



# tesa HAF® 9402

## Product Information



125 µm amber reactive structural bonding film

## Product Description

tesa HAF® 9402 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 and can easily be slit and die cut.

At room temperature tesa HAF® 9402 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.

## 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.

## Product Construction

- |                    |                                 |                   |        |
|--------------------|---------------------------------|-------------------|--------|
| • Backing          | none                            | • Total thickness | 125 µm |
| • Type of adhesive | nitrile rubber / phenolic resin | • Color           | amber  |
| • Type of liner    | glassine                        |                   |        |

## Properties/Performance Values

- |                                    |                      |                               |                      |
|------------------------------------|----------------------|-------------------------------|----------------------|
| • Bonding strength (dynamic shear) | 12 N/mm <sup>2</sup> | • Bonding strength (push-out) | 12 N/mm <sup>2</sup> |
|------------------------------------|----------------------|-------------------------------|----------------------|

## Additional Information

Processing:

For latest information on this product please visit <http://l.tesa.com/?ip=09402>



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### Additional Information

#### 1. Pre-lamination:

tesa HAF® 9402 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: 3–30 min

#### 3. Tempering (optional)

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: temperature = 120 °C; pressure = 10 bar; time = 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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