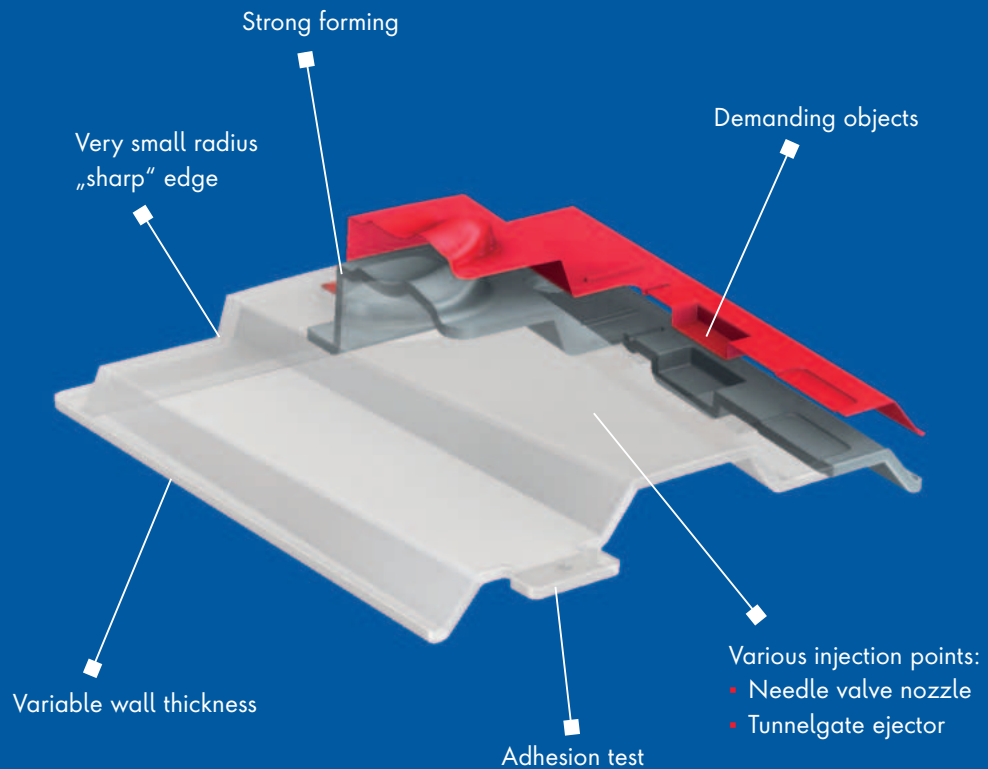


# CHARACTERISTICS FIM DEMO PART.



## INFORMATION FIM DEMO PART.



**Marabu**  
INKS AND COATINGS  
SCREEN · DIGITAL · PAD



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**Marabu**

# MANUFACTURING PROCESS FIM DEMO PART.

The FIM Demo Part from Marabu is manufactured under production conditions in several steps: Printing, drying, molding and back-injection. It is designed to test the ink for maximum resistance and formability. The entire manufacturing process takes place in our in-house printing center and FIM technical center.

## PRINTING

- Film: Makrofol DE 1-4, 250 µm
- Printing machine: ¾ Thieme 3010L

## FORMING

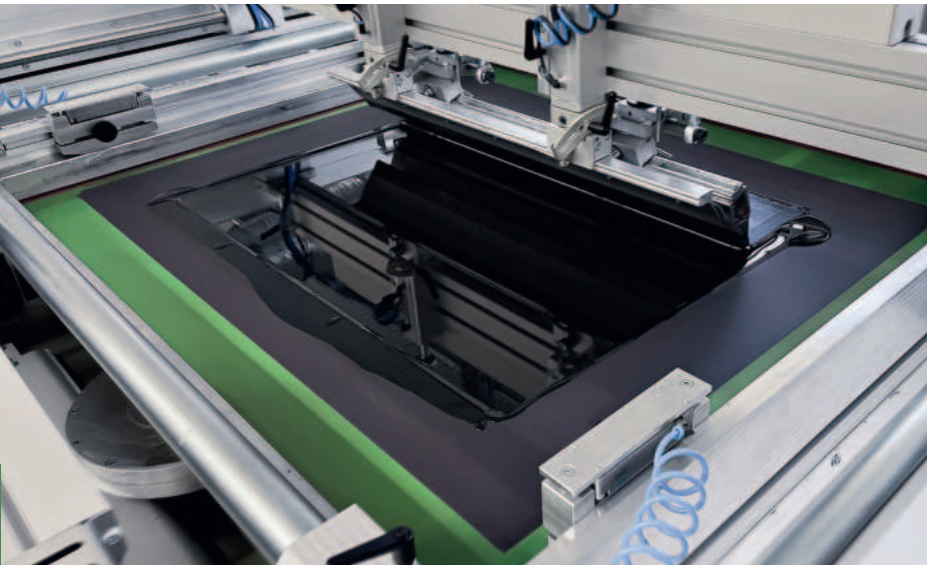
- Film: Printed Makrofol
- Tool heater: 115°C (239°F)
- Pressure: 100 bar

## DRYING

- Tunnel dryer Natgraph Model110: 2x80°C (176°F), IR 50%
- Final oven drying: 3h/80°C (176°F)

## BACK-INJECTION

- Moulding substrate: Makrolon 2207
- Wall thickness: 3,75 mm
- Mould surface spot cooling: 38°C (100°F)
- Injection speed: 15 cm³/s
- Nozzle melt temperature: 300°C (572°F)



## MARA® Mold MPX



The new MaraMold MPX was developed specifically for Film Insert Molding (FIM) applications on PC films, back injected with PC or PC/ABS. It is characterized by particularly good adhesion values in combination with a very flexible ink film and outstanding washout resistance. With this two-component ink system, no additional adhesive layer (tie-coat) is necessary to achieve a high bonding strength to the resin, thus potentially will result in reducing the number of ink layers.

## ★ YOUR ADVANTAGES

- Very good cohesion and bonding strength of film/ink/molding resin
- Flexibility of the ink film can be adjusted by varying the percentage of hardener
- Ink film allows very good forming and narrow curves
- Large processing window between printing and further processing
- Non conductive black fully compatible with conductive inks for IME (Inmold Electronics) applications

## MACHINE PARTNERS

Molding:  
Engel victory 180

Tool Design:  
Schoefer

Forming:  
Niebling SAMK 400

**ENGEL**

**SCHÖFER**  
a KURZ company

**niebling**