3M™ Charge-Collection Solar Tape 3007

Product Description
3M™ Charge-Collection Solar Tape 3007 consists of a 1-ounce tin-plated deadsoft copper foil backing and an electrically conductive pressure-sensitive adhesive. This single-coated foil tape features:

- Excellent conductivity
- Deadsoft copper with corrosion resistant tin-plating
- Excellent high-temperature adhesive shear properties
- PET release liner

3M Charge-Collection Solar Tape 3007 is available in standard and custom widths and lengths:

- Standard widths: 4 mm (0.157”), 6.35 mm (0.25”), 194 mm (7.64”)
- Standard lengths: 66 m (216’)

Please contact your local 3M Representative regarding availability of custom product sizes.

Applications
3M Charge-Collection Solar Tape 3007 is designed for use as a charge collector or bus within a thin-film solar panel. The adhesive was formulated to undergo the vacuum lamination process typically used in the manufacture of solar panels.

Typical Physical Properties
(Data not for specification purposes)

<table>
<thead>
<tr>
<th>Properties</th>
<th>Typical Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conductive Adhesive</td>
<td>0.9 mil (0.023 mm) Acrylic</td>
</tr>
<tr>
<td>Backing Thickness</td>
<td>1.4 mil (0.035 mm) Tin-Plated Copper</td>
</tr>
<tr>
<td>Total Thickness (Backing and Adhesive)</td>
<td>2.3 mil (0.058 mm)</td>
</tr>
<tr>
<td>Release Liner</td>
<td>1.3 mil (0.050 mm) 1-side si-coated PET</td>
</tr>
<tr>
<td>Color</td>
<td>Silver (tin)</td>
</tr>
<tr>
<td>Temperature Process (short term vacuum lamination)</td>
<td>320°F (160°C)</td>
</tr>
</tbody>
</table>

Adhesion Properties:

- Adhesion to Steel\(^1\) | 1.61 lb/in (0.28 N/mm)
- Liner Release | 11 g/in

Mechanical Properties:

- Breaking Strength\(^1\) | 34 lb/in (60 N/cm)

Electrical Properties:

- Electrical Resistance Through Adhesive\(^2\) | <0.002 ohm
- Flame Retardancy\(^3\) | Pass

1 Test Method ASTM D-1000
2 Mil-Std 202 Method 307 (5 psi over 1 in² surface area).
3 UL510 Flammability

This product is not on the Qualified Product Listing under the Defense Standardization Program and has not been tested for military use.

Shelf Life
To obtain best performance, use this product within 24 months from date of manufacture.

Storage Conditions
Store under normal conditions of 50°F to 80°F (10°C to 27°C) and less than 75% relative humidity in the original carton.
Technical Information: The technical information, recommendations and other statements contained in this document are based upon tests or experience that 3M believes are reliable, but the accuracy or completeness of such information is not guaranteed.

Product Use: Many factors beyond 3M’s control and uniquely within 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 evaluating the 3M product and determining whether it is fit for a particular purpose and suitable 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 where 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, including warranty, contract, negligence or strict liability.