

# 9405

## Product Information



Double-sided reactive heat activated film

### Product Description

tesa HAF® 9405 is a reactive heat activated film based on phenolic resin and nitrile rubber. This amber double sided tape has no backing. It is protected by a strong paper liner and can easily be slit and die cut.

At room temperature tesa HAF® 9405 is not tacky. It is activated by heat and starts to become tacky at 90°C for pre-lamination. In a second application step heat and pressure is applied over a certain period of time.

After curing tesa HAF® 9405 reaches:

- \*Very high bonding strength
- \*High temperature resistance of up to 350°C
- \*Excellent chemical resistance
- \*Resistance against oil and solvents
- \*Bonds remain flexible and elastic

### Product Features

- Very high bonding strength
- High temperature resistance
- Excellent chemical resistance
- Resistance against oil and solvents
- Bonds remain flexible and elastic

### Application Fields

It is suitable for bonding of all thermal resistant materials such as metal, glass, plastic, wood and textiles.

- \*Friction linings for clutch discs
- \*Friction linings for synchronizer rings
- \*Brake shims

### Technical Information (average values)

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

For latest information on this product please visit <http://l.tesa.com/?ip=09405>



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## Product Information

### 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 (dynamic shear) | 12 N/mm <sup>2</sup> |
|------------------------------------|----------------------|

### Additional Information

Processing:

#### 1. Pre-lamination:

tesa HAF® 9405 is laminated to the first substrate before curing. For this process we recommend a temperature between 90°C and 140°C.

#### 2. Bonding:

The bonding conditions temperature, pressure and time depend on the application. Following parameters can be regarded as a guideline:

Friction linings for clutch discs:

\*Temperature: 180 – 230°C

\*Pressure: > 6 bar

\*Time: 3 min

#### 3. Tempering (optional)

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### Additional Information

To reach the maximum bonding strength the bonded parts can be tempered at 180 - 230°C for 30 - 60 min without pressure.

Bonding strength values were obtained under standard laboratory conditions. Value is guaranteed clearance limit checked with each production batch (Material: Etched aluminium test specimen / Bonding conditions: Temp. = 120°C; p = 10 bar; t = 8 min)

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

### Disclaimer

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