

## tesa HAF® 8410

### 60µm amber reactive HAF mounting tape

tesa HAF® 8410 is a heat activated double-sided amber adhesive film based on reactive phenolic resin and nitrile rubber.

#### Special Features:

- Reliable chip module bonding
- Suitable for PVC, ABS, PET, and PC cards
- Good workability on all common implanting lines
- Outstanding ageing resistance
- Lifelong flexibility due to high rubber content

## Main Application

tesa HAF® 8410 is especially designed for the embedding of chip-modules into smart cards. It is also suitable for bonding of all thermal resistant materials such as metal, glass, plastic, wood and textiles e.g. friction liners for clutches).

## Technical Data

▪ Backing material	none	▪ Bonding strength	12 N/mm <sup>2</sup>
▪ Color	amber	▪ Shelf life time < 5°C	18 months
▪ Total thickness	60 µm	▪ Shelf life time < 15°C	15 months
▪ Type of adhesive	nitrile rubber / phenolic resin	▪ Shelf life time < 25°C	12 months
▪ Type of liner	glassine		

For latest information on this product please visit <http://l.tesa.com/?ip=08410>

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### Additional Information

Technical recommendations for Smart Card applications:

tesa HAF® 8410 is not self adhesive. It is activated by heat and pressure over a certain interval. The following values are recommendations for machine parameters to start with. Please note that optimum parameters strongly depend on the type of machine, particular materials for card bodies and chip modules as well as customer requirements.

#### 1. Pre-lamination:

During pre-lamination, the adhesive tape is laminated onto the module belt. The pre-lamination step does not affect the shelf life time of the adhesive tape. Pre-laminated belts can be stored over the same period of time as the adhesive tape.

Machine setting:

- Temperature 120 – 140 °C
- Pressure 2 – 3 bar
- Time 2.5 m/min

#### 2. Module embedding:

During module embedding, the pre-laminated modules are cut from the module belt, positioned into the card cavity and permanently bonded to the card body by heat and pressure. Depending on the type of implanting line, single-step or multiple-step process are possible. Today, most implanting machines have multiple heat press steps.

Single-step process - machine setting:

- Temperature<sup>1</sup> 180 – 200 °C
- Pressure 65 – 75 N/module
- Time 1.5 s

Multiple-step process - machine setting:

- Temperature<sup>1</sup> 180 – 200 °C
- Pressure 65 – 75 N/module
- Time 2 x 0.7 s / 3 x 0.5 s

<sup>1</sup> Temperature measured inside the heating stamp. Different temperature settings recommended for different card materials:

PVC and ABS: 180 – 190 °C

PET and PC: 190 – 200 °C

Bonding strength values were obtained under standard laboratory conditions. Value is specification limit checked for each production batch (material: etched aluminum test specimen / bonding conditions: Temp. = 120 °C; pressure = 10 bar; time = 8 min).

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

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