



# Product Information Platilon® U

## Highly Elastic Polyurethane Films

### Typical Properties

Basic Material			Polyurethane (Ester)			Polyurethane (Ether)	
Grade			2102 A	4100 D	U04/PE	4201 AU	U073
Property	Standard/ Procedure	Unit					
Density	calculated	g/cm <sup>3</sup>	1,21 <sup>1)</sup>	1,21 <sup>1)</sup>	1,17 <sup>1)</sup>	1,15 <sup>1)</sup>	1,12 <sup>1)</sup>
Softening range	TMA Onset – Endset internal method	°C	150 - 175	155 - 175	—	155 - 185	160 - 200
Hardness	DIN 7619-1, DIN EN ISO 868 or ASTM D2240	Shore A	93 <sup>2)</sup>	94 <sup>2)</sup>	86 <sup>2)</sup>	87 <sup>2)</sup>	87 <sup>2)</sup>
Tensile stress at break	DIN EN ISO 527	MPa	75 <sup>3)</sup>	75 <sup>3)</sup>	55 <sup>3)</sup>	65 <sup>3)</sup>	65 <sup>3)</sup>
Tensile stress at 50% strain	DIN EN ISO 527	MPa	6 - 10	7 - 10	5 - 7	5 - 7	6 - 7
Tensile strain at break	DIN EN ISO 527	%	450 <sup>3)</sup>	450 <sup>3)</sup>	650 <sup>3)</sup>	500 <sup>3)</sup>	650 <sup>3)</sup>
Tear propagation resistance	DIN ISO 34-1, B	kN/m	75 <sup>3)</sup>	80 <sup>3)</sup>	70 <sup>3)</sup>	50 <sup>3)</sup>	60 <sup>3)</sup>
UV-stability	empirical	-	o	o	o	x	o
Hydrolysis resistance	empirical	-	o	o	o	xx	xx
Microbial resistance	empirical	-	o	o	o	x	x
Weldability	empirical	-	xx	xx	x	xx	x
Thermoformability	empirical	-	xx	xx	x	xx	x
Carrier film (PE)			no	no	yes	no	yes

These data are provided as general information only. They are approximate values and not intended for use in preparing specifications! Please contact us before writing specifications on this product.

- <sup>1)</sup> Values for 50 µm films were calculated based on information by raw material suppliers and the film's composition.
- <sup>2)</sup> Based on data for the TPU resins provided by their suppliers and based on suppliers standard/procedure, not measured for film sample.
- <sup>3)</sup> Blown films may be orientated to a different degree depending on film thickness. The above mentioned values have been measured on 50 µm films and averaged over a long period. The average values from single productions can vary up to 30% subject to thickness, width and orientation.

Comparative data:

xx = excelent  
x = good  
o = limited

#### Film Formats

Thickness	(µm)	25 – 1000 (limitations depending on film grade and width)
Width	(mm)	1000 – 2500 (limitations depending on film grade and thickness)
Colours		natural, black, white (other colours upon request)

Our "General Conditions of Sale" also apply.

## Product Description

Platilon® U is the trade name for extruded thermoplastic polyurethane (TPU) films made by Epurex Films. The range currently includes aromatic TPU based on polyester and polyether.

## Properties

Platilon® U films are noted for the following properties:

- high abrasion resistance
- flexibility over a wide temperature range
- high resistance to oils, greases and solvents
- good weathering resistance
- good microbial and hydrolysis resistance of polyether TPU
- good resistance to high-energy radiation
- free of plasticisers
- breathable: watertight, but high water vapour transmission rate
- good adhesion to foams, adhesives, inks and many substrates

## Applications

The wide range of properties of Platilon® U films is used in many different applications, such as the following:

- **Automotive:**  
for the production of various interior trim parts e.g. headliners, door panels, seats, parcel shelves, sound insulation parts
- **Building & Construction:**  
roof linings, pipe relining
- **Medical:**  
colostomy bags, inflatable mattresses, anti-decubitus mattresses, wound dressings, extra corporal breast prosthesis
- **Industrial:**  
tank liners, air ducting, conveyor belts etc.
- **Sports and Leisure:**  
sportswear, football outer skins and bladders, air cushions of athletic shoes etc.

## Processing

Platilon® U films are suitable for:

- thermoforming and deep drawing
- welding by all standard methods
- heat lamination and flame-bonding
- coating and bonding with adhesives
- printing
- back-foaming
- back injection moulding

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