

TECHNICAL SPECIFICATION

AKYPLAC® 3 mm 450 gr/m²



► Description : twinwall polypropylene copolymer extruded

Product	Treatment *	Thickness (mm)	Weight gr/sqm	Density	Colour
Akyplac®	Corona	3,0± 0,2	450±45	0,21	White / bicolore: 1 side white, 1 side grey

*others on request

► Light transmission

	Akyplac® standard	Akyplac® BICOLORE
Light Transmission DIN 5036	9 %	0 %

► Item

	Dimension (mm)	Tolerance
Width	2000	+/- 2 mm
Length	3000	0/+16 mm
Squareness		5 mm / m

► Logistic details

Nr of piece/pallet	300
Dimension of pallet	2050 x 3050 x 1070
Protection	Wood pallet + SPC bottom and cover + PP Corners + PE stretch foil
Storage	Inside, dry place, 1 pallet on 1 maxi

► Treatment

	Method	Unit	Value	Result
Corona	Sherman pens	mN/m	≥ 38	3 months
Anti-static	On request			
Fire retardant	On request			
UV treatment	On request			

► Printing

	2 sides	1 side
Offset UV		
Silkscreen UV	X*	X
Digital UV	X*	X

In order to protect better the printing results, we recommend to apply an additional varnish over the inks.

*2 sides printing is technically possible, but the printing results depend on the picture covering to print; to be tested

► Converting

- Gluing (hot melt: PP or polyurethane reactive)
- Cutting (guillotine, die cut, laser, knife, plotter)

► Regulations

- Conformity with: Heavy metal (RoHS, 94/62/EC); REACH / SVHC)
- Food contact: please consult us

▶ **Mechanical properties of raw material***

Property	Method	Unit	Result
Tensile Strength at Yield	ISO 527-2	M Pa	24
Elongation at Yield	ISO 527-2	%	11
Flexural modulus	ISO 178	MPa	1150
Izod Impact Strength			
At 23°C	ISO 180	KJ /m ²	15
At -20°C			7

▶ **Mechanical properties of final product**

Property	Method	Unit	Result
Flexural rigidity (Distance between fulcrums: 100 mm, test speed 5 mm/mn, sample: 40x200 mm)	ISO 178	N/mm	
- Machine direction			2,0
- Perpendicular direction			0,7
Flexural break resistance (Distance between fulcrums: 100 mm, test speed 5 mm/mn, sample: 40x200 mm)	ISO 178	N	
- Machine direction			18
- Perpendicular direction			4
Flat Crush resistance	ISO 3035	kPa	400
Dimensional variation 22H, 70°C	Internal	%	< 0,5
Impact resistance at 23 °C (steel ball 500 g, falling height: 250 mm)	Internal		no effect

▶ **Thermal properties of raw material***

Property	Method	Unit	Result
Melting point	ISO 3146	°C	165°C
Heat Deflection Temperature			
1.80 MPa – 120°C per hour	ISO 75-2	°C	50
0.45 MPa - 120°C per hour			92
Flash point		°C	350
Auto ignition temperature		°C	> 380
Thermal expansion coefficient		mm/m°C	0,11

*Extracted from the polypropylene Heterophasic Copolymer raw material data sheet

▶ **Chemical resistance**

Polypropylene has good chemical inertness and good resistance to cracking under stress. It has no solvent at 20°C. Very resistant to mineral and organic products; it is neither affected by water solutions of mineral salts, nor by chemical bases and mineral acids at temperatures lower than 60°C, except very strong acids. Not resistant to substances with an oxidizing effect or to certain solvents. Details can be supplied on request.

▶ **Environment**

Polypropylene is persistent in the environment and is not biodegradable.

▶ **Recycling properties**

▶ **Thermal recycling or incineration**

The heat produced can then be used as substitutes for oil, gas and coal or to generate energy at power plants. The complete combustion of polypropylene with air only produces carbon dioxide and water. At higher temperatures traces of nitrogen oxide are present.

The incomplete combustion of polypropylene produces soot, carbon dioxide and monoxide, and several carbon, hydrogen and oxygen compounds. Unburned substances or additional products may be released.

The same by-products are also released during the combustion of natural materials such as wood or wool.

▶ **Mechanical recycling**

Polypropylene wastes can easily be recycled. They are collected, separated, milled, melted and extruded in granules in order to be re-injected in our process. We can reuse our own wastes and also the wastes of our customers.

▶ **Complementary information:**

Industrial waste number EC for PP: plastics (16 10 19, 17 02 03 & 20 01 39)

