

# PlastiPET ESD Permanent



**Plastirol**  
part of PAG

## Description

Plastirols Amorphous Polyethylene Terephthalate (APET) ESD Permanent is a polymer used for the technical packaging industry. The material has a reduced surfaceresistance, combined with with a good stiffness. This film is produced with internal and external antistatic material. This grade has a hazy appearance.

## Key features

### \*Shelf life surface and volume resistance

24 Months after production date. Do not wash the film because it will lose its surface and volume resistance.

### Certifications

The following approvals are available. FSSC 22000, standard 10/2011 EC and its ammendments.

### Printing

PlastiPET ESD Permanent is not applicable for printing.

## Product Availability

### Colour

PlastiPET ESD Permanent with recycled content will have slight colour tints; blueish, yellowish. Standard colours are available or customers demand.

### Finish

Standard natural gloss.

## Physical properties

	Standart	Unit	Value
<b>Mechanical properties</b>			
E-Modulus	ISO 527	MPa	2200
IV value		DI/g	0,70 - 0,80
<b>Thermic properties</b>			
Vicat VST/B/50	ISO 306	°C	77
<b>Other properties</b>			
Specific weight	ISO 1183	g/cm <sup>3</sup>	1,32
Water vapour transmission	ASTM - F1249	g/m <sup>2</sup> /24h	7 *)
Permeability CO <sub>2</sub>	ASTM - D1434	cm <sup>3</sup> /m <sup>2</sup> -h-bar	125 *)
Permeability O <sub>2</sub>	ASTM - D1434	cm <sup>3</sup> /m <sup>2</sup> -h-bar	40 *)
*) 0,40 mm film			
Surface resistance	IEC 61340-5-1	Ohm	10.8 - 10.10
Volume resistance	IEC 61340-5-1	Ohm	-
Testconditions temperature		degr/Celcius	18 - 28
Testconditions Relative Humidity		%	50 - 90
<b>Haze value</b>			
Virgin	haze	%	50-90 *)
Recycled	haze	%	50-90 *)
*) Depending on thickness			
<b>Overall Migration test</b>			
	<b>Simulant</b>	<b>Test condition</b>	<b>Result</b>
Dry, non fatty food	E. Tenax	10 days, 40°C	suitable
wet and aqueous food	A. Water	10 days, 40°C	suitable
sauer food, yoghurt, sauce	B. 3% acetic acid	10 days, 40°C	suitable
alcoholic drinks, milk	D1. 50% ethanol	10 days, 40°C	suitable
chocolate, cookies, fatty food	D2. 100% vegetable oil	10 days, 40°C	suitable
<b>Manufacturing Tolerances</b>			
Film thickness	0.21 to 0.40	0.41 to 0.80	0.81 to 1.20
thickness	+/- 7%	+/- 5%	+/- 4%
Width	+/- 1mm	+/- 1mm	+/- 2mm

## Available options

Colours

## Additional information

### Storage

We recommend to store our films with a maximum of 24 months after delivery without any UV exposure.  
Air humidity between 20% and 70%, temperature between 15 and 25 degrees Celsius.

### Recycling Circular

PlastiPET ESD Permanent recycled grade is produced with high content of recycled material (30% - 70%), to ensure optimal use of waste materials. Plastirol will facilitate the return of your regrind on demand.

### Thermoforming

To keep PlastiPET ESD Permanent clear we recommend sheet temperatures of 120 – 165 degrees Celsius. To keep the shrink as low as possible we recommend mould temps around 60 degrees Celsius. Overheating of PlastiPET ESD Permanent has negative effect the transparency of the film because it will start crystallising.

### Chemical resistance

PlastiPET ESD Permanent shows a good resistance to aqueous solutions of salt, acid and alkalis. It also has good resistance to most solvents, alcohols, fats and oils, although very limited to ketones.

### Visual aspects

black spots PlastiPET ESD Permanent (virgin)  
black spots PlastiPET ESD Permanent RQ (recycled grade)

0 - 299	300 - 500	501 - 999	≥ 1000	*)
≤ 15 / m <sup>2</sup>	≤ 3 / m <sup>2</sup>	1	none	
No spec.	≤ 15 / m <sup>2</sup>	≤ 3 / m <sup>2</sup>	1	

\*) values refer to a diameter of a circle, in micron measured

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### Disclaimer

Above information is based on our current knowledge and experience. In view of the many factors that may affect processing and application, these data do not relieve processors from the responsibility of carrying out their own tests and experiments; neither do they imply any legally binding assurance of certain properties or of suitability for a specific purpose. It is the responsibility of those to whom we supply our products to ensure that any proprietary rights and existing laws and legislation are observed.