

POLYVANTIS

PLEXIGLAS® and EUROPLEX® Films
For Label Industry

Agenda

1. PLEXIGLAS® and EUROPLEX® Films - For Labels Industry

- Market Trends, Customer Needs and Our Solution
- Product Matrix

2. Key Properties

3. Applications

4. Contact persons



**PLEXIGLAS® and
EUROPLEX® Films**
for individual Requirements
in Label Industry



MARKET TRENDS / CUSTOMER NEEDS

TECHNICAL AND QUALITY ASPECTS

MARKET TREND		OUR SOLUTION
High optical requirements with long lifetimes		High optical quality; no label-look; UV-protection for long time performance
Diverse portfolio for wide range of applications		Several film grades with varying mechanical properties (durable to ultra-destructable) and optical appearances; taylor made for overlay and facestock designs
Easy and universal processability		High compatibility with inline adhesives; suitable for common lamination and printing processes
Food contact		Chosen grades meet Requirement of Commission Regulation (EU) No 10/201
Cost competitive products		Printing can be directly applied to PLEXIGLAS® and EUROPLEX® film resulting in smarter layer design
Environmental friendly		Solvent-free extrusion process, high recyclability; smart layer design; halogene and PVC free

MARKET TRENDS / CUSTOMER NEEDS

PORTFOLIO AND SERVICE ASPECTS

MARKET TREND		OUR SOLUTION
Flexibility in size		Customized solution with regard to length, width; masking individually adjustable
Taylor-made designs for individual requirement		Wide portfolio: clear transparent / white opaque; smooth / matt; durable / ultra-destructable, food contact safe options
Technical support		Long-year experience in producing PLEXIGLAS® and EUROPLEX® films, including know-how on further processing steps
Flexibility for needs; product development		Production facilities in combination with excellent experience for support and development of new projects

PRODUCT MATRIX

Benefits

- Customized solutions to meet a variety of different properties
- Provides UV stability and protection
- Easy to print on
- Environmentally friendly

	PLEXIGLAS® OF072	PLEXIGLAS® OF080	PLEXIGLAS® WFO02	PLEXIGLAS® WFO07	PLEXIGLAS® OF079	PLEXIGLAS® WFO11	EUROPLEX® 99710
Brittleness	Durable	Durable	Durable	Destructible	Ultra-destructible	Ultra-destructible	Durable
Optics	Clear, glossy	Clear, glossy	White, glossy	White, glossy	Clear, glossy	White, matte/glossy	Clear, glossy
Weathering resistance*	8,000 h	5,000 h	10,000 h	10,000 h	-	10,000 h	10,000 h
Nominal strain @ break	40%	> 50%	> 50%	25%	< 15%	< 5%	> 50%
Tensile stress @yield	56 MPa	35 MPa	33 MPa	41 MPa	72 MPa	No yield	38 MPa
Chemical resistance	High	High	High	High	High	High	Excellent
Food contact	-	-	-	-	Yes	Yes	-

* ISO 4892-2 method A, cycle 1, 65% RH



PLEXIGLAS® films - A wide portfolio with customized solutions



PLEXIGLAS® and EUROPLEX® Films

Key Properties

- Excellent Optical Properties
- High Weathering Resistance
- Long Term UV Protection and Stability
- High Chemical Resistance

EXCELLENT TRANSPARENCY WITH UV-PROTECTION

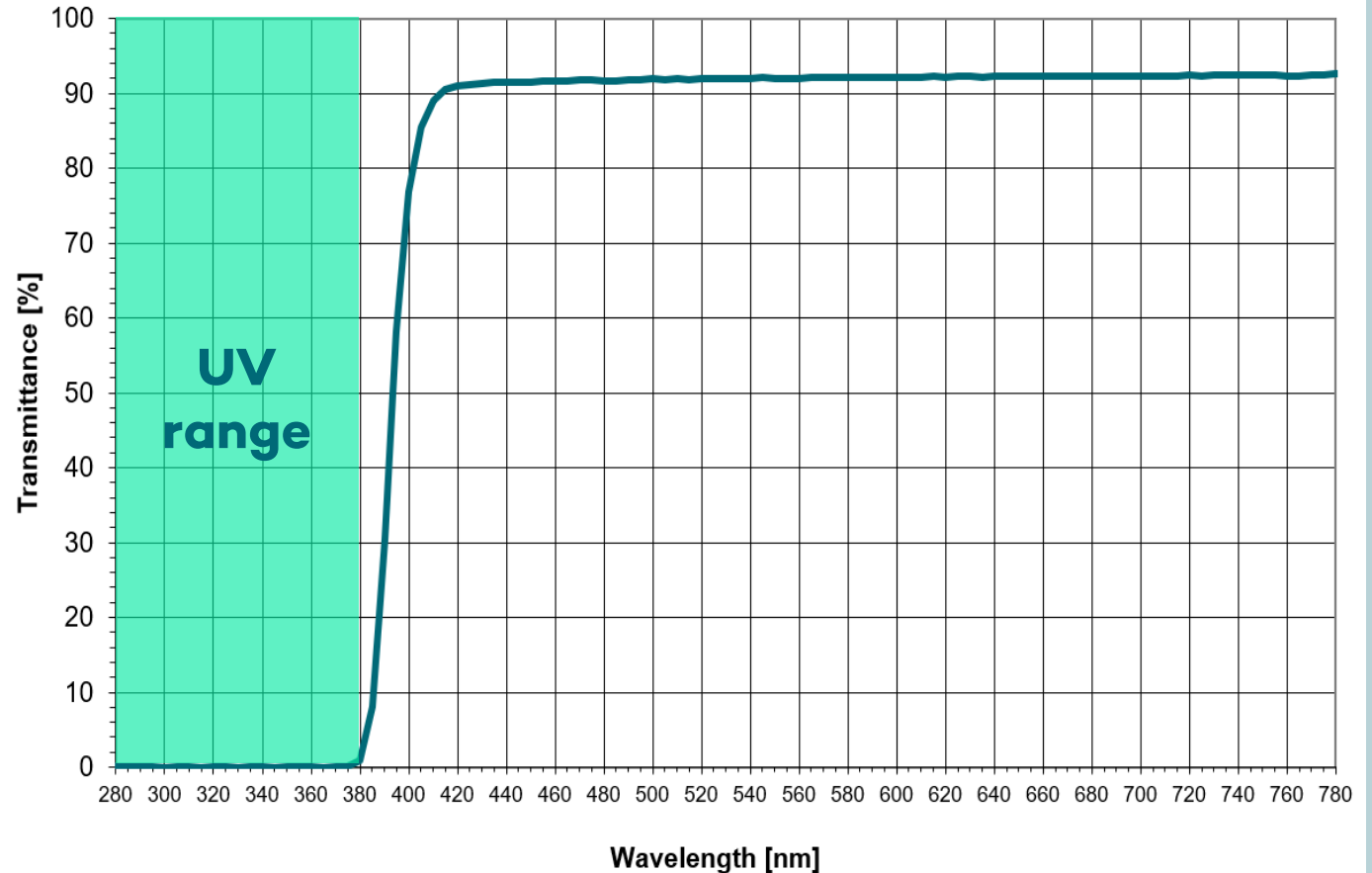
Protection – UV blocking

- State-of-the-art UV absorber packages, aligned to the requirements of the application
- Blocks UV-light up to 98% (280 – 380 nm)
- Protects other polymeric films or printings (when used as overlay) against degradation or color fading over the years



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Spectral transmittance of PLEXIGLAS® Film OF072, thickness = 75 µm



WEATHERING PROPERTIES

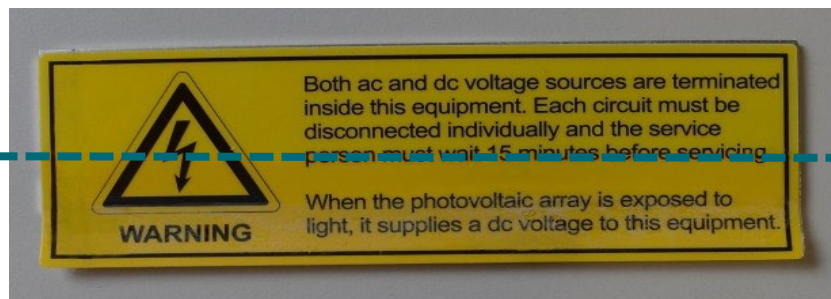
Standard Overlay Film (e.g. PET)



After 500 h*

Before UV test*

PLEXIGLAS® Film OF072 as Overlay



After 500 h*

Before UV test

Durability - High UV Resistance

- High durability under long term outdoor applications
- No degradation
- No color change
- No haziness (when used as overlay) against degradation or color fading over years

No change with PLEXIGLAS® and EUROPLEX®

*ISO 4892-2 method A, cycle 1, 65% RH

ADVANTAGES FOR OVERLAY LABELS

■ Aesthetic

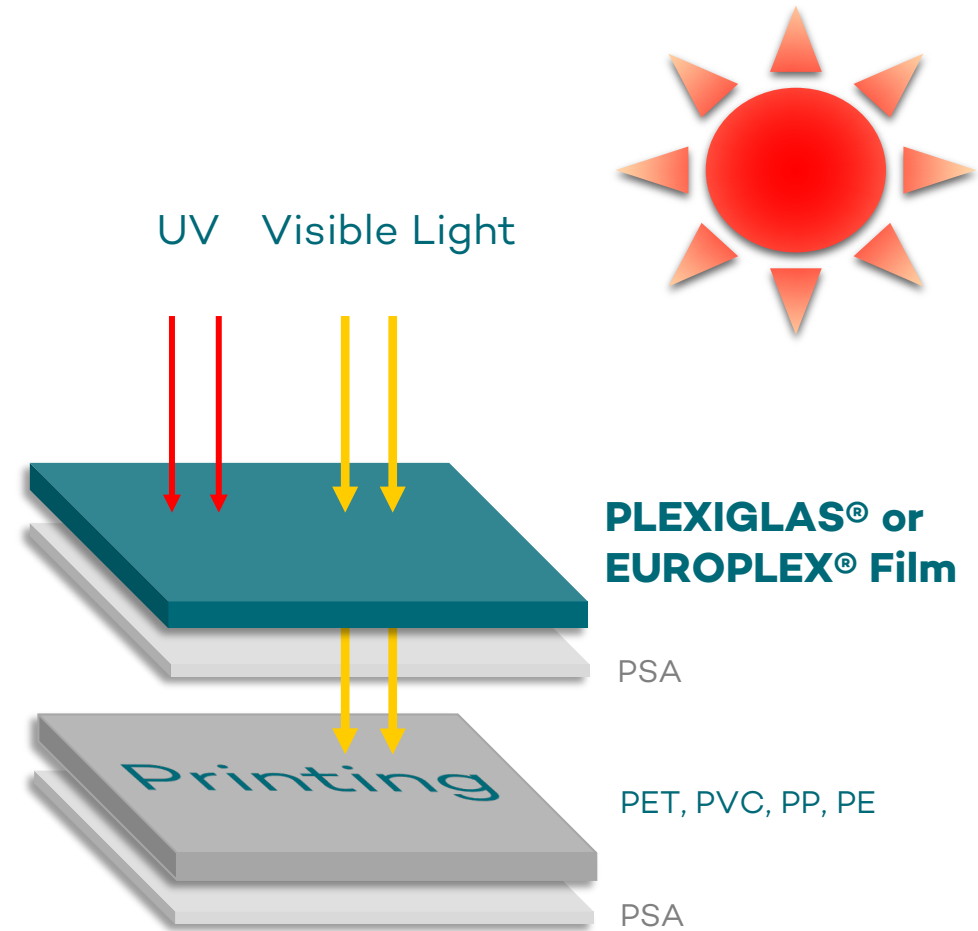
Transparency – No Label Look, depth effect
No color change or haziness over the time

■ Protection

Protects the facestock / printings against UV-light and weathering

■ Durability

No degradation under long term UV and weathering exposure



ADVANTAGES FOR FACESTOCK LABELS

■ Aesthetic

Transparent or opaquely colored – no label look, no color change or haziness over time

■ Protection

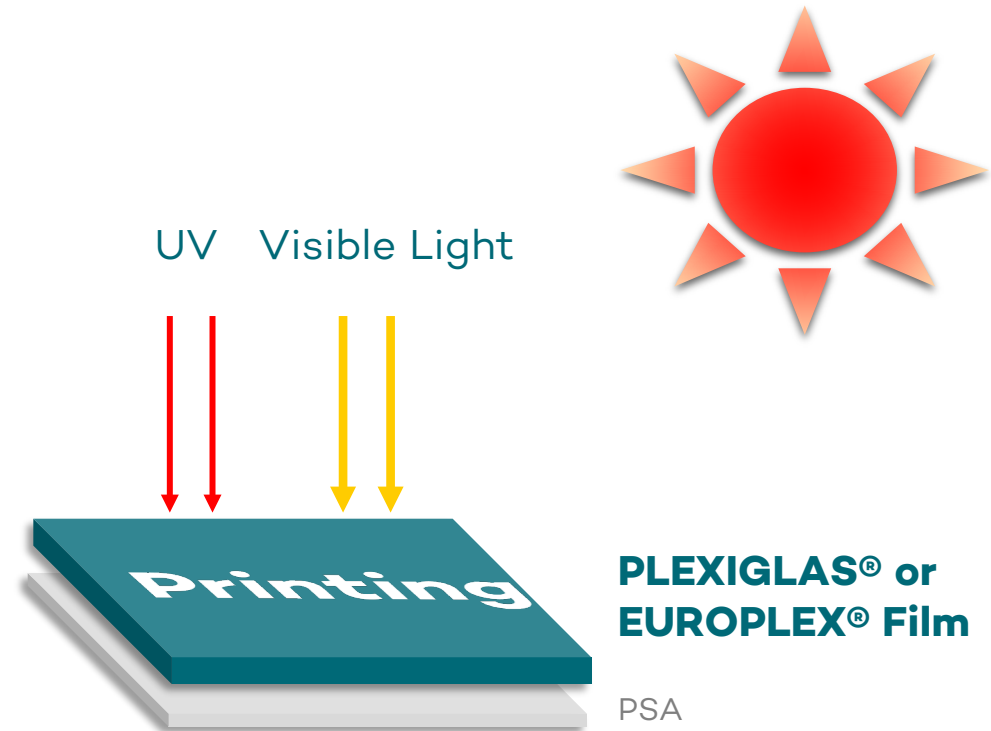
Protects the printing on the back side against UV and weathering (transparent films)

■ Durability

No degradation under long term UV and weathering exposure

■ Cost Saving

Smart Layer Design



No overlay necessary!

ADVANTAGES FOR DESTRUCTIBLE LABELS

■ Aesthetic

Transparent – No Label Look
No color change or haziness over time

■ Environment and Health

Halogen-free, odorless PLEXIGLAS® Film OF079 and WF011
meet the requirements of Commission Regulations (EU)
No 10/2011

■ Cost Saving and Productivity

Smart layer design with simplified composite assembly (film +
PSA+ liner)

■ Durability

Long term UV protection of label



**ODOR
FREE**

BENEFITS FOR LABEL INDUSTRY - SUMMARY



PLEXIGLAS® and EUROPLEX®

Functionality

Highly transparent or opaquely colored, durable or ultra-brittle, smooth or textured surface

Shelf-life

Prolonged life-time under appropriate storage conditions

Durability

High UV-light and weather resistance, protects the substrate

Processing

Easy to process, easy to print

Environment

Halogen-free, odorless, Completely recyclable, solvent-free extrusion process, sustainable



PLEXIGLAS® and EUROPLEX® Films Applications

TYPICAL APPLICATIONS

SECURITY LABELS



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SECURITY LABELS



Document sealing, packaging:
Security labels,
anti-counterfeiting protection



TYPICAL APPLICATIONS

SECURITY LABELS



TYPICAL APPLICATIONS

SECURITY LABELS



SUPPORT AND CONTACT PERSON



Please scan the
QR code to
connect our
commercial and
technical support
worldwide



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