

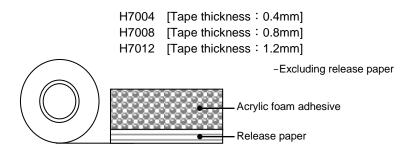
### Superior adhesive performance acrylic foam Double-coated adhesive tape **HYPERJOINT®**

# H7004, H7008, H7012

### **Outline**

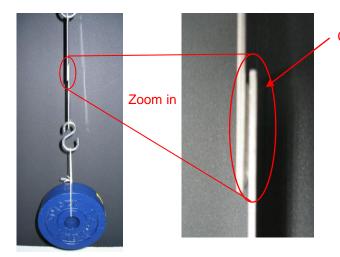
HYPERJOINT® H7004, H7008 and H7012 are double-coated adhesive tapes that have superior adhesion, heat resistance and durability using by flexible acrylic foam.

### **Structure**



#### **Features**

- Superior adhesion, heat resistance and water resistance.
- Stable adhesion with following substrate move using by flexible acrylic foam.
- 10 restricted substances by RoHS are not contained.



Contact area: No Separation, No shear

The tape shows excellent bonding performance to substrate like this heavy load because of its high shear strength and holding power.

 $H7004,\ H7008,\ H7012\ 10-P-0264\_E\ (1/5)$  Notes: This data represents examples of measured values, and not guaranteed values. They do not guarantee compatibility with the applications described in these documents. Please confirm compatibility with your application prior to use. We retain all rights, including copyrights, for the contents of these documents. Copying, reprinting and use for purposes other than originally intended are strictly prohibited without our prior expressed permission. Contact details are provided at the end of this document. Please do not hesitate to contact us for any inquiry.



### **Applications**

- Fixing of name plate, sign board and fittings for housing.
- Fixing of exterior components for automobile.
- Fixing of home electronics parts.
- Fixing of metal name plate.

### Standards Sizes

| Product numbers | Tape thickness [mm] | Width [mm] | Standard Length [M] |
|-----------------|---------------------|------------|---------------------|
| H7004           | 0.4                 | 5 ~ 1,150  | 20                  |
| H7008           | 0.8                 | 5 ~ 1,150  | 20                  |
| H7012           | 1.2                 | 5 ~ 1,150  | 20                  |

For more information, please contact us.

### **Properties**

90 degree peeling adhesion by substrates

| Substrates            | H7004 | H7008 | H7012 |
|-----------------------|-------|-------|-------|
| SECC steel plate      | 82    | 94    | 97    |
| Stainless steel plate | 60    | 66    | 82    |
| Aluminum plate        | 55    | 64    | 55    |
| Acrylic plate         | 43    | 47    | 53    |
| ABS plate             | 33    | 43    | 45    |
| Polycarbonate plate   | 37    | 40    | 44    |
| Polystyrene plate     | 26    | 31    | 33    |

(Unit: N/25mm)

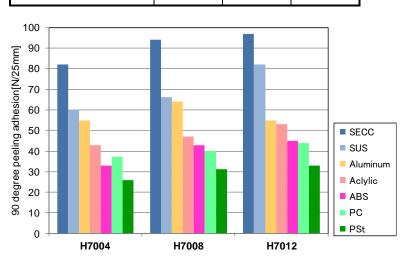
Backing: Aluminum foil (0.13 mm thickness)

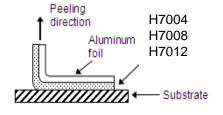
Application condition: 1 pass back and forth with 5kg roller

Bonding temperature: 23degreeC/50%RH Curing condition: 23degreeC/50%RH x 30 min

Peeling speed: 300 mm/min. Peeling angle: 90 degree

Measurement condition: 23degree C/50%RH





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### 90 degree peeling adhesion by temperatures

|                                     | surement<br>peratures | H7004 | H7008 | H7012 |
|-------------------------------------|-----------------------|-------|-------|-------|
|                                     | 0 degree C.           | 128   | 142   | 148   |
| 90 degree Peeling adhesion [N/25mm] | 23 degree C.          | 60    | 66    | 82    |
|                                     | 40 degree C.          | 55    | 60    | 66    |
|                                     | 80 degree C.          | 42    | 57    | 64    |
|                                     | 100 degree C.         | 39    | 47    | 54    |

(Unit: N/25mm)

Substrate: Stainless steel plate

Backing: Aluminum foil (0.13 mm thickness)

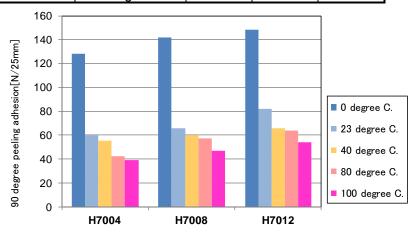
Application condition: 1 pass back and forth with 5kg roller

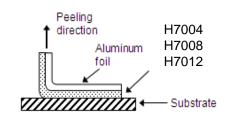
Bonding temperature: 23degreeC/50%RH Curing condition: 23degreeC/50%RH x 30 min

And measurement temperature x 30 min

Peeling speed: 300mm/min. Peeling angle: 90 degree

Measurement condition: 0,23,40,80,100 degreeC





Shear strength by temperatures

|                      | surement<br>peratures | H7004 | H7008 | H7012 |
|----------------------|-----------------------|-------|-------|-------|
|                      | 0 degree C.           | 264   | 215   | 187   |
| Shear                | 23 degree C.          | 132   | 102   | 82    |
| strength             | 40 degree C.          | 108   | 90    | 77    |
| [N/cm <sup>2</sup> ] | 80 degree C.          | 91    | 85    | 75    |
|                      | 100 degree C.         | 76    | 68    | 69    |

(Unit: N/cm2)

Substrate: Stainless steel plate Tape area: 25mm x 25mm

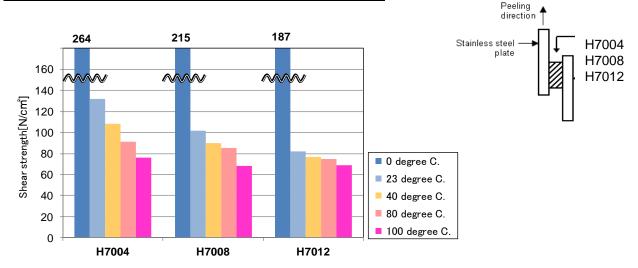
Application condition: 1 pass back and forth with 5kg roller

Bonding temperature: 23degreeC/50%RH

Curing condition: measurement temperature x 30 min

Peeling speed: 50mm/min.

Measurement condition: 0,23,40,80,100 degreeC



 $H7004,\ H7008,\ H7012\ 10-P-0264\_E\ (3/5)$  Notes: This data represents examples of measured values, and not guaranteed values. They do not guarantee compatibility with the applications described in these documents. Please confirm compatibility with your application prior to use. We retain all rights, including copyrights, for the contents of these documents. Copying, reprinting and use for purposes other than originally intended are strictly prohibited without our prior expressed permission. Contact details are provided at the end of this document. Please do not hesitate to contact us for any inquiry.

## **Nitto Denko Corporation**



### Product Data Sheet

#### Durability (Shear strength)

| Evaluation                                      | H7004 | H7008 | H7012 |
|---|-------|-------|-------|
| Initial (23°C x 30minutes)                      | 132   | 102   | 82    |
| Ordinary state<br>(23°C x 24hours)              | 191   | 134   | 113   |
| Heat resistance<br>(80°Cx 250hours)             | 260   | 207   | 175   |
| Water resistance<br>(40°C hot water x 250hours) | 135   | 98    | 76    |
| Thermal cycle resistance*                       | 111   | 88    | 78    |

※Condition of thermal cycle

10 cycles  $80^{\circ}\text{C} \times 16\text{hours} \Rightarrow 23^{\circ}\text{C} \times \text{an hour} \Rightarrow 50^{\circ}\text{C} \times 98\%\text{RH} \times 24\text{hours}$ 

 $\Rightarrow$  23°C × an hour  $\Rightarrow$  -30°C × 8hours  $\Rightarrow$  23°C × an hour

### (Unit: N/cm<sup>2</sup>)

Substrate: Stainless steel plate Tape area: 25mm x 25mm

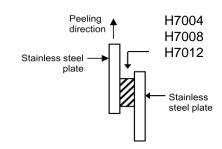
Application condition: 1 pass back and forth with 5kg roller

Bonding temperature: 23degreeC/50%RH Curing condition: 23degreeC/50%RH x 24hours

And each condition(See the left table) (Initial: 23degreeC/50%RH x 30min)

Peeling speed: 50mm/min.

Measurement condition: 23degree C/50%RH



### Holding power(Amount of transformation)

| Measurement temperature | H7004 | H7008 | H7012 |
|-------------------------|-------|-------|-------|
| 80 degree C.            | 0.2   | 0.3   | 0.5   |

(Unit: mm)

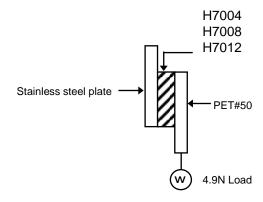
Substrate: Stainless steel plate Backing: Polyester film #50 Tape area: 10mm x 20mm

Application condition: 1 pass back and forth with 5kg roller

Bonding temperature: 23degreeC/50%RH Curing condition: 23degreeC/50%RH x 24hours

Load: 4.9N

Measurement temperature: 80 degree C. Measured amount of transformation after 2hours



 $H7004,\ H7008,\ H7012\ 10-P-0264\_E\ (4/5)$  Notes: This data represents examples of measured values, and not guaranteed values. They do not guarantee compatibility with the applications described in these documents. Please confirm compatibility with your application prior to use. We retain all rights, including copyrights, for the contents of these documents. Copying, reprinting and use for purposes other than originally intended are strictly prohibited without our prior expressed permission. Contact details are provided at the end of this document. Please do not hesitate to contact us for any inquiry.



### **Precautions**

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#### Safety Precautions

- 1. Before using the tape, thoroughly check that if the tape is suit your intended use (purpose and conditions). If you put the tape under the improper application condition, it is likely cause severe troubles such as applied components falling due to external stress or vibration, exterior parts falling while moving, etc. Please use the tape adheres rigidly to the following 'Cares When Using or Storing'.
- 2. Hands, fingers or any other parts may be injured by the edges of the tape, its separator (liner film), the core, etc. Take proper precautions such as wearing protective gloves or its substitution when handling.

#### •Cares When Using or Storing

1. The tape is hardly applied to exterior parts such as rubber, polypropylene, polyethylene and vinyl chloride. It is advisable to check in advance the applicability.

(We suggest that those substrates should be treated with primer.)

In addition, the adhesion property might become lower as time passed depending on the exterior parts that include plasticizer a lot. Please due confirm in advance.

- 2. Remove oil, moisture and dirt from the adherent surface to which the tape is applied. If the dirt is strong, remove with some solvent.
- 3. Use the tape preferably on flat surface. Exterior parts may fall if these are applied on uneven, rough or curved surface since bonding area is not enough.
- 4. Initial adhesive strength might be lower since the tape becomes hard at low temperature environment such as winter season. For such cases, we recommend that the tape and your substrate are warmed at around 15 degree C to 40 degree C before application.

Please also pay attention to a type of substrate and an environment that condensation occurs.

- 5. The adhesive of the tape is pressure-sensitive adhesive. Apply an adequate pressure after the tape is applied.
- 6. Do not redo attaching the tape. Once it is removed, the adherent surface becomes rough and original adhesive strength may not be obtained.
- 7. The tape must be left untouched for several hours after it is applied until it is securely bonded. Please avoid putting and using the tape with high power.
- 8. Store the tape indoors as delivery-packed state at normal temperature and normal humidity so that it is not affected by direct sunlight.
- 9. Be sure to keep the tape in its box when not using.

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H7004, H7008, H7012 10-P-0264 E (5/5)

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