating adhesive for bonding smooth, transparent substrates. It is 25 microns thick.

3M™ Optically Clear Adhesive 8172 is an optically clear laminating adhesive for bonding smooth or textured transparent substrates. It is 50 microns thick.

Construction

Product	8171	8172
Adhesive Type:	Acrylic	Acrylic
Adhesive Carrier:	None	None
Approximate Thickness:		
Release Liner:	50 um (2.0 mils) Polyester	50 um (2.0 mils) Polyester
Adhesive:	25 um (1 mils)	50 microns (2.0 mils)
Release Liner:	50 um (2.0 mils) Polyester	50 microns (2.0 mils) Polyester



Refractive Index:

(± 0.0005 measured for Sodium D line @ 25°C)

3M™ Optically Clear Adhesives	
8171	8172
1.475	1.4741

Haze: Measured according to ASTM D1003-92

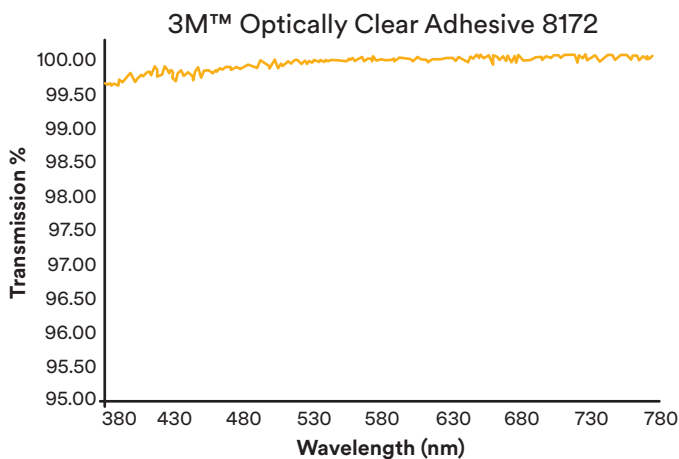
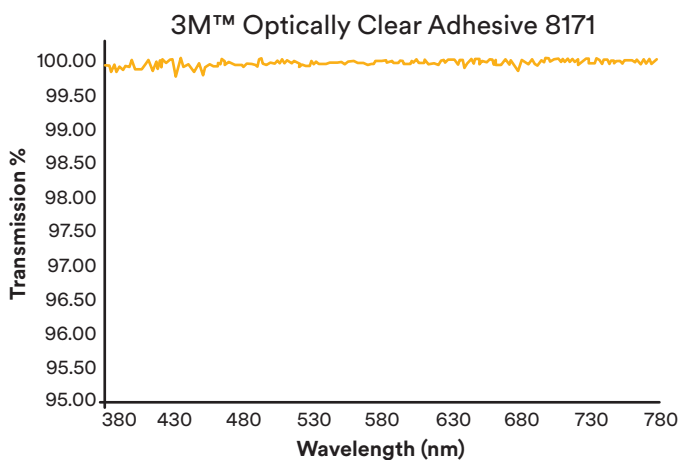
3M OCA 8171 Haze 0.6%

3M OCA 8172 Haze 0.8%

Transmission:

ASTM E903, D1003, and E284

Reflective-Corrected Total Luminous Transmission vs. Wavelength



Peel Adhesion:

ASTM D3330, 180 degree peel, 12 in/min, 2 mil polyester to various surfaces

3M™ Optically Clear Adhesives			
	Substrate	8171	8172
20 Minute Dwell	Glass	40 oz/in (46 N/100 mm)	45 oz/in (49 N/100 mm)
	Acrylic	29 oz/in (32 N/100 mm)	32 oz/in (35 N/100 mm)
	Polycarbonate	32 oz/in (35N/100 mm)	38 oz/in (42 N/100 mm)
	Stainless Steel	33 oz/in (36 N/100 mm)	35 oz/in (39 N/100 mm)
72 Hour Dwell - RT	Glass	37 oz/in (40 N/100 mm)	43 oz/in (47 N/100 mm)
	Acrylic	35 oz/in (39 N/100 mm)	38 oz/in (42 N/100 mm)
	Polycarbonate	39 oz/in (43 N/100 mm)	44 oz/in (48 N/100 mm)
	Stainless Steel	45 oz/in (49 N/100 mm)	48 oz/in (53 N/100 mm)

Shear Adhesion:

ASTM D-3654 Procedure H

1/2" x 1" overlap, minutes to failure

	8171	8172
Heat Aged (70°C) 500 g, stainless steel	>10,000	>10,000

Color:

ASTM E1164-07/CIELAB

(BYK Gardner TCS Plus spectrophotometer, model 8870)

3M™ Optically Clear Laminating Adhesives	
8171	8172
L* = 97.10	L* = 97.08
a* = 0.04	a* = 0.05
b* = 0.17	b* = 0.22

Application Ideas

- Touchscreens for bonding film and glass laminate
- Transparent graphic overlaps
- Projection screens
- Avionics and military displays
- Optical management films for LCD

Storage

- Store in original packaging or plastic bag
- Avoid applying pressure or resting objects on the product to prevent marking, denting, or deforming the surface
- Wear gloves to prevent fingerprints or nail marks when handling
- Product needs to be unpacked and handled in a clean-room facility
- Store at room temperature conditions of $22 \pm 8^{\circ}\text{C}$ and $50 \pm 20\%$ relative humidity

Regulatory

For regulatory information about this product, please contact your 3M representative.

Technical Information

The technical information, recommendations and other statements contained in this document are based upon tests or experience that 3M believes reliable, but the accuracy or completeness of such information is not guaranteed.

Product Use

Many factors beyond 3M's control and uniquely within the user's knowledge and control can affect the use and performance of a 3M product in a particular application. Given the variety of factors that can affect the use and performance of a 3M product, user is solely responsible for user's method of application.

Warranty. Limited Remedy, and Disclaimer

Unless an additional warranty is specifically stated on the applicable 3M product packaging or product literature, 3M warrants that each 3M product meets the applicable 3M product specification at the time 3M ships the product. 3M MAKES NO OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY IMPLIED WARRANTY OR CONDITION ARISING OUT OF A COURSE OF DEALING, CUSTOM OR USAGE OF TRADE. If the 3M product does not conform to this warranty, then the sole and exclusive remedy is, at 3M's option, replacement of the 3M product or refund of the purchase price.

Limitation of Liability

Except to the extent prohibited by law, 3M will not be liable for any loss or damage arising from the 3M product, whether direct, indirect, special, incidental or consequential, regardless of the legal theory asserted.



3M Display Materials & Systems Division

3M Center, Building 235-1E-54
St. Paul, MN 55144-1000 U.S.A.

Phone 1-800-3M HELPS
Web 3M.com/displayfilms

3M is a trademark of 3M Company. Please recycle.
©3M 2016. All rights reserved. 60-5002-0730-7