

**Introduction**

Overlaminating of printed images with transparent films is a necessary step to provide maximum performance of finished images: it provides the right finish, colour depth and protection.

Inkjet printed images require overlaminates for protection against UV radiation, abrasion and moisture.

Overlaminates also enhance the colours of the image and provide it with the required finish: e.g. a gloss finish for outdoor use and a matte or lustre (semi-gloss) finish to avoid unwanted light reflections when used indoors.

**Lamination**

Prior to laminating make sure that:

- the rollers of the laminator are clean and not damaged
- the rollers are parallel to each other
- the rollers are set at the correct temperature and pressure
- the material is laminated in the centre of the laminator.

To operate the laminator, the following settings are recommended:

| Avery Dennison DOL films                | Roll temperature <sup>1</sup> (°C) | Pressure (psi) | Speed (m/min) |
|---|------------------------------------|----------------|---------------|
| DOL 1400 Z Series / DOL 6460 / MPI 1440 | 20                                 | 50 - 70        | 0 - 2,5       |
| DOL 2000 Series                         | 20 - 35                            |                |               |
| DOL 3000 Series                         |                                    |                |               |
| DOL 4000 / DOL 4100 <sup>2</sup>        |                                    |                |               |
| DOL 4300                                |                                    |                |               |
| DOL 6000 / DOL 5900 / DOL 5800          |                                    |                |               |
| DOL 6040                                | 35 preferred                       |                |               |
| DOL 4400 UV <sup>3</sup>                |                                    |                |               |

<sup>1</sup> Roll closest to the laminate

<sup>2</sup> Both DOL 4000 and DOL 4100 only in conjunction with Avery Dennison Perforated Window Films

<sup>3</sup> When applied on to images printed with UV Curable ink.

Always set the lamination tension of the overlaminate and the printed substrate in such a way that they are laminated flat but without stretching. Improper tension adjustment is THE major cause for wrinkles and possible delaminating. This is caused by the tension difference of the laminate and media.

Please note that increased roller temperatures in combination with higher winding tension could lead to unwanted elongation of the film and image. Winding tension therefore should be carefully monitored and kept at an appropriate level. This is specifically critical for highly conformable laminates DOL 1460 Z, DOL 1470 Z DOL 1480 Z, DOL 6460 and MPI 1440. UV ink can have minuscule structured surface. This is a result of the ink type that has been used and/or the amount of ink deployed, and is typical for these inks. This structure can become visible after overlamination, as a result of encapsulating air in the ink structure by the laminate. This effect is known as “silvering”. Using the right laminate and recommended settings reduces or eliminates this effect.

For specific settings on the laminator, please consult the technical manual which goes with the laminator from the original supplier notice.