Transfer Adhesive Tape

GA5903 / GA5905

Outline

Nitto Denko GA5903 and GA5905 are bonding materials developed using our own original adhesive manufacturing technology. These tape offer superior adhesive strength, holding property and resistance to repulsion force. The tape is ideal to adhere to plastic molding, insulation film, label film, metal plating and various types of film.

Structure

[Tape thickness (without liner)]
GA5903: 0.03mm
GA5905: 0.05mm

Features

● Provides superior bonding reliability and component bonding performance.
● Offers superior repulsion properties.
● Offer high processability.
● 6 restricted substances by RoHS are not contained.
● GA5903, GA5905 are UL approved products. [UL File No. MH13557]

Applications

● Bonding of labels and plastic insulation film to metal substrate and plastic substrate.

Size

<table>
<thead>
<tr>
<th>Products No.</th>
<th>Tape thickness [mm]</th>
<th>Width [mm]</th>
<th>Length [m]</th>
</tr>
</thead>
<tbody>
<tr>
<td>GA5903</td>
<td>0.03</td>
<td>1200</td>
<td>50</td>
</tr>
<tr>
<td>GA5905</td>
<td>0.05</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

About more details of the size, please contact our sales.

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## Properties

- 180 degree peeling adhesion for each substrate

<table>
<thead>
<tr>
<th>Substrate</th>
<th>GA5903</th>
<th>GA5905</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stainless steel plate</td>
<td>12</td>
<td>15</td>
</tr>
<tr>
<td>Aluminum plate</td>
<td>10</td>
<td>15</td>
</tr>
<tr>
<td>ABS plate</td>
<td>10</td>
<td>14</td>
</tr>
<tr>
<td>NOMEX® film</td>
<td>9</td>
<td>12</td>
</tr>
<tr>
<td>Polycarbonate plate</td>
<td>13</td>
<td>15</td>
</tr>
<tr>
<td>PET plate</td>
<td>13</td>
<td>16</td>
</tr>
</tbody>
</table>

(Unit: N/20mm)
Test piece: 20mm width
Lining material: PET#25
Application method:
- 1 pass back and forth with 2-kg roller
Application temperature: 23 degree C, 50%RH
Applying conditions: 23 degree C/50%RHx30min
Peeling speed: 300 mm/min
Peeling angle: 180 degree
Measurement temperature: 23 degree C, 50%RH

- 180 degree peeling adhesion for each temperature

<table>
<thead>
<tr>
<th>Temperature</th>
<th>GA5903</th>
<th>GA5905</th>
</tr>
</thead>
<tbody>
<tr>
<td>23 degree C</td>
<td>12</td>
<td>15</td>
</tr>
<tr>
<td>40 degree C</td>
<td>11</td>
<td>13</td>
</tr>
<tr>
<td>60 degree C</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>80 degree C</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>

(Unit: N/20mm)
Substrate: stainless plate
Test piece: 20mm width
Lining material: PET#25
Application method:
- 1 pass back and forth with 2-kg roller
Application temperature: 23 degree C/50%RH
Applying conditions:
- Measurement temperaturex30min
Peeling speed: 300 mm/min
Peeling angle: 180 degree
Measurement temperature: 23, 40, 60, 80 degree C

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● Holding power

<table>
<thead>
<tr>
<th>Temperature</th>
<th>GA5903</th>
<th>GA5905</th>
</tr>
</thead>
<tbody>
<tr>
<td>40 degree C</td>
<td>0.2</td>
<td>0.2</td>
</tr>
<tr>
<td>60 degree C</td>
<td>0.2</td>
<td>0.3</td>
</tr>
<tr>
<td>80 degree C</td>
<td>0.2</td>
<td>0.3</td>
</tr>
</tbody>
</table>

(Unit: mm/hr)
Substrate: Phenol resin
Application time: 23 degree C/50%RH
Applying conditions:
  Measurement Temp x 30min
Measurement temperature: 40, 60, 80 degree C
Laminated area: 20mm x 10mm
Load: 4.9N (500g)
Loading time: 1 hour

● Resistance to repulsion with plastic films

<table>
<thead>
<tr>
<th>Substrate and Backing film</th>
<th>GA5903</th>
<th>GA5905</th>
</tr>
</thead>
<tbody>
<tr>
<td>PET film 0.05mm (^1)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Polycarbonate film (PC) 0.05mm (^1)</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

(Unit: mm)
Sample width: 10mm
Application area: 10mm x 10mm
Substrate: same film with backing
Application:
  Applied by 1 pass back and forth with 2kg roller at 23 degree C/50%RH. The sample is kept for 24 hours at 23 degree C/50%RH.
Measurement:
  Lifting distance between AL and the substrate is measured after 65degreeC95%RH x 3days.
Precautions when using

● Remove all oil, moisture and dirt from the surface of the substrate before applying.
● Since the tape is pressure-sensitive adhesive, be sure to apply enough pressure with a roller or press when applying. Otherwise it might be affected to its properties and appearance.
● The tape may not adhere well to extremely uneven or distorted surfaces. Enough Leveling off the surface should be required before applying.
● It takes certain time to get full adhesive strength after applying, keep away the tape from any stress for a several hours after applying.

Precautions when storing

● Please be sure to keep the tape in its box when not using.
● Please keep in a cool and dark place away from direct sunlight.

Safety precautions

⚠️ WARNING

● Make sure the product is suitable for the application (objective and conditions) before attempting to use. The tape may come off depending on the substrate to which it is applied or conditions under which it is applied.
● Use in combination with another method of joining if there is possibility of an accident.

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