Welcome to

Advanced Textiles EXPO®

ORGANIZED BY ATA



BEYOND AESTHETICS

The Role of Print and Color Performance in Textile Architecture

Steven Huisman

ColorArmor®



THE ROLE OF PRINT AND COLOR PERFORMANCE IN TA

THE ADDED VALUE

THE MISUNDERSTANDINGS

THE SCIENCE

Advanced Textiles EXPO®

“

PRINT.

THE ULTIMATE TOOL FOR ARCHITECTS.

Unfortunately, still underestimated.



THE DILEMMA

POSSIBILITIES

Design freedom

LIMITATIONS

Long-term performance

Advanced Textiles EXPO®

LIMITATIONS / MISUNDERSTANDINGS

A few things we hear all the time.

1) “Print fades too fast.”

2) “Print only works on print media.”

3) “Print can be applied to any material.”

4) “Print never lasts as long as a colored substrate.”



PRINT FADES TOO FAST

Why do colors fade? The science behind it.



UV can degrade exposed pigments.

On flexible PVC textiles, protection is everything.

If the protective system is weakened, color loss accelerates.

Advanced Textiles EXPO®

FLEXIBILITY

The bigger unknown cause of limited print performance

From outside in → **Pigment degradation** ← **From inside out**

Flexibility does not directly cause UV fading.

It can damage the protective system — and that leaves pigments more exposed to UV, dirt and moisture.

Advanced Textiles EXPO®

FLEXIBILITY

Movement, **the chain reaction**

How movement can lead to UV fading



1 **Movement**
Continuous flexing, tension and stress.

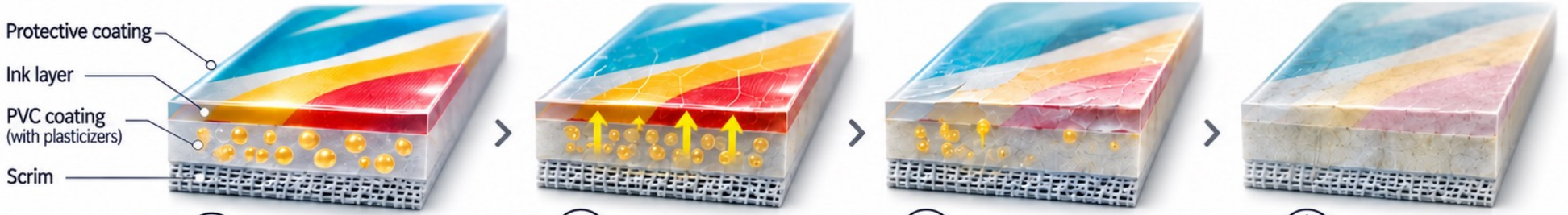
2 **Cracks**
Microcracks in the protective coating reduce its barrier.

3 **Delamination**
The coating can lift and separate from the ink layer.

4 **UV fading**
With the ink and pigments less protected, UV, dirt and moisture accelerate color loss.

Plasticizer migration: **the hidden driver**

How plasticizers in PVC can attack ink and coating from within.



1 **Plasticizers in PVC**
Built-in plasticizers keep the PVC flexible.

2 **Migration**
Over time, plasticizers move from the PVC towards the ink and coating.

3 **Softening & loss of adhesion**
The plasticizers can soften the ink and coating, reducing their performance.

4 **Color fading**
The affected ink is less stable, which can lead to discoloration and accelerated fading.

Advanced Textiles EXPO®

THE SOLUTION? THIS IS NOT!

Two wrong directions.

✕ Printing on just any PVC substrate

You need to make sure that the inks and coating can deal with the flexibility of the substrate

Plasticizers should not be able to interfere with the inks and coating. Most materials are not prepared for that.

✕ Switching to a print medium

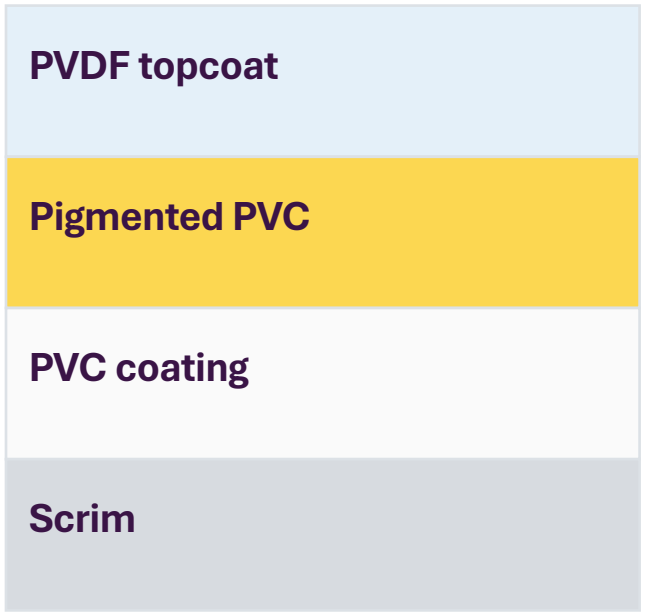
Print media are better receptive to inks and coatings and some actively block plasticizers. But they don’t have the technical properties for TA projects.

Never compromise the substrate to accommodate the print.

Advanced Textiles EXPO®

THE BENCHMARK

Standard colored substrates



Color is integrated in the flexible PVC.

1. No separate printed ink film
2. No print-layer delamination
3. Additional surface protection with PVDF

The benchmark for color durability — but limited in color flexibility, motifs and MOQ.

Advanced Textiles EXPO®

THE SOLUTION!

A print that meets or exceeds the properties of standard colored substrates

1

Compatibility

Block plasticizers

2

Flexibility

Use flexible inks

3

Protection

Shield inks against UV, dirt and moisture



THE SOLUTION!

A print that meets or exceeds the properties of standard colored substrates

LET'S THINK POSSIBILITIES

No MOQ

Unlimited colors

Design freedom



STAND OUT





Advanced Textiles EXPO®

BRAND IT





Advanced Textiles EXPO®

BLEND IN





Advanced Textiles EXPO®

IMAGINE THE POSSIBILITIES













Advanced Textiles EXPO®

QUESTIONS?

Thank you.

ColorArmor®

Booth #1602

Let’s reimagine print endurance together.



See you next year!

Advanced Textiles EXPO®

ORGANIZED BY ATA

Oct. 26–28, 2027 | Baltimore, MD USA


See You Next Year In
Charm City
Baltimore
MARYLAND
Advanced Textiles
EXPO®
Oct. 26–28,
2027