



**WATER BASED
INKS**

EPTAINKS

WATER BASED INKS

TOPICS

WHY PRINTING WITH WATER BASED INKS

SELECTION OF THE MOST APPROPRIATE INK

PRINTABLE SUBSTRATES

POSSIBLE EFFECTS WITH WATER BASED INKS

HOW TO ACHIEVE SOME EFFECTS



WATER BASED INKS

WHY PRINTING WITH WATER BASED INKS

- Because they allow to achieve prints which comply with the most severe restrictions in terms of ecology and safety for the users
- Because they allow to achieve prints with different kinds of touch
- Because they allow to print with a simple equipment
- Because they allow to print also on substrates sensitive to high temperatures



WATER BASED INKS

SELECTION OF THE MOST APPROPRIATE INK

LIGHT SUBSTRATE

OPAQUE
SEMI-OPAQUE
TRANSPARENT

DARK SUBSTRATE

OPAQUE
BACKGROUND WHITE + SEMI-OPAQUE
BACKGROUND WHITE + TRANSPARENT
DISCHARGE PRINTING



WATER BASED INKS

PRINTABLE SUBSTRATES

- Water-based inks are suitable for a wide range of fabrics and jersey, either natural or synthetic
- Water-based inks allow to achieve good quality prints even on substrates which do not resist normal polymerization conditions



WATER BASED INKS

POSSIBLE EFFECTS WITH WATER-BASED INKS

- 01 | —○ PRINT ON LIGHT SUBSTRATES
- 02 | —○ PRINT ON DARK SUBSTRATES
Opaque inks
- 03 | —○ PRINT ON DARK SUBSTRATES
Discharge printing
- 04 | —○ PRINT ON ELASTIC SUBSTRATES
- 05 | —○ DEVORÉ PRINT
- 06 | —○ PUFF EFFECT PRINT
- 07 | —○ GLITTER PRINT
- 08 | —○ SUEDE EFFECT PRINT
- 09 | —○ MYTEX EFFECT PRINT
- 10 | —○ FLOCK EFFECT PRINT



01 PRINTING ON LIGHT SUBSTRATES

- Pay specific attention to the resistance of the substrate to be printed to the high temperatures
- Some water-based inks require high temperature to anchor to the fabric (150°C)
- These conditions, in some cases, can yellow some kinds of light fabrics
- To avoid the problem, it is enough to adequately change oven times and temperatures



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01 PRINTING ON LIGHT SUBSTRATES

BASES TO BE PIGMENTED:

COOL CURING

TEXILAC POLIMER 2000

TEXILAC APS TRASPARENTE
+ CATALIZZATORE APS N

OVEN CURING

TEXILAC APS TRASPARENTE

TEXILAC HT 2R

ECOTEX CONCENTRATO
AQUA SERIES

READY TO USE BASES:

COOL CURING

TEXILAC MONO A FREDDO



02

PRINTING ON DARK SUBSTRATES Opaque inks

- A good opacity on dark substrates can be achieved by printing opaque water-based inks
- The best results concerning opacity are achieved by using water-based ink for discharge printing



WATER BASED INKS

02

PRINTING ON DARK SUBSTRATES

Opaque inks

BASES TO BE PIGMENTED:

COOL CURING

TEXILAC MONO AF BASE

OVEN CURING

BB 95

MNK 22

TEXILAC E-LF

AQUA SERIES

READY TO USE BASES:

COOL CURING

TEXILAC MONO AF

OVEN CURING

TEXILAC PO

TEXILAC PO-E

AQUA COLOURS



03

PRINTING ON DARK SUBSTRATES

Discharge printing

- Discharge printing is selected to get small designs with well-defined outlines and which are very opaque on dark backgrounds.
To get a perfect printing it is essential to select both pigments for the backgrounds dyeing (which must be corrodible), and pigments used in the printing base (which must be fast to the corrosive agent).
- It is realized on dyed fabrics (usually in dark tones)
In the printed areas the pigment of the dyeing (background) is destroyed through specific reducing agents, thus leaving white areas which can be coloured if, in the paste, in addition to the reducing agent, there is a pigment.
- Pay specific attention when printing black or navy blue backgrounds because it is impossible to verify the register of the printed colours: every mistake will be clear only after polymerization.



03

PRINTING ON DARK SUBSTRATES

Discharge printing

BASES

TEXILAC DISCHARGE LB
TEXILAC DISCHARGE WHITE
TEXILAC DISCHARGE LF

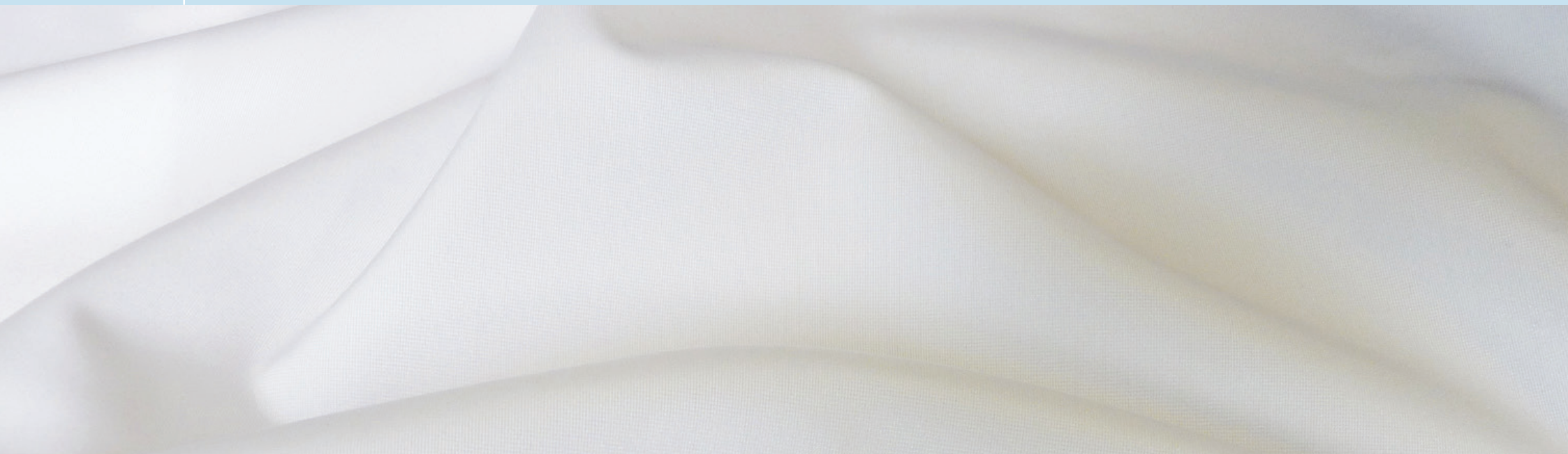
ACTIVATORS

TEXILAC CORRODENTE PM
TEXILAC CORRODENTE PM
TEXILAC CORRODENTE LF



04 PRINTING ON ELASTIC SUBSTRATES

- The elasticity of the prints can be achieved only after polymerization.
- The polymerization has two functions: let the ink anchor to the substrate and make it elastic.
- Not all water-based inks are ideal for printing elastic substrates; they must be carefully selected according to the fabric to be printed.



04 PRINTING ON ELASTIC SUBSTRATES

BASES TO BE PIGMENTED

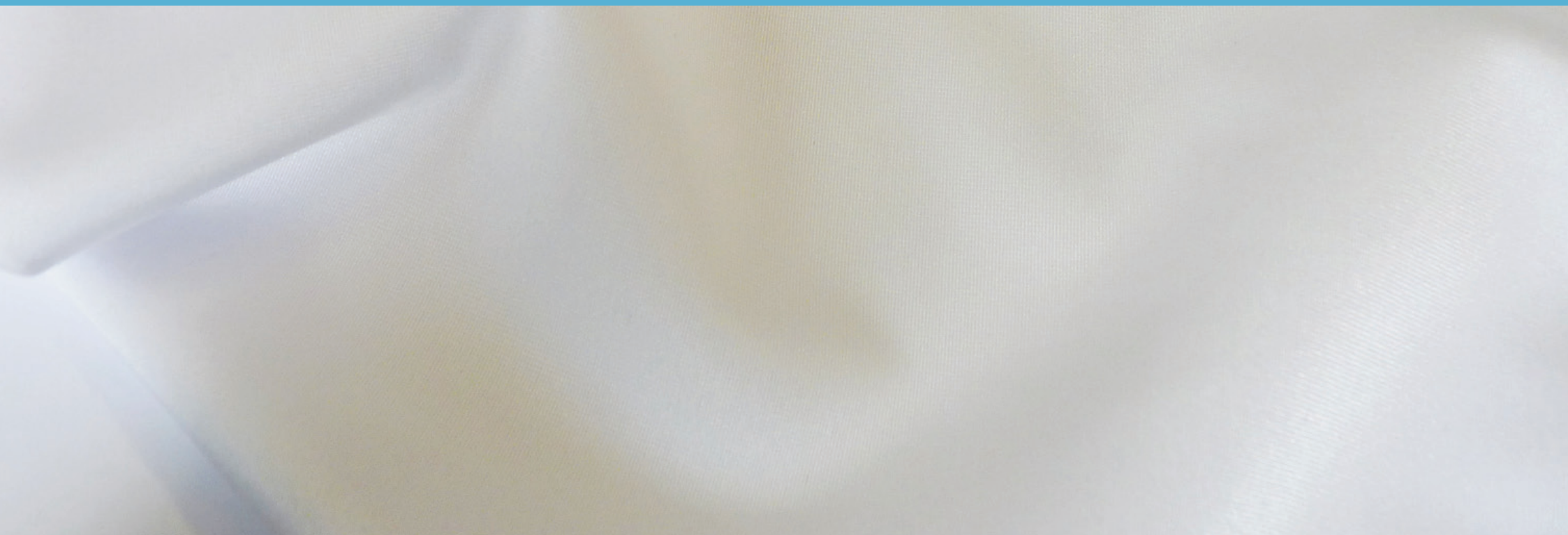
OVEN CURING

TEXILAC E-LF
AQUA SERIES

READY TO USE BASES

OVEN CURING

TEXILAC PO-E
AQUA COLOURS



05 DEVORÉ PRINTING

- The Devoré printing is realized on blended polyester/cellulose fabrics; more rarely on fabrics with other compositions like: Polyamide/Viscose – Silk/Viscose – Wool/Viscose
The ink during the polymerization at $[140-170]^{\circ}\text{C}$ burns the cellulose fibres, creating lacy designs in transparency.

- Fabrics must be specific studied for this kind of printing; indeed the fibre which is eliminated must be at least 50-60% of the fabric in order to have clear effects. The residual fibre must be both in weave and in warp, in order to achieve an adequate stability where the devoré printing has been done.



05 DEVORÉ PRINTING

BASES

TEXILAC DEVORÉ

ACTIVATORS

TEXILAC DEVORÉ ATTIVATORE



06 — PUFF EFFECT PRINTING

- You can get puff effect prints by using water-based inks
- The result can be achieved by printing specific bases which must be polymerized [160°C - 3 minutes]



WATER BASED INKS

06 PUFF EFFECT PRINTING

WATER-BASED INK

BASES

TEXILAC UP TRASPARENTE
AQUA PUFF

MAIN FEATURES

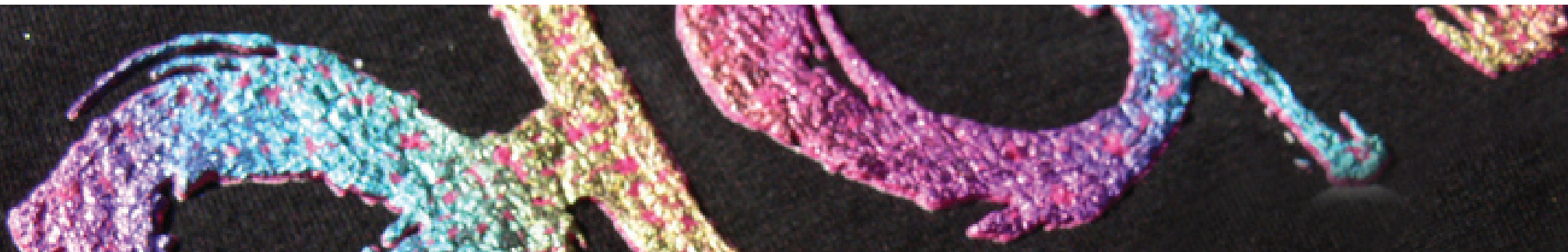
SOFT TOUCH
ECO FRIENDLY



PIGMENTS

TEXILAC COLORANTI OR ECOTEX P PIGMENTI

Texilac up trasparente and Aqua puff can be mixed with elastic inks, as Aqua trasparente and Texilac E-LF, in order to increase elasticity and fastness of the prints.



07 GLITTER PRINTING

- Glitter effects can be achieved by using transparent inks mixed or “sprinkled” with Glitter: polyester colored “powders” of different sizes (fineness).
- For the screen printing application (in mixture) the screen mesh has to be selected in relation to the glitter size.

MIXTURE



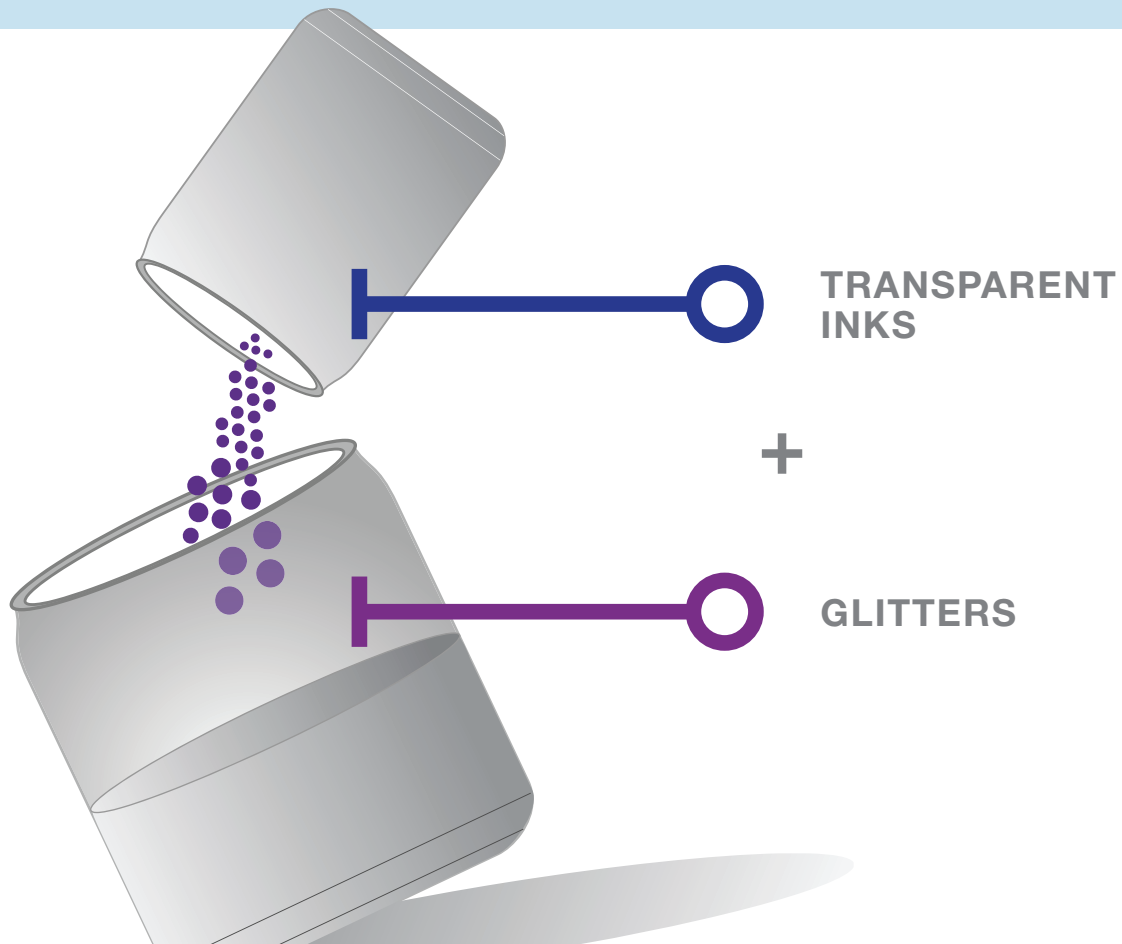
SPRINKLING



07 GLITTER PRINTING



APPLICATIVE METHOD – MIXTURE



WATER BASED INKS

07 GLITTER PRINTING



WATER-BASED INKS

INK

TEXILAC TRASPARENTE x GLITTER
AQUA BINDER PG

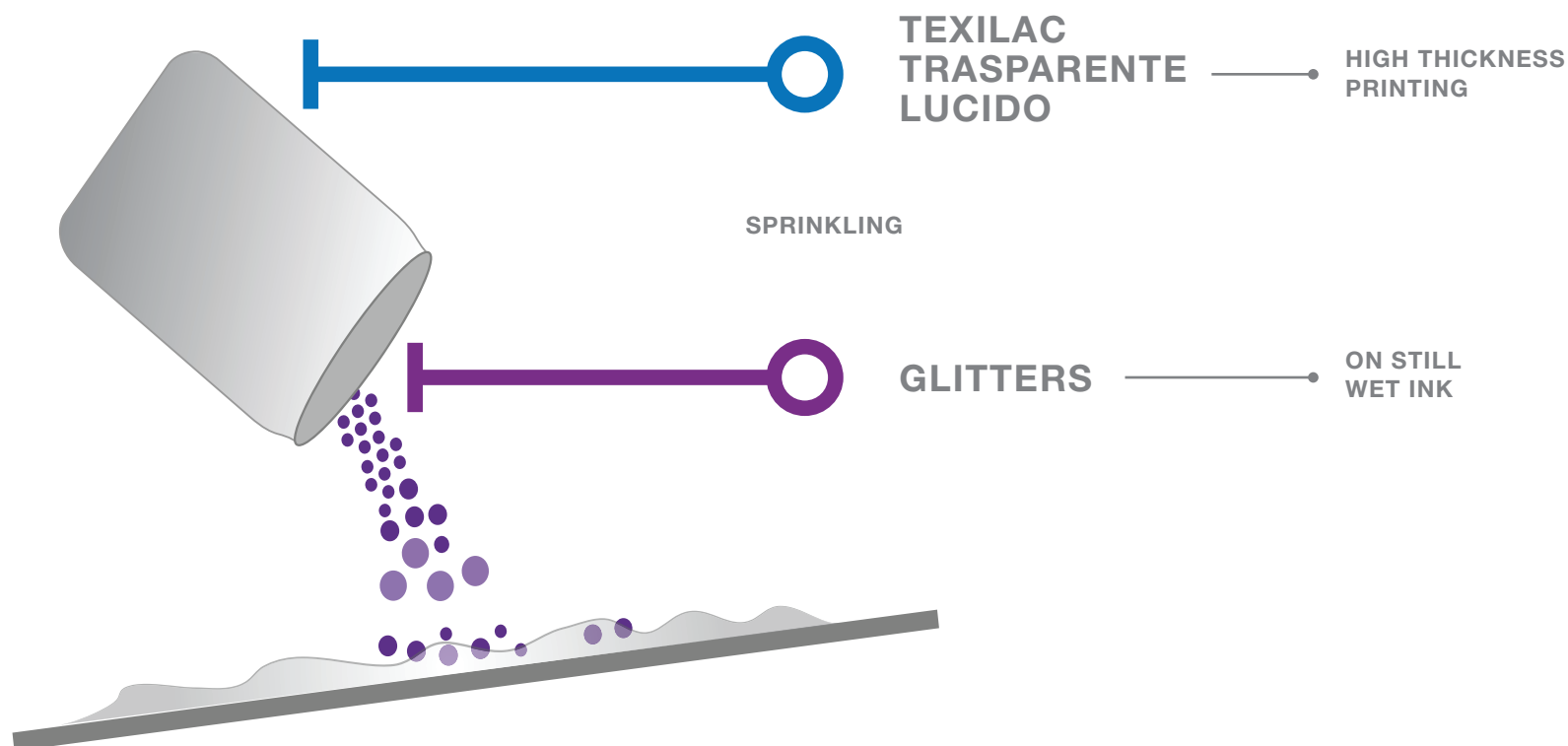
MAIN FEATURES

GOOD WASHING RESISTENCE
ECO FRIENDLY



07 GLITTER PRINTING

APPLICATIVE METHOD – SPRINKLING



WATER BASED INKS

GLITTER PRINTING

APPLICATIVE METHODS

Chart for the selection of the best mesh

MIXING



TYPE	FINENESS	Th./cm	MESH
001	50 μm	34	56
002	75 μm	24	56
004	150 μm	15	Galvanic
008	230 μm	9	Galvanic

SPRINKLING



TYPE	FINENESS
015	385 μm
025	635 μm
040	1 mm
060	1,5 mm

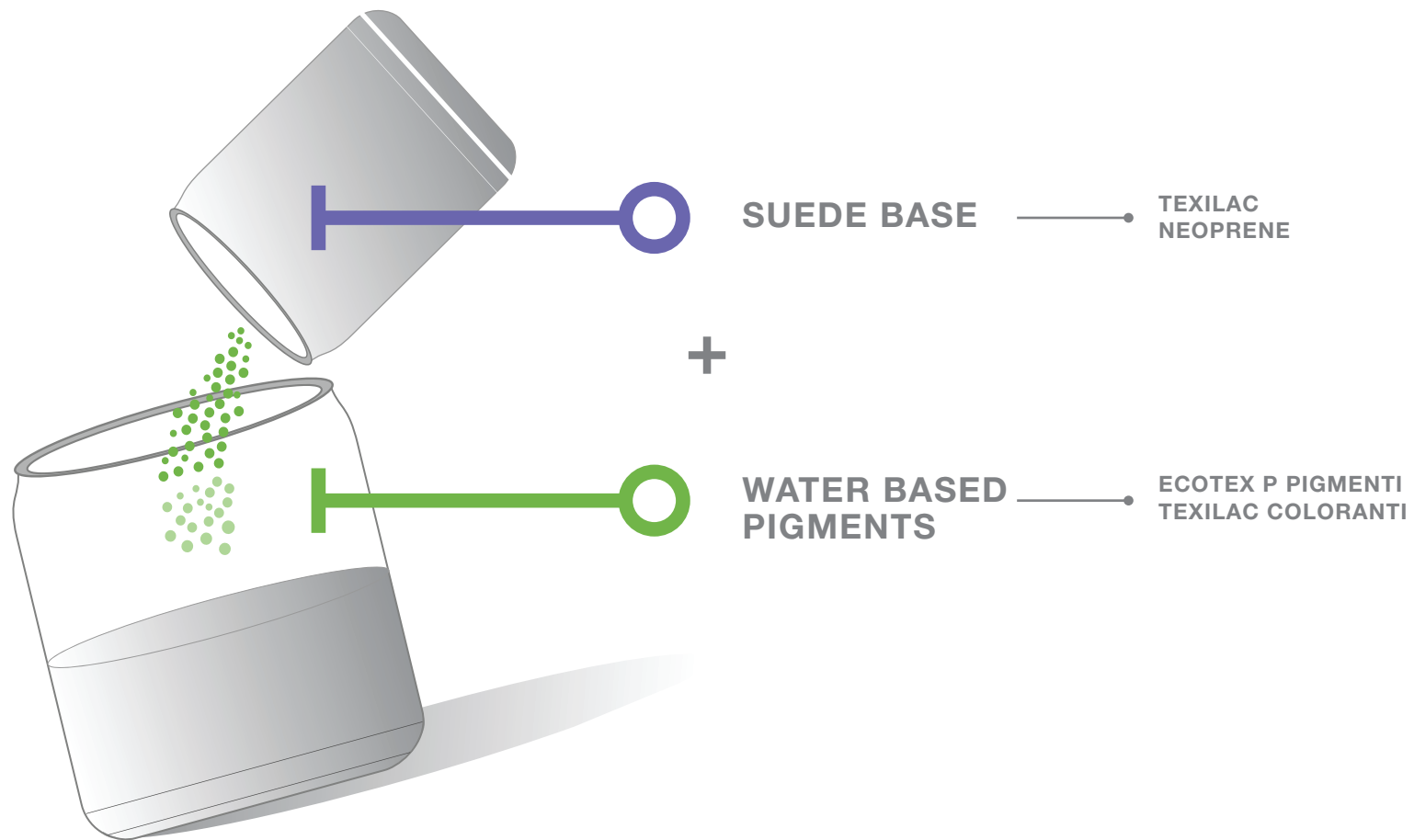
08 SUEDE EFFECT PRINT

Prints with a Suede Effect can be achieved by printing the specific base, Texilac Neoprene, mixed with coloured pigments (Texilac coloranti or Ecotex P pigmenti) and then polymerizing at high temperature [160°C, 3 minutes].

The same effect can be achieved by printing with specific plastisol and silicone inks (see the product portfolio of Texiplast and Special Effects)



08 SUEDE EFFECT PRINT



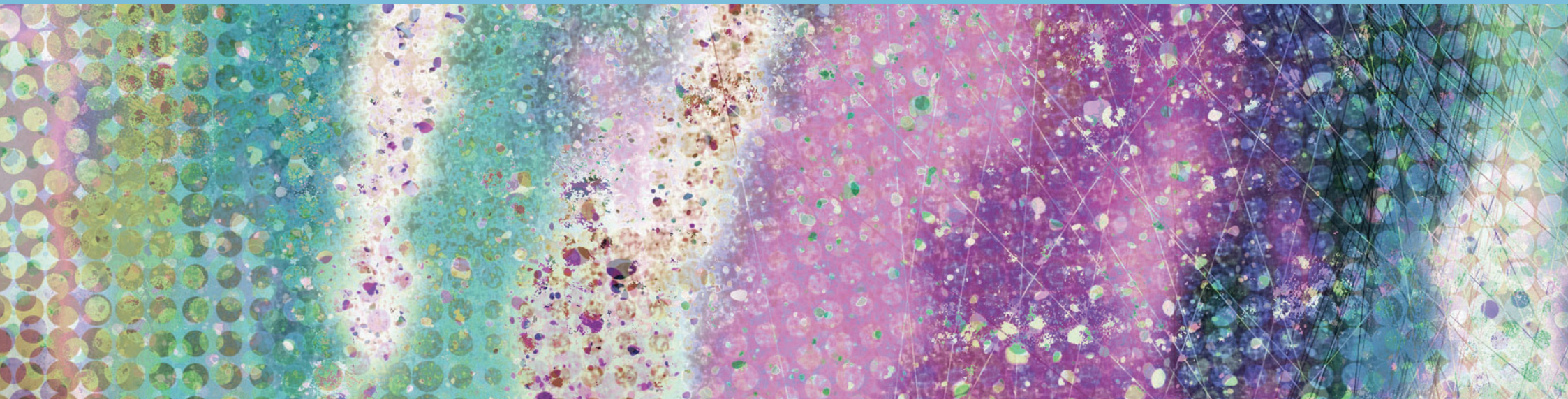
09 MYTEX EFFECT PRINT

WHAT IS MYTEX

To obtain the Mytex effect a thermo-adhesive is first printed and dried in a warm air oven, then the coloured polyester film (Mytex) is applied onto the fabric through a heat transfer process.

APPLICATION

Transfer can be done by means of a heat press or a calender (standard transfer conditions: 150° - 12 seconds). After cooling, the transparent film can be peeled off; in the areas printed with the thermo-adhesive the coloured design will appear.



WATER BASED INKS

09 MYTEX EFFECT PRINT

ADHESIVES

TEXIFLOCK ST
TEXIFLOCK E-FF

MAIN FEATURES

FASTNESS
ELASTICITY



10 FLOCK EFFECT PRINT

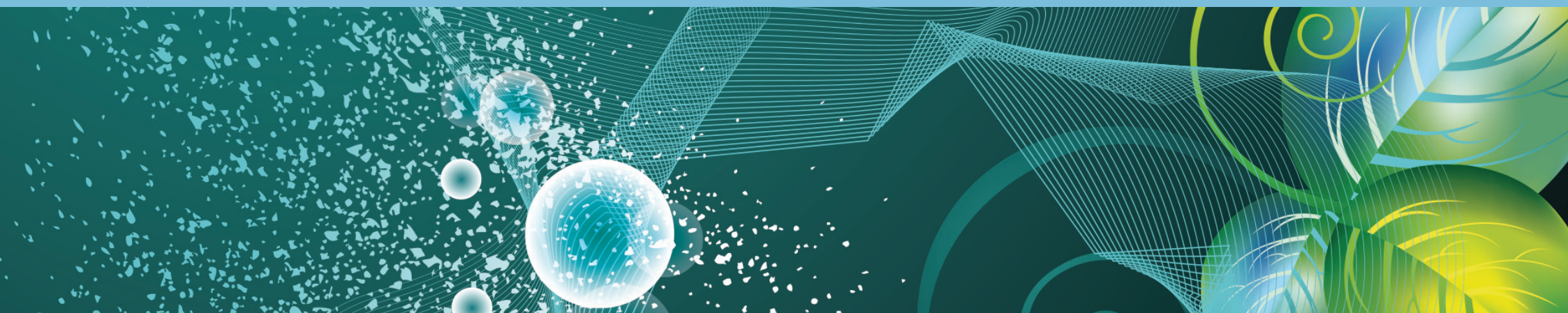
WHAT IS FLOCK PAPER

A polyester film which supports the coloured flock

APPLICATION

To obtain this effect a water-based thermo-adhesive is first printed and dried in a warm air oven. Afterwards, the Flock paper is applied, by means of a heat press or a calender, onto the fabric at 170°C for 20 seconds.

After cooling, the film can be peeled off; the coloured flock which remains on the fabric creates designs in the area printed with the thermo-adhesive



10 FLOCK EFFECT PRINT

ADHESIVES

TEXIFLOCK ST
TEXIFLOCK E-FF

MAIN FEATURES

FASTNESS
ELASTICITY





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