



# Laminating Adhesives Data Page

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FOD # 0330

## 3M™ 467MP Roll Laminating Adhesive 468MP Roll Laminating Adhesive

### Product Construction

|       | <u>Adhesive</u>   | <u>Liner</u>  |
|-------|---|---|
| 467MP | 2.0 mils (50 microns)<br>#200MP “Hi-Performance”<br>Acrylic Adhesive  | 4.0 mils (100 microns)<br>58# Tan Polycoated<br>Kraft Paper |
| 468MP | 5.0 mils (125 microns)<br>#200MP “Hi-Performance”<br>Acrylic Adhesive | 4.0 mils (100 microns)<br>58# Tan Polycoated<br>Kraft Paper |

### Features

- High performance solvent-free acrylic adhesive for exceptional environmental resistance and enhanced bond strength.
- Superior adhesive smoothness for improved clarity and reduced telegraphing through thin plastic facestocks.
- High cohesive strength for resistance to edge lifting and slippage.
- 2.0 mil 467MP is ideal for application to relatively smooth surfaces.
- 5.0 mil 468MP is ideal for application to a variety of rough or textured surfaces.
- Moisture stable liner resists curling or wrinkling in high humidity.
- 200MP Hi-Performance adhesive is initially repositionable, then builds to high ultimate bond strength.

## Applications

- Long term bonding of nameplates and decorative trim to metal and high surface energy plastics in the automotive, appliance and electronic markets.
- Excellent adhesive for bonding metal and plastic nameplates in the aerospace, instrumentation and medical markets.
- Used for lamination to back printed polycarbonate or polyester graphic overlay materials in the automotive, electronics and membrane switch markets.
- Used for lamination of wood veneers and plastic laminates to cabinetry and furniture.
- Used in the assembly of membrane switches, including spacers for circuit separation graphic overlay for switch display and bonding the complete switch to the application surface.

## Physical Properties

(Typical values – not for specification use)

ASTM D-3330 (modified)  
 90 degree peel, 12"/min.  
 (305 mm/min) 2 mil  
 aluminum

|                                     | <b>Product</b> | <b>20 Min. Dwell</b>    |    |
|-------------------------------------|----------------|-------------------------|----|
|                                     |                | <b>Oz./In. N/100 mm</b> |    |
| - Metal (Stainless Steel)           | 467MP          | 44                      | 48 |
|                                     | 468MP          | 59                      | 64 |
| - High Surface Energy Plastic (ABS) | 467MP          | 40                      | 44 |
|                                     | 468MP          | 52                      | 57 |

3M Test (90 degree peel,  
 12"/min. 305 mm/min.)  
 2 mil aluminum to  
 various surfaces

|  | <b>Product</b>  | <b>72 Hr. Dwell</b>     |     | <b>Ultimate Bond</b>    |     |
|--|-----------------|-------------------------|-----|-------------------------|-----|
|  |                 | <b>Oz./In. N/100 mm</b> |     | <b>Oz./In. N/100 mm</b> |     |
| - Metal (Stainless Steel)                    | 467MP           | 82                      | 90  | 113                     | 124 |
|  | 468MP           | 109                     | 119 | 178                     | 194 |
| - High Surface Energy Plastic (ABS)          | 467MP           | 47                      | 51  | 43                      | 47  |
|  | 468MP           | 61                      | 67  | 58                      | 63  |
| - Low Surface Energy Plastic (Polypropylene) | Not Recommended |                         |     |                         |     |

## Environmental Performance

The properties defined are based on the attachment of impervious faceplate materials (such as aluminum) to an aluminum test surface.

|                                 |  |
|---------------------------------|--|
| Bond Build-up:                  | The bond strength of #200MP "Hi-Performance" Acrylic Adhesive increases as a function of time and temperature.   |
| Humidity Resistance:            | High humidity has a minimal effect on adhesive performance. Bond strengths are generally higher after exposure for 7 days at 90 degrees F (32 degrees C) and 90% relative humidity.  |
| U.V. Resistance:                | When properly applied, nameplates and decorative trim parts are not adversely affected by outdoor exposure.  |
| Water Resistance:               | Immersion in water has no appreciable effect on the bond strength. After 100 hours in room temperature water the bond actually shows an increase in strength.  |
| Temperature Cycling Resistance: | Bond strength generally increases after cycling four times through:<br>4 hours at 158 degrees F (70 degrees C)<br>4 hours at -20 degrees F (-29 degrees C)<br>16 hours at room temperature   |
| Chemical Resistance:            | When properly applied, nameplate and decorative trim parts will hold securely after exposure to numerous chemicals including gasoline, oil, "Freon" TF, sodium chloride solution, mild acids and alkalis.                            |
| Low Service Temp:               | -40 degrees F (-40 degrees C).   |
| Heat Resistance:                | The #200MP "Hi-Performance" adhesive is usable for short periods (minutes, hours) at temperatures up to 400 degrees F (204 degrees C) and for intermittent longer periods of time (days, weeks) up to 300 degrees F (149 degrees C). |
| Shelf Life:                     | Product retains its performance and properties for two years from date of manufacture if properly stored at room temperature conditions of 72 degrees F (22 degrees C) and 50% R.H. Storage in plastic bag is recommended.           |

## Processing

|                  |   |
|------------------|---|
| Die-cutting:     | Excellent die-cuttability. For easier processing lubricate dies with Laminoleum vanishing oil available from Metal Lubricants (708-333-8900). |
| Roll Laminating: | Excellent processability. A combination of metal and rubber rollers with moderate pressure is recommended.                                    |

## Special Considerations/Application Tips

For maximum bond strength the surface should be thoroughly cleaned and dried. Typical cleaning solvents are heptane or isopropyl alcohol. Consult solvent manufacturer's Material Safety Data Sheet for proper handling and storage instructions.

Bond strength can also be improved with firm application pressure and moderate heat causing the adhesive to develop intimate contact with the bonding surface.

Ideal adhesive application temperature range is 70 degrees F to 100 degrees F (21 degrees C to 38 degrees C). Application is not recommended if surface temperature is below 50 degrees F (10 degrees C) because the adhesive becomes too firm to adhere readily. Once properly applied, low temperature holding is satisfactory. For more specific information contact our Customer Service and Sales Support "hot line" at 1-800-223-7427.

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