



# 8471

## Product Information

30µm amber reactive structural bonding film

### Product Description

tesa HAF® 8471 is a reactive heat activated structural bonding film based on phenolic resin and nitrile rubber. This amber double sided tape has no backing. It is protected by a strong paper liner.

It is activated by heat and pressure applied during the assembly process.

### Product Features

- Extremely high performance, even on small bonding areas and thin design gaps
- Reliable and ageing-resistant bonds
- Very low oozing ratio
- Suitable for long-term applications that are exposed to heavy stress
- Free of halogen and compliant with current ROHS standards

### Application Fields

tesa HAF® 8471 is especially recommended for bonding of metal components to metal surfaces or heat resistant plastics, e.g. SUS or AL to PI, PMMA or ABS:

- Constructive bonding inside electronic devices
- FPC bonding
- Button fixation
- Camera lens and bezel mounting
- Bonding of decorative metal components

### Technical Information (average values)

The values in this section should be considered representative or typical only and should not be used for specification purposes.

### Product Construction

- |                    |                                    |                   |       |
|--------------------|------------------------------------|-------------------|-------|
| • Backing          | none                               | • Total thickness | 30 µm |
| • Type of adhesive | nitrile rubber /<br>phenolic resin | • Color           | amber |
| • Type of liner    | glassine                           |                   |       |

### Properties/Performance Values

- |                    |                     |
|--------------------|---------------------|
| • Bonding strength | 7 N/mm <sup>2</sup> |
|--------------------|---------------------|

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### Additional Information

Technical recommendations:

tesa HAF® is not self adhesive. It is activated by heat and pressure over a certain interval. The following values are recommendations for bond line parameters to start with.

#### 1. Pre-lamination:

During pre-lamination, the adhesive tape is laminated onto the first substrate. This step does not affect the shelf life time of the adhesive tape. Pre-laminated components can be stored over the same period of time as the adhesive tape.

setting:

- Temperature<sup>1</sup> 95-120 °C
- Pressure<sup>2</sup> 2-6 bar
- Time 3-10 s

#### 2. Bonding:

Remove the liner from tape after pre-lamination step. Place the pre-laminated part onto the second substrate. Apply sufficient temperature while applying pressure for the bonding time to reach sufficient bonding strength.

setting:

- Temperature<sup>1</sup> 120-250 °C
- Pressure<sup>2</sup> 5-30 bar
- Time 5-180 s

Temperature, pressure and time will depend upon the type and thickness of the substrates. Generally, thicker substrates or lower bonding temperatures will require longer bonding times. To achieve optimum performance a cooling step (while applying pressure) directly after the bonding step is recommended.

<sup>1</sup> 'Pre-lamination' and 'Bonding' temperature refer to the data that is measured in the bond line.

<sup>2</sup> 'Pre-lamination' and 'Bonding' pressure refer to the force that is transformed from jig surface directly to the bonding area.

Bonding strength values were obtained under standard laboratory conditions. (Material: etched aluminum test specimen / bonding conditions: temperature = 180 °C; pressure = 10 bar; time = 7 sec).

To reach maximum bonding strength surfaces should be clean and dry. Storage conditions according to tesa HAF® shelf life concept.



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