PRODUCT BULLETIN

USER'S INSTRUCTIONS

# CUTFLEX PLOTTER FILMS:

## (FLEX 200 / FLOCK 200 / REFLEX / GLITFLEX / COLORCUT / GLOWCUT / BLOCKCUT / BRICKCUT / SPEEDCUT / NYLCUT / METALCUT)

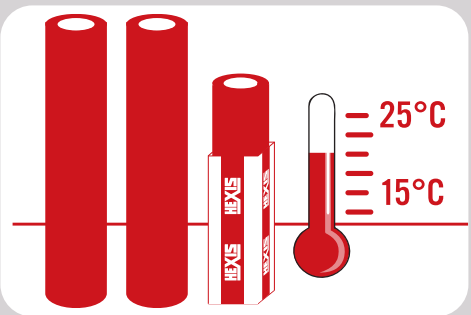
### REQUIRED EQUIPMENT

- A plotter
- A heat press
- Plotter flex or flock film
- A fabric
- A TEFLEX protection sheet, silicone paper or parchment paper (optional)

### STORE YOUR FILMS UNDER APPROPRIATE CONDITIONS

Keep the films away from any major sources of heat (radiators and heaters, direct exposure to sunlight, etc.).

Shelf life: The shelf life of this film is 1 year when stored in its original packaging at a temperature ranging from 15 °C to 25 °C (+59 °F to +77 °F) with relative humidity between 30 % and 70 %.




### FEATURES

Plotter flex or flock films for heat transfer:

| | FLEX 200 | FLOCK 200 | REFLEX | GLITFLEX | COLORCUT | GLOWCUT | BLOCKCUT | BRICKCUT | SPEEDCUT | NYLCUT | METALCUT |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Thickness (µm) | 90 | 500 | 175 | 330 | 75 | 110 | 110 | 630 | 100 | 100 | 50 |
| Film material | | | | | | | | | | | |
| Polyurethane | ✓ | ✓ | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Retro-reflective | | | ✓ | | | | | | | | |
| Polyester | | | | ✓ | | | | | | | |
| For fabrics | | | | | | | | | | | |
| Cotton | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | | ✓ |
| Polyester | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | | ✓ |
| Acrylic | | | | | | | | ✓ | ✓ | | |
| Cotton | | | | | | | | | | ✓ | |
| Polyester | | | | | | | ✓ | | | | |

For further technical information, please refer to the data sheets available on the "Professionals" pages on our website at www.hexis-graphics.com.

### SUMMARY



Application methods are based upon HEXIS' experience and are non-restrictive.
Comply with instructions to ease application of HEXIS films.

## 1. RECOMMENDATIONS:

› To protect delicate fabrics against a possible shiny appearance caused by direct contact of the fabric with the hot metal of the press, you can use one of the following:
- a TEFLON® TEFLEX protection sheet;
- silicone or parchment paper.

› Carry out different tests before any first application:
- Test the resistance of the fabric to the temperature of the press.
- Test the compatibility of the plotter flex or flock film with the fabric.

› Apply the film to previously washed fabrics.

› For optimum durability, avoid application of the plotter flex or flock film over seams.

## 2. FILM CUTTING:

The films should preferably be stored in the same environment as the cutting station.

The pressure of the blade has to be adjusted depending on the film.

It is recommended to carry out a plotting test before starting a production run.

*If the pressure is too high, the protective liner may slightly crack causing adhesive bleeding. This would make the weeding process more difficult.*

In any case, it is recommended to weed the material right after the cutting.

### 2.1. Introduction to plotting:

The smallest possible size to be cut depends on the type of flex film, condition of the blade, pressure, cutting speed and plotter. In general, an acceptable height is 10 mm (0.4 in.), with serifs of 1.5 mm (0.06 in.), at medium speed and with a blade in good shape. Smaller letters can be obtained by reducing the speed.

⚠ *For GLITFLEX, the minimum size of the cuttings must be that of a large-sized logo.*
*For BRICKCUT, the minimum size of the cuttings must be that of a medium to a large-sized logo.*

For instance, the recommended medium speed for a ROLAND® GX24 cutting plotter is 20 cm/s (7.87 in./s).

*Note: In any case, carefully read the cutting plotter's instructions and carry out a preliminary plotting trial.*

The blade must cut the flex or flock film. (FIG. 01)

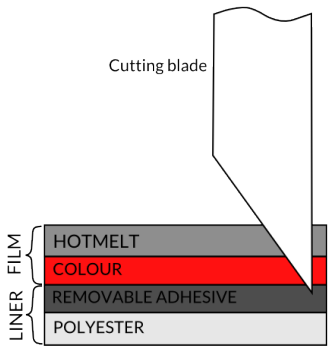


Figure 01

A blunt and worn blade will impair the quality of the cutting and will require a higher pressure. Weeding will also be more difficult.

### 2.2. Preliminary plotting test:

In order to determine the plotter settings, we advise you to carry out a preliminary test:

› Cut a square of 10 cm x 10 cm (3.94 in. x 3.94 in.).

› Weed (FIG. 02) (FIG. 03): remove any excess material.

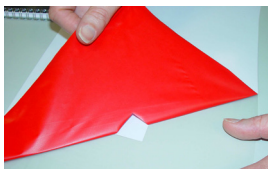


Figure 02

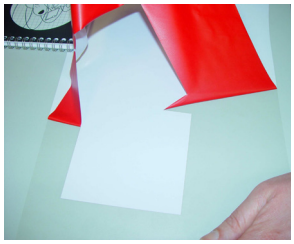


Figure 03

› Check:
- that the cut square adheres well to the liner;
- that the liner is free of any incision.

› Weeding will be successful if the plotter is properly set up (pressure, speed, shape of the blade).

### 2.3. Mirror the design before cutting and weeding:

› Mirror the design before cutting. (FIG. 04)

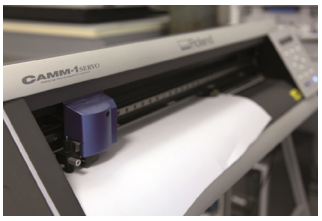


Figure 04

⚠ *For the GLITFLEX film, the cutting must be carried out with a blade in a good shape at a 45 degree angle.*
*For the FLOCK 200 film, the cutting must be carried out with a blade at a 45 degree angle.*
*For the BRICKCUT film, the cutting must be carried out in 2 passes using a blade at a 60 degree angle.*

› Weed (FIG. 05) (FIG. 06) (FIG. 07): remove any excess material.

Figure 05

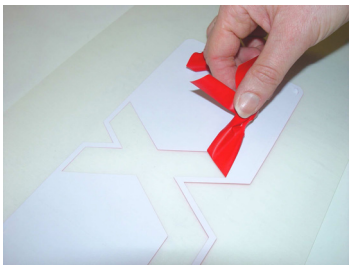


Figure 06

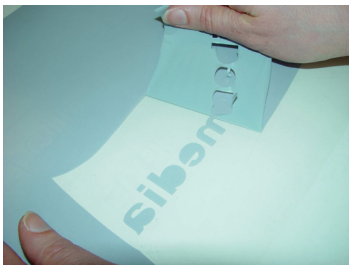


Figure 07

## 3. APPLYING THE GRAPHIC:

### 3.1. Adjusting your heat press:

(FIG. 08)

| Plotter Flex or Flock Film | Indicative press temperature | Pressure |
|---|---|---|
| FLEX 200 | 160 °C (320 °F) | medium |
| FLOCK 200 | 150 °C (302 °F) | medium |
| REFLEX | 150 °C (302 °F) | medium |
| GLITFLEX | 160 °C (320 °F) | medium |
| COLORCUT | 150 °C (302 °F) | medium |
| GLOWCUT | 150 °C (302 °F) | medium |
| BLOCKCUT | 160 °C (320 °F) | medium |
| BRICKCUT | 160 °C (320 °F) | strong |
| SPEEDCUT | 130 °C (266 °F) | medium |
| NYLCUT | 150 °C (302 °F) | low |
| METALCUT | 150 °C (302 °F) | medium |

Figure 08

### 3.2. Preheating the textile:

Purpose: to remove humidity from the fabric.

› Position the fabric on the press. (FIG. 09)

Figure 09

Figure 10

› Press for 3 seconds to preheat the fabric (5 seconds for the NYLCUT and for the GLOWCUT film). (FIG. 10)

### 3.3. Positioning the graphic:

Figure 11

› Once the fabric has cooled down to room temperature, place the lettering/graphic in the reading direction (the protective liner is on top and the polyurethane film must be in direct contact with the fabric and the hot plate of the press). (FIG. 11)

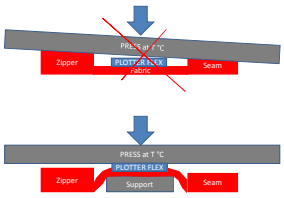



Figure 12

› Some fabrics/clothes have a non-uniform thickness (seams, rivets, buttons, etc.). Therefore they require an additional support between the fabric and the press table, which should be as large as the graphic or slightly larger, and thick enough to allow the plotter flex or flock film to fit perfectly with the hot plate during pressing. (FIG. 12)

### 3.4. Pressing:

(FIG. 13)

Figure 13

| Plotter Flex or Flock Film | Indicative press temperature WITHOUT textile protection. | Indicative press temperature WITH textile protection. |
|---|---|---|
| FLEX 200 | 160 °C (320 °F) - 20 s | 180 °C (356 °F) - 30 s |
| FLOCK 200 | 150 °C (302 °F) - 15 s | Not applicable |
| REFLEX | 150 °C (302 °F) - 12 s | Not applicable |
| GLITFLEX | 160 °C (320 °F) - 10 s | Not applicable |
| COLORCUT | 150 °C (302 °F) - 10 s | Not applicable |
| GLOWCUT | 150 °C (302 °F) - 8 s | Not applicable |
| BLOCKCUT | 160 °C (320 °F) - 20 s | 180 °C (356 °F) - 30 s |
| BRICKCUT | 160 °C (320 °F) - 25 s | Not applicable |
| SPEEDCUT | 130 °C (266 °F)- 5 s | Not applicable |
| NYLCUT | 150 °C (302 °F) - 5 s | Not applicable |
| METALCUT | 150 °C (302 °F) - 8 s | Not applicable |

### 3.5. The liner is designed to be removed hot, warm or cold:

(FIG. 14) (FIG. 15)

| Plotter Flex or Flock Film | Removal of the liner while the flex or flock film is ... |
|---|---|
| FLEX 200 | warm (between 30 °C and 60 °C (between 86 °F and 140 °F)). |
| FLOCK 200 | hot. |
| REFLEX | warm (between 30 °C and 60 °C (between 86 °F and 140 °F)). |
| GLITFLEX | hot. |
| COLORCUT | hot. |
| GLOWCUT | hot. |
| BLOCKCUT | warm (between 30 °C and 60 °C (between 86 °F and 140 °F)). |
| BRICKCUT | cold. |
| SPEEDCUT | hot. |
| NYLCUT | hot. |
| METALCUT | cold. |

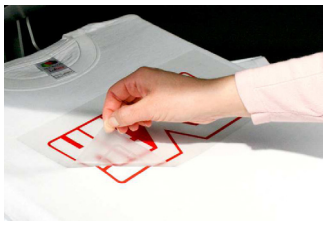


Figure 14

Figure 15

Note with respect to

-Flock 200: when removing the liner, some flock fibres may remain stuck to it, but this is absolutely normal and will not impair in any way the final quality of the product.

-GLITFLEX: when removing the liner, some sequins may remain stuck to it, but this is absolutely normal and will not impair in any way the final quality of the product.

### 3.6. In the case of an additional graphic, position it as follows:

*(for FLEX 200 only)*

(FIG. 16)

Figure 16

As a precaution, you may protect the entire graphic by means of:

- the previously removed protective liner;
- a TEFLON® TEFLEX protection sheet;
- silicone or parchment paper,

### 3.7. Pressing:

*(for FLEX 200 and BLOCKCUT only)*

(FIG. 17)

| Plotter Flex Film | Indicative press temperature WITHOUT textile protection. | Indicative press temperature WITH textile protection. |
|---|---|---|
| FLEX 200 | 160 °C (320 °F) - 20 s | 180 °C (356 °F) - 30 s |
| BLOCKCUT | 160 °C (320 °F) - 20 s | 180 °C (356 °F) - 30 s |

Figure 17

### 3.8. The liner is designed to be removed warm or cold:

*(for FLEX 200 and BLOCKCUT only)*

(FIG. 18)

› Textile temperature ranging from 30 °C to 60 °C (86 °F to 140 °F).

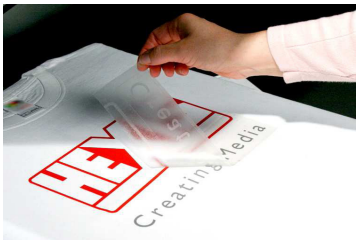


Figure 18

### 3.9. Final result:

*(only for the references indicated in the chart below)*
(FIG. 19)


Figure 19

Different outcomes and surface finishings can be obtained depending on the protection sheet used during a second passing in the heat press.

For best results and optimal adhesion:

› Place on the graphic's surface either:
- a TEFLEX protection sheet or
- parchment or silicone paper.

***Silicone paper ➔ silicone-coated side to be placed on the graphic.***

› Press everything together.

Conditions:

| Plotter Flex Film | Indicative re-press temperature |
|---|---|
| FLEX 200 | 170 °C (338 °F) - 10 s |
| COLORCUT | 150 °C (302 °F) - 5 s |
| BLOCKCUT | 170 °C (338 °F) - 10 s |
| SPEEDCUT | 130 °C (266 °F) - 5 s |
| NYLCUT | 150 °C (302 °F) - 10 s |
| METALCUT | 150 °C (302 °F) - 8 s |

The effect of this second run is to let the flex film penetrate between the textile fibres, thus improving its adherence.

## 4. MAINTENANCE OF TEXTILES WITH PLOTTER FLEX FILM:

› After pressing, wait for at least 24 hours before washing the garment.

| Plotter Flex or Flock Film | Maximum washing temperature |
|---|---|
| FLEX 200 | 40 °C (104 °F) |
| FLOCK 200 | 40 °C (104 °F) |
| REFLEX | 60 °C (140 °F) |
| GLITFLEX | 40 °C (104 °F) |
| COLORCUT | 80 °C (176 °F) or possibility of dry cleaning |
| GLOWCUT | 60 °C (140 °F) |
| BLOCKCUT | 40 °C (104 °F) |
| BRICKCUT | 60 °C (140 °F) |
| SPEEDCUT | 60 °C (140 °F) |
| NYLCUT | 30 °C (86 °F) |
| METALCUT | Hand-washing or machine-washing at 30 °C (86 °F) |

› Use laundry products without chlorine bleach.

› Tumble drying is not recommended (tumble drying of the textile is possible at a maximum temperature of 100 °C (212 °F) for the SPEEDCUT film and at low temperature for the GLOWCUT film).

› We recommend you to wash and iron your garment inside out.

*Note: for the Flock 200, REFLEX and GLITFLEX film, ironing must be carried out at low temperature, without using steam. The NYLCUT and GLOWCUT film should not be ironed.*

For further technical information, please refer to the Technical Data Sheets available for free download from our website *www.hexis-graphics.com*, on the "Professionals" pages.



www.**hexis-graphics**.com