# Low Fogging Adhesive Transfer Tapes

3M™ Low Fogging Adhesive Transfer Tapes 6032, 6035 and 6038 are pressure-sensitive transfer tapes which are specially formulated to be low fogging with good adhesion to many lower surface energy materials. These tapes are ideal for use in automotive interior applications.

## Technical Data

### Construction

<table>
<thead>
<tr>
<th>Product</th>
<th>Tape 6032PC</th>
<th>Tape 6035PC</th>
<th>Tape 6038PC</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Adhesive</strong></td>
<td>2.0 mils (51 microns) #300MP Acrylic Adhesive</td>
<td>5.0 mils (127 microns) #300MP Acrylic Adhesive</td>
<td>8.0 mils (203 microns) #300MP Acrylic Adhesive</td>
</tr>
<tr>
<td><strong>Liner</strong></td>
<td>4.2 mils (107 microns) 58# Polycoated Kraft Paper</td>
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</tr>
</tbody>
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<table>
<thead>
<tr>
<th>Product</th>
<th>Tape 6032PL</th>
<th>Tape 6035PL</th>
<th>Tape 6038PL</th>
</tr>
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<tbody>
<tr>
<td><strong>Adhesive</strong></td>
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<td>5.0 mils (127 microns) #300MP Acrylic Adhesive</td>
<td>8.0 mils (203 microns) #300MP Acrylic Adhesive</td>
</tr>
<tr>
<td><strong>Liner</strong></td>
<td>6.2 mils (157 microns) 86# Polycoated Kraft Paper</td>
<td>6.2 mils (157 microns) 83# Polycoated Kraft Paper</td>
<td>6.2 mils (157 microns) 86# Polycoated Kraft Paper</td>
</tr>
</tbody>
</table>

## Typical Physical Properties and Performance Characteristics

**Note:** The following technical information and data should be considered representative or typical only and should not be used for specification purposes.

<table>
<thead>
<tr>
<th>Test</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammability Test</td>
<td>(FMVSS 302/SAE J369)</td>
</tr>
<tr>
<td>Automotive Fogging Test</td>
<td>SAE J1756 @ 100°C</td>
</tr>
<tr>
<td>Adhesion</td>
<td>ASTM D-3330 (modified) 90° Peel, 12&quot;/minute (305 mm/minute), 2 mil aluminum foil to various surfaces.</td>
</tr>
</tbody>
</table>
Note: The following technical information and data should be considered representative or typical only and should not be used for specification purposes.

### Typical Physical Properties and Performance Characteristics (continued)

<table>
<thead>
<tr>
<th>Surface</th>
<th>15 Minute Dwell</th>
<th>72 Hour Dwell</th>
<th>72 Hour Dwell @ 158°F</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Oz./In. N/100 mm</td>
<td>Oz./In. N/100 mm</td>
<td>Oz./In. N/100 mm</td>
</tr>
<tr>
<td>Stainless Steel</td>
<td>65</td>
<td>80</td>
<td>102</td>
</tr>
<tr>
<td>Polycarbonate (High Surface Energy Plastic)</td>
<td>56</td>
<td>61</td>
<td>64</td>
</tr>
<tr>
<td>Polypropylene (Low Surface Energy Plastic)</td>
<td>NA</td>
<td>NA</td>
<td>51</td>
</tr>
<tr>
<td>ABS</td>
<td>NA</td>
<td>62</td>
<td>44</td>
</tr>
</tbody>
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</tr>
<tr>
<td>Stainless Steel</td>
<td>102</td>
<td>131</td>
<td>166</td>
</tr>
<tr>
<td>Polycarbonate (High Surface Energy Plastic)</td>
<td>89</td>
<td>96</td>
<td>67</td>
</tr>
<tr>
<td>Polypropylene (Low Surface Energy Plastic)</td>
<td>NA</td>
<td>NA</td>
<td>73</td>
</tr>
<tr>
<td>ABS</td>
<td>NA</td>
<td>93</td>
<td>78</td>
</tr>
</tbody>
</table>

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<tr>
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</tr>
<tr>
<td>Stainless Steel</td>
<td>165</td>
<td>210</td>
<td>247</td>
</tr>
<tr>
<td>Polycarbonate (High Surface Energy Plastic)</td>
<td>125</td>
<td>146</td>
<td>106</td>
</tr>
<tr>
<td>Polypropylene (Low Surface Energy Plastic)</td>
<td>NA</td>
<td>NA</td>
<td>96</td>
</tr>
<tr>
<td>ABS</td>
<td>NA</td>
<td>143</td>
<td>120</td>
</tr>
</tbody>
</table>

### Environmental Performance

Temperature Resistance: Short term: 250°F (121°C).

Humidity Resistance: No adverse effect on the bond after exposure to 100% relative humidity at 100°F (38°C).

U.V. Resistance: Adhesive is resistant to oxidation and ozone when exposed to air or ultraviolet light.

Bond Build-Up: The bond strength of the adhesive increases as a function of time and temperature.

Shelf Life: Product retains its performance properties for two years from date of manufacture if properly stored at room temperature conditions of 72°F (22°C) and 50% relative humidity.
Environmental Performance (continued)

Properties defined below are based on sample attachment to a stainless steel faceplate material with a 0.002 inch aluminum foil backing. Values are listed based on a 90° peel at 12 inches/minute (305 mm/minute) after a 24 hour dwell. This data is provided as a guideline for the effects on adhesion at the following conditions and should not be used for specification purposes.

<table>
<thead>
<tr>
<th>Test Condition</th>
<th>Tapes 6032PC &amp; 6032PL</th>
<th>Tapes 6035PC &amp; 6035PL</th>
<th>Tapes 6038PC &amp; 6038PL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Oz./In.</td>
<td>N/100 mm</td>
<td>Oz./In.</td>
</tr>
<tr>
<td>Unleaded Gas - 1 hr. @ R.T.</td>
<td>49</td>
<td>54</td>
<td>65</td>
</tr>
<tr>
<td>Methyl Ethyl Ketone - 1 hr. @ R.T.</td>
<td>50</td>
<td>55</td>
<td>39</td>
</tr>
<tr>
<td>Oil (10W30) - 72 hrs. @ 120°F (49°C)</td>
<td>78</td>
<td>85</td>
<td>114</td>
</tr>
<tr>
<td>Weak Acid (pH 4) - 4 hrs. @ R.T.</td>
<td>60</td>
<td>66</td>
<td>89</td>
</tr>
<tr>
<td>Weak Base (pH 10) - 4 hrs. @ R.T.</td>
<td>57</td>
<td>62</td>
<td>81</td>
</tr>
<tr>
<td>Water - 100 hrs. @ R.T.</td>
<td>76</td>
<td>83</td>
<td>134</td>
</tr>
<tr>
<td>7 days @ 90°F (32°C) and 90 R.H.</td>
<td>80</td>
<td>88</td>
<td>140</td>
</tr>
<tr>
<td>Sodium Chloride Solution (5%) - 72 hrs. @ R.T.</td>
<td>73</td>
<td>80</td>
<td>113</td>
</tr>
<tr>
<td>Ultraviolet Light - 30 days exposure</td>
<td>112</td>
<td>123</td>
<td>191</td>
</tr>
<tr>
<td>Temperature Cycling - 4 hrs. @ 158°F (70°C); 4 hrs. @ -20°F (-29°C); 16 hrs. @ R.T. - repeated three times</td>
<td>82</td>
<td>90</td>
<td>134</td>
</tr>
</tbody>
</table>

Available Sizes

1" - 3" (25.4 mm - 76.2 mm) Width: 60 yds (54.8 m) maximum roll size
3" - 5" (76.2 mm - 127 mm) Width: 180 yds (165 m) maximum roll size
5" - 60" 127 mm - 1524 mm) Width: 360 yds (329 m) maximum roll size

Standard core size = 3" (76.2 mm) diameter
Width tolerance = ±1/32" (0.79 mm)
Sizes other than above are negotiable

Application Techniques

- For maximum bond strength the surface should be thoroughly cleaned and dried. Typical cleaning solvents are heptane or isopropyl alcohol.

  Note: Follow the manufacturer’s precautions and directions for use when using solvents.

- 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°F to 100°F (21°C to 38°C). This is not recommended for application to surfaces at temperatures below 50°F (10°C) because the adhesive becomes too firm to adhere readily. Once properly applied, low temperature holding is satisfactory.
General Information

- 3M™ Low Fogging Adhesive Transfer Tapes meet OEM fogging specifications.
- Provides excellent bond to a wide variety of smooth surfaces.
- Excellent shear and peel values to both high and low energy surfaces (PP, ABS, painted metal).
- High initial tack for quick and easy assembly line application.
- High temperature resistance to withstand environmental conditions normally associated with automotive interiors.

Application Ideas

- Attaching a wide variety of vibration and sound damping materials.
- Attaching the wiring harness to the automobile headliner.
- Attaching interior panels.
- Attaching glass to rearview mirror assembly.

For Additional Information


Recognition/Certification

MSDS: 3M has not prepared an MSDS for these products which are not subject to the MSDS requirements of the Occupational Safety and Health Administration’s Hazard Communication Standard, 29 C.F.R. 1910.1200(b)(6)(v). When used under reasonable conditions or in accordance with the 3M directions for use, the products should not present a health and safety hazard. However, use or processing of the products in a manner not in accordance with the directions for use may affect their performance and present potential health and safety hazards.

TSCA: These products are defined as articles under the Toxic Substances Control Act and therefore, are exempt from inventory listing requirements.

Important Notice

3M MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. User is responsible for determining whether the 3M product is fit for a particular purpose and suitable for user's method of application. Please remember that many factors can affect the use and performance of a 3M product in a particular application. The materials to be bonded with the product, the surface preparation of those materials, the product selected for use, the conditions in which the product is used, and the time and environmental conditions in which the product is expected to perform are among the many factors that can affect the use and performance of a 3M product. Given the variety of factors that can affect the use and performance of a 3M product, some of which are uniquely within the user’s knowledge and control, it is essential that the user evaluate the 3M product to determine whether it is fit for a particular purpose and suitable for the user’s method of application.

Limitation of Remedies and Liability

If the 3M product is proved to be defective, THE EXCLUSIVE REMEDY, AT 3M’S OPTION, SHALL BE TO REFUND THE PURCHASE PRICE OF OR TO REPAIR OR REPLACE THE DEFECTIVE 3M PRODUCT. 3M shall not otherwise be liable for loss or damages, whether direct, indirect, special, incidental, or consequential, regardless of the legal theory asserted, including, but not limited to, contract, negligence, warranty, or strict liability.

This Engineered Adhesives Division product was manufactured under a 3M quality system registered to ISO 9002 standards.

Converter Markets
Engineered Adhesives Division