

vaplatec®

POWERED BY COMMITMENT



Pulse to the future



VAPLATEC products and articles possess a series of technical characteristics that define them as very versatile products that are suitable for use in a wide variety of industrial, decorative and domestic applications. Thanks to the way the material responds during the mechanisation process, you can obtain more demanding, accurate and beautiful products.

The lightness, self-lubrication and good sliding properties of our products makes VAPLATEC the ideal material for use in industrial applications where friction exists, to improve and even replace traditional materials such as wood or metals. Its good sliding capabilities, its resistance to abrasion and the low impact of chemical and corrosive agents are qualities that perfectly define our range of VAPLATEC products.

In harmony with environment



One of the main objectives of our company is to respect and protect the environment through the minimum possible emission of plastic waste into the environment that surrounds us. This is why 95 per cent of the surplus plastic from our manufacturing is treated and reused in our own production process. By doing this we are able to make VAPLATEC RC, which is a recovered and recycled material that guarantees the correct management of our surplus production and at the same time offers some optimal technical features.

The development of good environmental practices, including the correct management of our waste is not only beneficial to all of the companies in our sector, but it is also positive step for our workers, the environment and society as a whole.

Products

vaplatec® 300 HD PE

Molecular weight: 300,000 g / mol

Is a polyethylene with the lowest molecular weight in the VAPLATEC range. The product is manufactured by extrusion for applications where cost is the determining factor and not will require very demanding conditions of work.

vaplatec® 500 HMW PE

Molecular weight approximately: 500,000 g / mol

VAPLATEC 500 is a semi-finished material to ensure maximum reliability for your technical projects.

It is a product manufactured using the compression moulding technique, specially designed for the machining of industrial machinery parts where the tolerances are very tight.

It is also routinely used in slide guides and bands of abrasion due to its low coefficient of friction and in cold installations due to its resistance to low temperatures.

vaplatec® 1000 UHMW PE

Weight molecular: 5,000,000 g / mol

This is the polyethylene of greatest molecular weight in the VAPLATEC range.

Its high resistance to abrasion, wear, and impact makes it imperative for mechanical transmission applications where the fatigue and friction levels are very high.

vaplatec® PP

Is the hardest and most rigid in the VAPLATEC range.

Produced and manufactured in excellent quality PP by means of compression moulding technique, it has an excellent resistance to chemical and corrosive products. Its hardness makes it ideal for industrial cutting applications.

vaplatec® RC

Is a polyethylene made from the recycling and recovery systems from our own manufacturing process.

It is a product that is 100% recycled that keeps most of the features of our own VAPLATEC 500, because during the process of recovery and recycling it avoids the mixing of materials and contamination of external agents.

vaplatec® TAILOR MADE

If you have specific needs other than outlined, please consult our Sales Department with any technical requirement you may have and we will work closely with you to make a VAPLATEC to suit your needs.



vaplatec[®]
AS

Polyethylene with additives to
produce antistatic properties.

vaplatec[®]

AS

Characteristics

Thanks to its formulation VAPLATEC AS presents a superficial resistivity lower than polyethylene without additives, thus reaching the required property of surface charge dissipation.

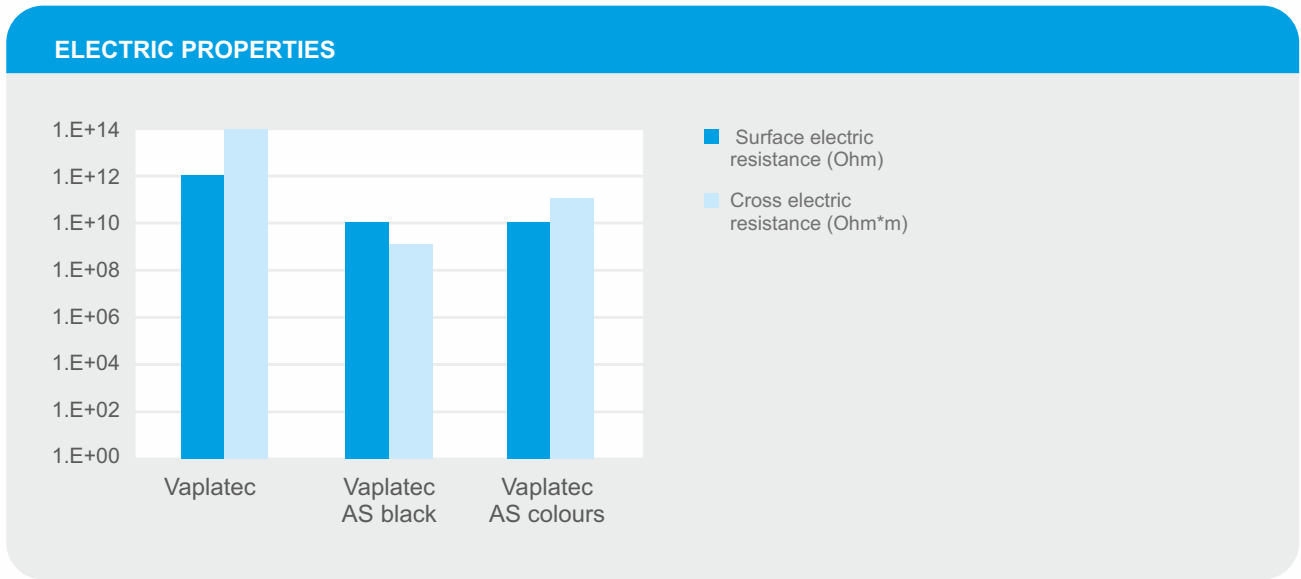
VAPLATEC AS can be manufactured in the following colours, black white and green, varying slightly their electrical properties as is shown and can be appreciated in the following table.

Applications

- Components for transport.
- Painting Cabins.
- Lines of gravity flow.
- Etc.

Colour

- Black
- White
- Green





vaplatec[®] WR

This material offers extraordinary anti-wear properties thanks to the combination of additives and dry lubricants intended to increase resistance to abrasion.

vaplatec® WR

Characteristics

VAPLATEC WR covers the same applications where materials with ceramic additives are used, but with the advantage of less deterioration of cutting and machining tools.

This material is available in VAPLATEC 500 and VAPLATEC 1000.

VAPLATEC WR achieves an improvement of 20% when compared to VAPLATEC.

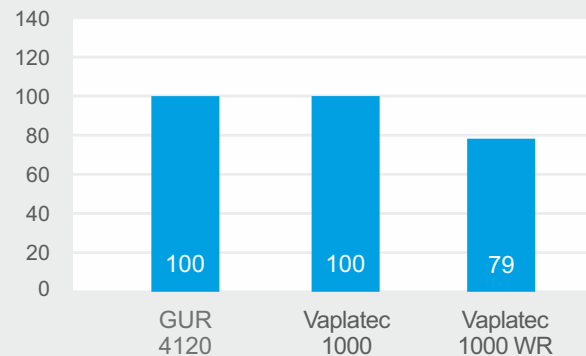
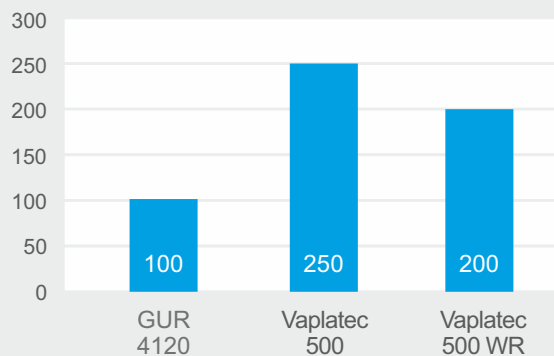
Applications

- Chutes.
- Chain guides.
- Friction bands.
- Pieces submitted to wear and tear.

Colour

VAPLATEC WR is supplied in bluish grey.

WEAR INDEX (Internal method based on Sand Slurry Test)





vaplatec[®]

RC

This regenerated material is obtained through our own recycling system using derivatives from the production process.



Characteristics

Thanks to a comprehensive system of control, selection and cleaning, this guarantees the homogeneity of the product and the regularity of its technical features, as well as the achievement of an only a minor degradation of the material.

Applications

- Wire subsection.
- Chain guides.
- Covers.
- Etc.

Colour

VAPLATEC RG is supplied in colour black.

CHARACTERISTICS	PROPERTY	METHOD	VALUE
PHYSICAL	Molecular wheigt (g/mol)		Aprox. 500.000
	Density (g/cm ³)	UNE-EN ISO 1183	0.955
	Shore hardness D	UNE-EN ISO 868	62
	Water absorption (%)	UNE-EN ISO 62	< 0.1
MECHANICAL	Tensile modulus of elasticity (MPa)	UNE-EN ISO 178	1100
	Flaxural stress (MPa)	UNE-EN ISO 178	30
	Ultimate tensile strength (MPa)	UNE-EN ISO 527	11
	Elongation at break (%)	UNE-EN ISO 527	250
	Compression resistance (Kg/cm ²)	UNE-EN ISO 604	120
	Compression resistance deformation (%)	UNE-EN ISO 604	2,5
THERMAL	Melting temperature (°C)	UNE 1135-3	130
	VICAT softening point (B50) (°C)	UNE-EN ISO 306	80
	Service temperature in continual (°C)		80
	Coefficient of linear thermal expansion by °C (m/(mK))	UNE 53126	9x10 ⁻⁵



vaplatec[®]

AB

Adapting to the changing regulations and requirements of the market in hygiene and sanitary matters, we have developed VAPLATEC AB, a material that is suitable for food preparation.

This product is the result of several microbiological studies, achieving total inhibition of bacteria, microbes and fungal growth in those situations where the prime requirement is hygiene.

vaplatec® AB

Characteristics

- Is an isotropic material which means that the distribution of the antibacterial properties are homogenous in any direction.
- It reduces smell
- It avoids infection risk it reduces the risk of cross contamination between different foods
- It permits the spacing of cleaning times including in areas difficult to access.

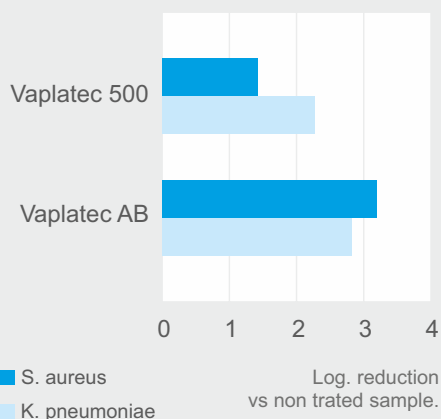
Applications

- Food processing equipments.
- Cutting boards.
- Boards for food display.
- Bulk food containers.
- Catering Equipment.
- Water tanks.
- Plumbing pieces.

Colour

VAPLATEC AB is supplied in light blue.

EFFICACY IN FRONT OF BACTERIUM



INOCULATION PROCEDURE

All previously described is obtained from laboratory tests which include an efficiency test against bacteria. "Method of contact between plates".

The samples are tested against two types of bacteria: *Staphylococcus aureus* (gram +) and *Klebsiella pneumoniae* (gram -). They are exposed to a culture of bacteria within 24 hours at a 37°C temperature. They are covered with a disinfected film of LDPE to distribute the dissolution in the whole surface and prevent the desiccation. After the incubation, samples are cleaned to get all the adhered cells. All viable cells in the washed dissolution are quantified (CFU).

The test results confirm that the bacteria growth is reduced in more of a 99%. Additives used are satisfactorily included in the following organizations registers:

European Union: EFSA (European Food Safety Authority): approved for its use in materials in contact with food. BPD (Biocidal Products Directive) notification.

USA: EPA (Environmental Protection Agency) registered in FIFRA. FDA registration. NSF (National Sanitation Foundation) conformity.



vaplatec[®] CN

Its main property is the ability to lead electrical current. This property has been achieved by reducing its superficial and transverse electrical resistance to the maximum.



Characteristics

Its main characteristic is the ability of leading electrical current, which has been achieved by reducing the superficial and transverse electrical resistance.

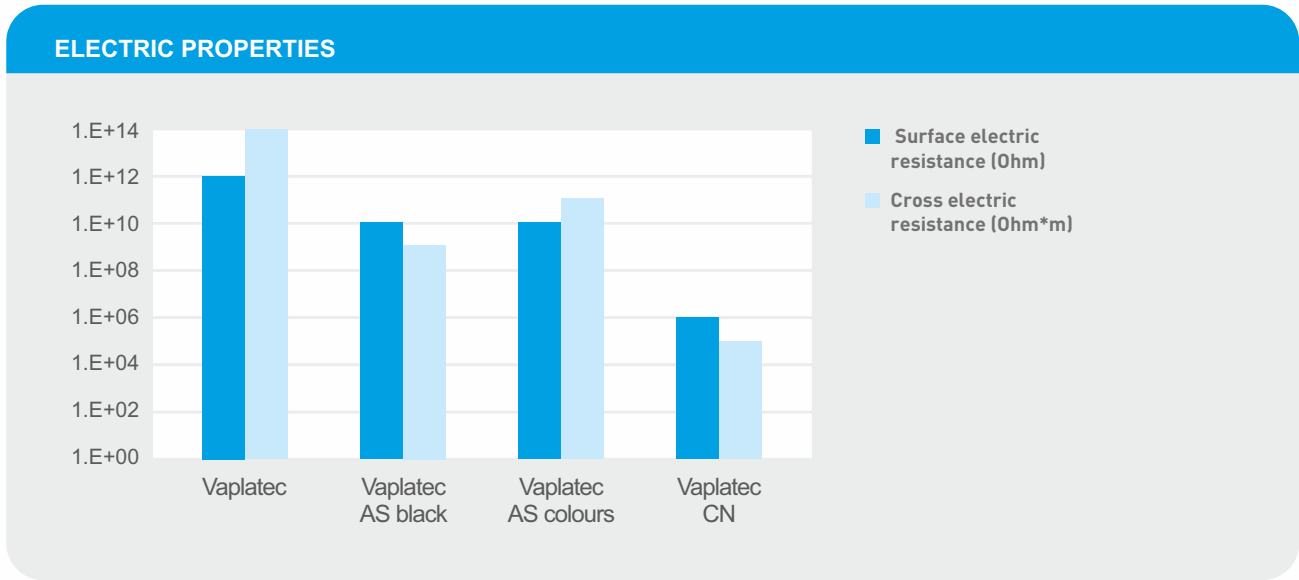
The comparison table shows how VAPLATEC CN offers half of resistance to the passage of electricity than VAPLATEC without additives, which makes it a conductive material.

Applications

- Electrical components.
- Conductive pieces.
- Etc.

Colour

VAPLATEC CN is only supplied in black.





vaplatec[®]
DT

Due to the increase in the demand of detectable polymeric materials to replace machined pieces of metal we have developed VAPLATEC DT, the optimal product for the food industry.



Characteristics

- Detectable with metal detector.
- With an easily identifiable. Dark blue Color
- Almost nul absorption of moisture.
- Good impact resistance.

Applications

- Bearings
- Scrapers
- Cogwheels
- Elements of guides of chain
- Etc.

Colour

VAPLATEC DT is supplied in blue RAL 5010.

CHARAC-TERISTICS	PROPERTY	METHOD	VAPLATEC 500 DT	VAPLATEC 1000 DT
PHYSICAL	Density (g/cm³)		Approx. 500.000	Approx. 500.000
	Shore hardness D	UNE-EN ISO 868	65	64
	Water absorption (%)	UNE-EN ISO 62	< 0.1	< 0.1
MECHANICAL	Tensile modulus of elasticity (MPa)	UNE-EN ISO 178	1140	970
	Flaxural stress (MPa)	UNE-EN ISO 178	27	23
	Ultimate tensile strength (MPa)	UNE-EN ISO 527	27	32
	Elongation at break (%)	UNE-EN ISO 527	530	280
	Charpy impact strenght unnotched (Pendulum of 25 J) (KJ/m²)	UNE-EN ISO 179-1	Do not break	Do not break
THERMAL	Melting temperature (°C)	UNE 1135-3	141	142
	VICAT softening point (B50) (°C)	UNE-EN ISO 306	81	85
	Service temperature in continual (°C)		80	80
	Coefficient of linear thermal expansion by °C (m/(mK))	UNE 53126	8,25x10 ⁻⁵	1x10 ⁻⁴



vaplatec®
NF

Is a high molecular weight flame retardant polyethylene, capable of avoiding the spread of fire along its surface, which makes this material resistant to combustion.

vaplatec®

NF

Characteristics

VAPLATEC NF is a high molecular weight flame retardant polyethylene, capable of avoiding the spread of fire along its surface, which makes this material resistant to combustion.

In the use of dangerous substances in electrical and electronic equipment.

Applications

- Structural components.
- Tanks.
- Overpressure chambers.

Colour

VAPLATEC NF is supplied in white and black.

PROPERTY	METHOD	VALUE
Inflammability	UNE 53-315	V0
Coefficient thermal dilatation lineal by °C,	UNE 53126	9·10 ⁻⁵
VICAT softening temperature (°C).	UNE 306	> 130



vaplasol®

500

Technology to service the Food Industry.

vaplasol[®]

500

Characteristics

VAPLASOL is the trade mark in which Vapla offers the most adapted plastics for contact, manufacture and processing of food.

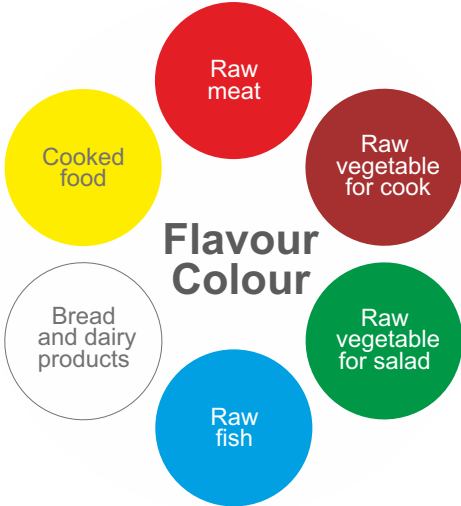
The main characteristics of VAPLASOL 500 are:

- Easy cleaning.
- Does not splinter.
- Nil humidity absorption.
- It helps maintain knife sharpness for a longer period.
- Does not yellow.
- Does not tense in the same way a extruded materials.
- Nil adherence it can withstand temperatures of up to 80oC.
- Long duration.
- Physiologically inert.

VAPLASOL 500 completes its range with the new VAPLASOL AB 500. Antibacterial material tested and guaranteed in a laboratory setting, which eliminates 99% of bacteria avoiding bio-film creation. For total security in the most demanding settings and application of hygiene and sanitary matters.

6 Colours 6 flavours

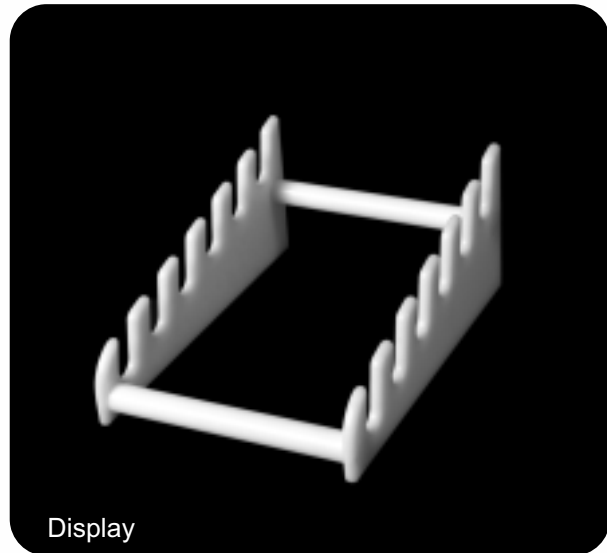
According to the new quality trends, it has been advised that the use of differently colored cutting boards for each food family. By using different colours for different foods processing, we can avoid cross contamination and also achieve greater levels of hygiene.



STANDARD DIMENSION OF SHEETS (mm)		THICKNESS
300 x 200	500 x 330	Standard from 10 to 50 mm
400 x 200	500 x 350	
400 x 300	500 x 400	
400 x 400	500 x 500	Specials from 60 to 150 mm
450 x 450	600 x 400	
500 x 300		

Tolerances: Size: - 1 mm, + 10 mm. Calibrate: -0.2 mm + 0.3 mm. This dates are only informative, the company reserves the right to modify any value without previous notification.

vaplasol® 500 Applications



vaplasol® 500 Applications



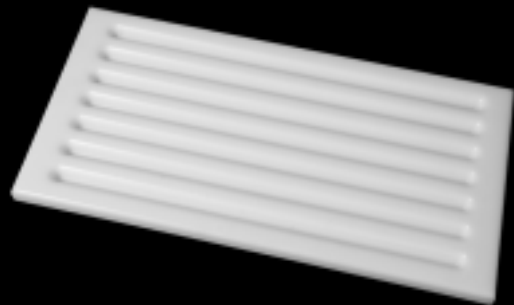
PE butcher table



Round and square stainless steel
handed cutting board

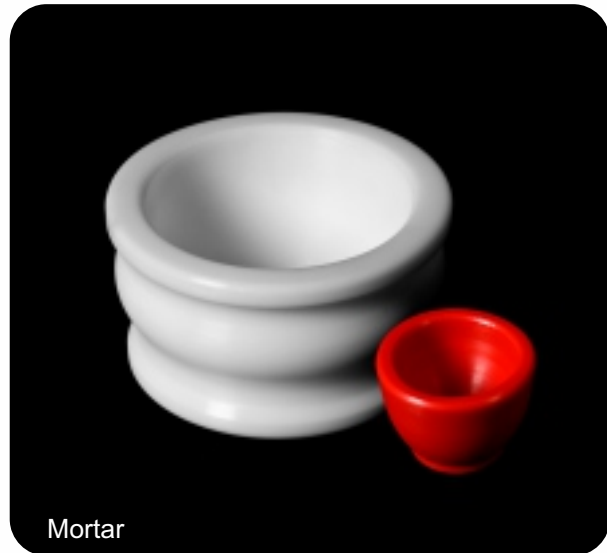


Cutting board with juice collecting channel



Bread board

vaplasol[®] 500 Applications



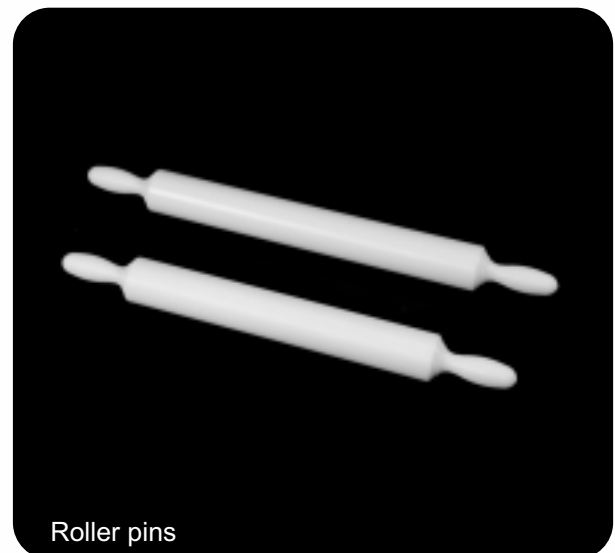
Mortar



Sauces dish

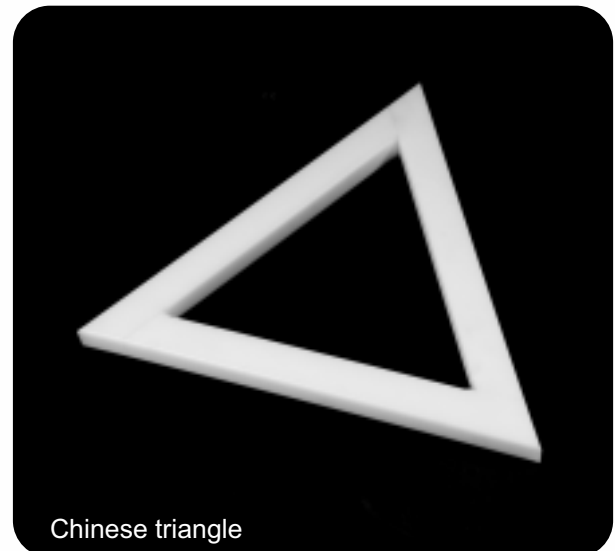
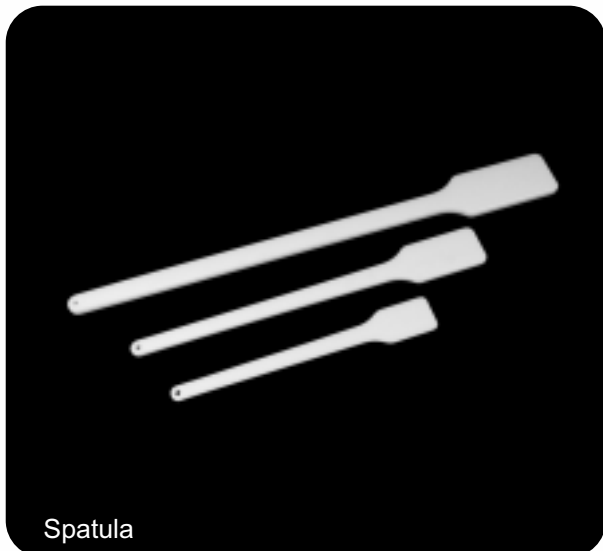


Chinese hand, mortar hand



Roller pins

vaplasol[®] 500 Applications



A close-up, low-angle shot of an industrial machine, likely a shear or guillotine, cutting a thick metal plate. The machine's heavy-duty metal frame and cutting tool are visible in the upper half of the frame. The metal plate being cut is in the foreground, showing a clean, straight edge. The background is dark and out of focus, emphasizing the machine and the cutting process.

vaplador[®]

Guaranteed Cutting Quality

Characteristics

VAPLADUR is a product especially designed and developed for industrial cutting professionals, who require a resistant and lasting product for the optimization of their work.

It is manufactured in guaranteed 1st quality polypropylene for a clean and precise cut.

Applications

Its versatility allows it to be used in a great variety of industries such as.

Textile, shoemaking, paper, carpets, leatherwork and cork etc.

Colour

- Natural.
- Light Green.
- Dark Green.
- Reddish Brown.
- Black.

STANDARD DIMENSION OF SHEETS (mm)	THICKNESS
900 x 450	Standard from 10 to 60 mm
1000 x 500	
1600 x 500	
2000 x 1000	
4000 x 1200	
4000 x 2000	

Tolerances: Size: - 1 mm, + 10 mm. Calibrate: + 0 mm + 0.3 mm. This dates are only informative, the company reserves the right to modify any value without previous notification.



General Properties

CHARACTERISTICS	PROPERTY	METHOD	VAPLATEC 500	VAPLATEC 1000	VAPLATEC PP
PHYSICAL	Molecular weight (g/mol)		Approx. 500,000	5,000,00	***
	Density (g/cm ³)	UNE-EN ISO 1183	0.950	0.930	> 0.900
	Shore hardness D	UNE-EN ISO 868	65	64	70
	Water absorption (%)	UNE-EN ISO 62	< 0.1	< 0.1	< 0.1
MECHANICAL	Tensile modulus of elasticity (MPa)	UNE-EN ISO 178	1400	915	1700
	Flexural stress (MPa)	UNE-EN ISO 178	32	23	45
	Yield stress (MPa)	UNE-EN ISO 527	29	22	36
	Ultimate tensile strength (MPa)	UNE-EN ISO 527	25	27	***
	Elongation at break (%)	UNE-EN ISO 527	870	290	24
	Charpy impact strength unnotched (Pendulum of 25 J) (KJ/m ²)	UNE-EN ISO 179-1	Do not break	Do not break	75
	Charpy impact strength notched (Pendulum of 25 J) (KJ/m ²)	UNE-EN ISO 179-1	50	100 (Partial break)	***
THERMAL	Wear resistance (Pattern: GUR 4120=100)	Sand Slurry test	250	100	***
	Melting temperature (°C)	UNE 1135-3	135	135	160
	VICAT softening temperature VICAT B50 (°C)	UNE-EN ISO 306	80	80	150
	Service temperature in continual (°C)		80	80	100
ELECTRICAL	Coefficient of linear thermal expansion (m/mK)	UNE 53126	8.70x10 ⁻⁵	1.00x10 ⁻⁴	6.9x10 ⁻⁵
	Surface resistivity (Ω)	UNE 21303	> 10 ¹²	> 10 ¹²	> 10 ¹²
	Volume resistivity (Ω.m)	UNE 21303	> 10 ¹²	> 10 ¹²	> 10 ¹²



Sheet sizes

PRODUCT	COLOURS	4000 x 2000 mm	4000 x 1200 mm	2300 x 1000 mm	2000 x 1000 mm
Vaplatec 500	Natural, green, black	10 - 150 mm	10 - 100 mm	10 - 25 mm	10 - 150 mm
Vaplatec 1000	Natural, green, black	10 - 150 mm	10 - 100 mm	***	10 - 80 mm
Vaplatec 500 RC	Black	10 - 100 mm	10 - 80 mm	10 - 25 mm	10 - 1000 mm
Vaplatec 500 Additivated		10 - 150 mm	10 - 100 mm	10 - 25 mm	10 - 80 mm
Vaplatec 1000 Additivated		10 - 150 mm	10 - 100 mm	***	10 - 80 mm
Vaplatec PP		10 - 60 mm	10 - 60 mm	10 - 25 mm	10 - 60 mm

Tolerances: Size: - 1 mm, + 10 mm. Calibrate: + 0 mm + 0.3 mm. This dates are only informative, the company reserves the right to modify any value without previous notification.

For more thickness, please, ask about to the commercial department.
For special colours, please ask about to the commercial department.

Chemical Resistance

TEMPERATURE (°C)	PE				PP			
	20	40	60	80	20	40	60	80
Diesel oil	+		0		0			
Corn oil	+	+	+		+	+	0	
Lubricant oil	+	+	0		0			
Mineral oil	+	+			+	+		
Oliver oil	+	+	0		+	+	+	+
Palm oil	+	+	0		+	+	0	
Silicone oil	+	+	+		+	+	+	+
Turpentine oil	+	+	-		+	+	-	
Acetaldehyde pure	+	0			0	-		
Vinyl acetate	+	+			+		0	
Acetone	+	+	+		+	+	+	
Acetic acid	+	+	0		+	0	-	
Carbonic acid	+	+	+		+	+	+	
Cytric acid	+	+	+		+	+	+	+
Chlorhidric acid (10%)	+	+			-			
Chlorhidric acid (20%)	0				-			
Phosphoric acid (50%)	+	+	+		+	+	+	
Nitric acid (25%)	+	+	+		+	0		
Nitric acid (50%)	+				-			
Sulphidric acid dilution	+	+	+		+	+	+	
Sulphuric acid (40%)	+	+	+		+	+	+	
Sulphuric acid (60%)	+	+	+		+	0	-	
Sulphuric acid (96%)	-				-			
Sea water	+	+	+		+	+	+	+
Aqua regia	-				-			
Camphor	0		-		0		-	
Pure ammonia gaseous	+	+	+		+	+	+	
Ammonia dilution	+	+	+		+	+	+	
Nitric anhydrid	+	+	+		+	0	-	
Aniline	-				-			
Sulphur	+	+	+		+	+	+	+
Benzene	0	0			0	-		
Bórax	+	+	+		+	+	+	+
Brome	-				-			
Quicklime	+	+	+		+	+	+	
Wax	+	+	+		+	+	+	
Cetinas	0	0	-		0	0	-	
Chlorine	-				-			
Chlorobenzene	0				+			
Chloroform	-				-			
Colouring	+	+	+		+	+	+	
Detergent	+	+	+		+	+	+	
Dichloroethylene	-				0			

TEMPERATURE (°C)	PE				PP			
	20	40	60	80	20	40	60	80
Ethanol	+	+	+		+	+	+	
Ether	0	0	-		0	0	-	
Alifatic ester	+	+	0		+	+	0	
Aromatic ester	0	0			0	0		
Petroleum ether	0	0	-		0	0	-	
Phenol	+	+	0		+	+	-	
Fertilizer	+	+	+		+	+	+	
Fluorine	-				-			
Formaldehyde (40%)	+	+	+		+	+		
Phosphates	+	+	+		+	+	+	+
Fuel-oil	0	-			0	-		
Glycerine	+	+	+		+	+	+	
Glycol	+	+	+		+	+	+	
Hexane	+		0		+		0	
Hydrogen pure	+	+	+		+	+	+	
Fruit juices	+	+	+		+	+	+	+
Soda lye	+	+	+		+	+	+	
Potash lye	+	+	+		+	+	+	
Hypochloride lye	+	+	-		+	+	-	
Mixed acids	-				-			
Methanol	+	+	+		+	+	+	
Nitrobenzene	+	0	0		+	0		
Oxygen pure	+	+	0		+	+	0	
Ozone	0	-			0	-		
Potassium permanganate	+	+	0		+	+		
Hydrogen peroxide (10%)	+	+	+		+	+	+	
Hydrogen peroxide (50%)	+				+			
Hydrogen peroxide (90%)	+		+		-			
Petroleum	+	+	0		+	0	0	
Pyridina	+	0	0		0	0	0	
Pytosanitary products	+	+	+	+	+	+	+	+
Salt	+	+	+	+	+	+	+	+
Zinc salt	+	+	+		+	+	+	
Magnesium salts	+	+	+		+	+	+	+
Potassium salts	+	+	+		+	+	+	+
Sodium salts	+	+	+		+	+	+	+
Soap solution	+	+	+		+	+	+	
Carbon tetrachloride	-				-			
Toluene	0				0			
Trichlorobenzene	-				-			
Sulphur trioxide	-				-			
Vaseline	+		0		0		-	
Xilene	-				-			
Iodine	+		0					



**Valenciana de
Plásticos Técnicos sl.**

Batans, 7
P.O. Box, 141
E-46870 ONTINYENT
(Valencia) SPAIN

Tel. 34-96 2910081
Fax 34-96 2387862

info@vapla.com
www.vapla.com