



tesa HAF® 9401

Product Information



Double-sided reactive heat activated film

Product Description

tesa HAF® 9401 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® 9401 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® 9401 reaches:

- *Very high bonding strength
- *High temperature resistance
- *Resistance against oil and solvents
- *Excellent chemical resistance
- *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

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 | 200 µm |
| • Type of adhesive | nitrile rubber / phenolic resin | • Color | amber |
| • Type of liner | glassine | | |



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Properties/Performance Values

- Bonding strength (dynamic shear) 12 N/mm²
- Bonding strength (push-out) 12 N/mm²

Additional Information

Processing:

1. Pre-lamination:

tesa HAF® 9401 is laminated to the first substrate. For this process we recommend a temperature between 120 °C and 140 °C and a slight pressure of 0.5 - 2.5 bar for 3 - 10 sec.

2. Bonding:

The liner is removed from the tape after pre-lamination. The bonding conditions depend on the application. Following parameters can be regarded as a guideline:

*Temperature: 180 – 230 °C

*Pressure: > 8 bar

*Time: 3 min – 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: 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.



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