

Printing logos manually

Screen management

- Make a logo screen with a mesh **100.48, 90T or 77.55** and a tension of **16N**.
- Use a **70 or 75 shore monolayer** squeegee; when used take a new one or grind the printing angle sharp
- Put the screen with the frame on the top direction (Figure 1)
- Enamel has to be used with a viscosity of **15 to 20Pa.s**
- Off-contact is maintained between frame and glass at **2-3mm**
- Enamel is put on the screen, and **flood**, in homogeneous thickness, with the squeegee on the full design, **without pressure** to keep the off-contact between the screen and the glass while flooding (Figure 2)
- For printing, **push on squeegee** to have the screen in contact with the glass for enamel transfer (Figure 3) and pull toward the logo area with a constant speed

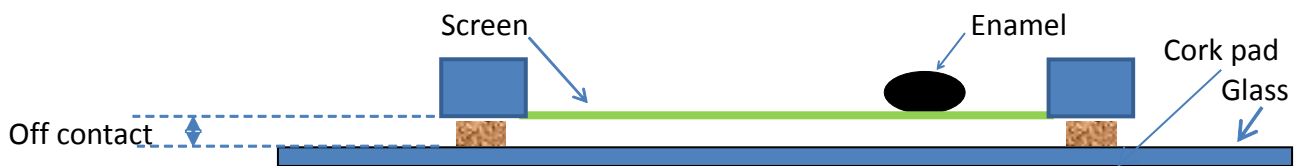


Figure 1 : preparation of screen before printing

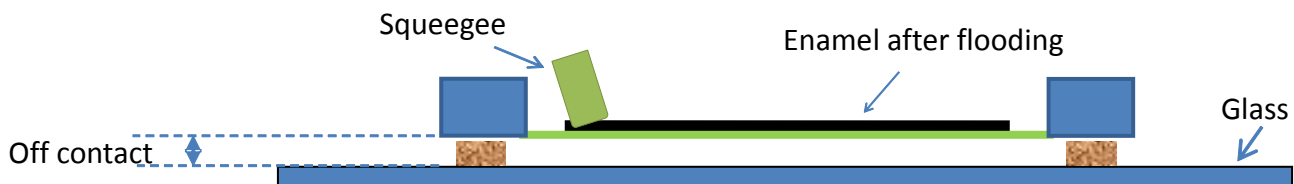


Figure 2 : Screen ready to print, after flooding

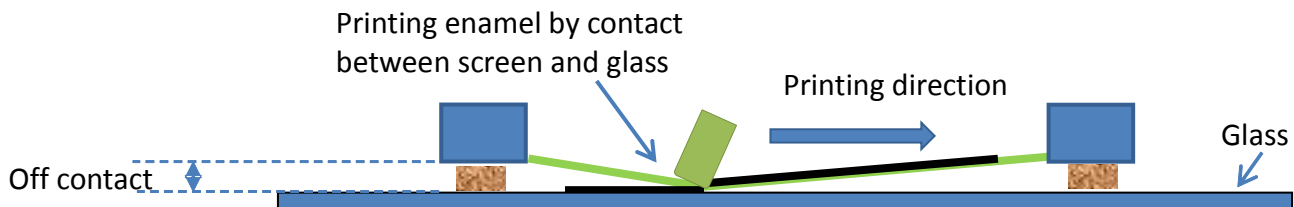


Figure 3 : printing on glass

Remarks

- When using a new or cleaned screen, always initiate the printing with few stamps on a rejected glass
- If the wet stamp is creeping or if the screen sticks on the glass; clean and dry (pressurized air) the screen. Otherwise, check the viscosity of the enamel that might be too liquid (<15Pa.s).
- If the printing room is too hot (>25°C) the enamel paste will tend to dry and become too viscous; check the viscosity and adjust with medium if necessary.
- Off contact can easily be made with cork pad at each corner of the screen (Figure 4)



Figure 4 : Example of off-contact made with cork pad.

Paste(s) preparation

Enamels to be used

- **194020** (Ferro) in medium **801026**
- **VV37/109/1RA-MED243** (DV77-537-0 (PMI) in medium **243**)
- “Ready-to-use” **DV77-795-0 RA** in medium **243 (PMI)**

Paste conditioning

- Pastes have to be at a temperature between 15°C and 25°C.
- Pastes have to be at the same temperature than the printing room (drums must be in printing room minimum 2h before use).
- Pastes have to be mixed in the drum to guarantee homogeneity before viscosity adjustment and printing (risk of sedimentation of pigments or frit in the drum).

Paste preparation

Pastes have to be prepared in dedicated drums, large enough for one production.
Use of this specific drum should avoid pollution and numerous viscosity adjustments in the same drum.

Viscosity adjustment

- The viscosity has to be adjusted with medium.
- Viscosity has to be between 15 to 20 ± 1 Pa.s
- Shelf life: **1 week**
 - Enamel must be used in the week after dilution.
 - Hand mixing in the drum during 5min at good viscosity must be made each shift.

Tools cleaning

- All the elements used for the printing enamels can be cleaned with **water**.
- All drums **have to be cleaned** after use and before storage to reduce pollution risk for the next use.

Example of viscometers:



Viscometer Haake



VT2Plus



Ford Cup (not suitable for 15Pa.s)