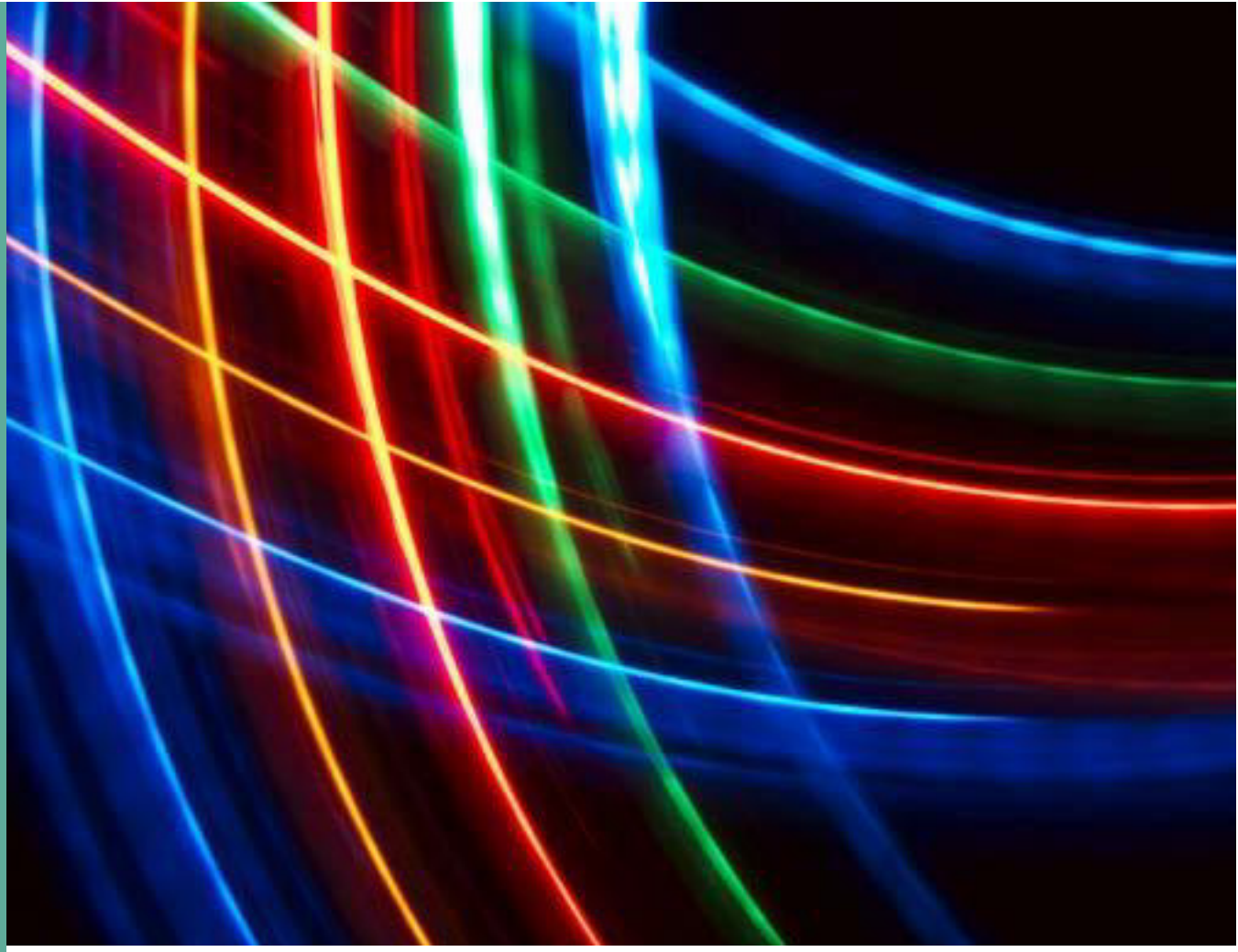


POLICap 540

TRANSPARENT POLYURETHANE-BASED ENCAPSULATION RESIN

PoliCAP is an innovative bi-component 2K resin, expertly designed for encapsulating LEDs and electronic components. It stands out for its fast curing capability at room temperature, ensuring a smooth, aesthetically pleasing finish, and excellent thermal expansion properties.

The defining feature of PoliCAP is its exceptional transparency. This transparency maintains the intensity of the luminous flux emitted by LEDs, making it an ideal choice for applications where light output is crucial. Furthermore, it provides robust protection for components under adverse operating conditions, ensuring both functionality and longevity.

Ideal for a range of electronic applications, PoliCAP combines quick curing, aesthetic quality, and outstanding transparency with effective protection, making it an optimal solution for LED encapsulation.

Features

- Excellent light transmission
- Flexibility to compensate for thermal expansion of printed circuits and components
- High Thermal Dissipation
- Guarantees IP69 protection level

Delivery Format

- 20L canisters
- 80L barrels
- 200L barrels

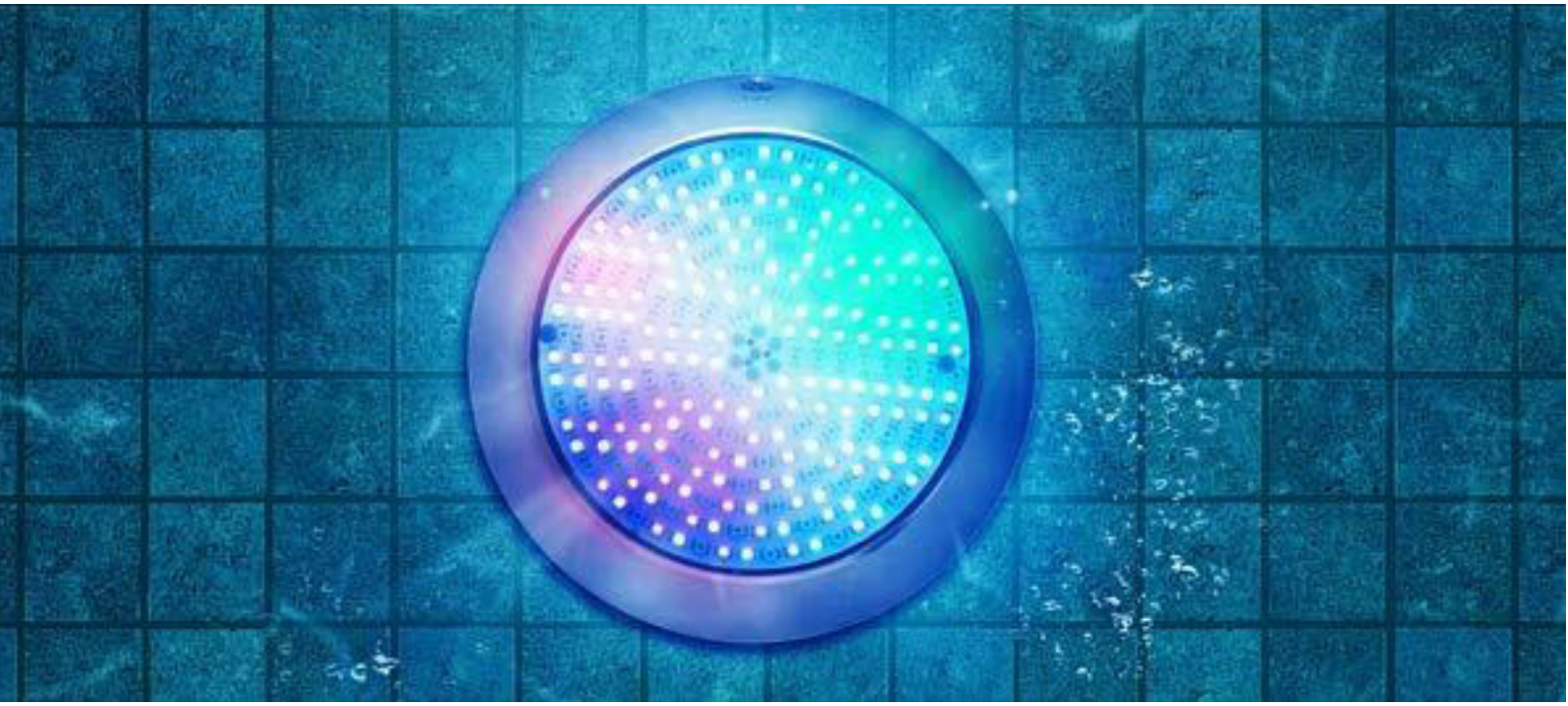
Remarks

1. It is the customer's responsibility to carry out the necessary tests for approval of the product in its final application, such as chemical compatibility tests and photometric tests.

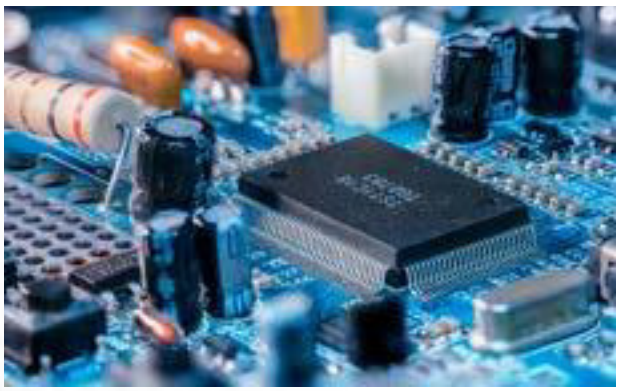
POLICap 540

TRANSPARENT POLYURETHANE-BASED ENCAPSULATION RESIN

Applications



- Internal and external lighting
- Underwater lighting
- Classified area lighting
- Headlights and beacon lamps
- Electronic equipment in general



PROPERTIES	Standart	Unit	POLICap 540	Endurecedor
Mechanical / Chemical (@ 25°C)				
Shelf-life (original packaging)	-	years	1	1
Color	Visual	-	Clear and Transparent	Clear and Transparent
Specific Gravity	ASTM D1475	g/ml	1.05 - 1.06	1.07 - 1.08
Viscosity	ISO 3219	mPas	250 - 650	150 - 450
Part by Volume (pbV)	**-**	**mL**	**100/100**	
Reactivity Data				
Gel time - 20g (*)	DIN 16945-16916	min	50 - 80	
Pot Life - 20g double initial viscosity (*)	ST04P15	min	10 - 12	
Curing Time				
Tack-free - removable (*) (**)	25°C 40% R.U.	hours	2 - 4	
Suggested curing cycle (**)	25°C 40% R.U.	hours	10 - 12	
Accelerated curing time (@ 50°C)	50°C <40% R.U.	min	15	
PROPERTIES OF CURED SYSTEM (***) (at 25°C)				
Density	ASTM D1475	g/ml	1.06	
Hardness	ASTM D2240	Shore D	20 - 26	
Glass Transition Temperature (DSC)	ASTM D3418	°C	5 - 15	
Linear Thermal Expansion (Tg-10°C) / (Tg+10°C)	DIN 53752	ppm/°C	80 / 210	
Refractive Index	Monochromatic light (633 nm)	-	1.51	
Transmission (2 mm layer)	Teste Interno	%	93	
Water Absorption - (1h100° / 7d23°)	DIN 53752	%	<0.8 / < 0.5	
Tensile Strength	ISO 527	N/mm^2	5 - 6	
Elongation at Break	ISO 527	%	400 - 500	
Flammability	UL 94	-	HB	
Thermal				
Thermal Conductivity	ISO 22007-2	W/m.k	0.25	
Operating Temperature (****)	IEC 600085	°C	-40 to 90	
Electric				
Dielectric Strength (50 Hz - 2 mm)	ASTM D149	kV/mm	20 - 25	
Volume Resistivity	ASTM D257	ohm-cm	1.4×10^{15}	

(*) For larger quantities the values are shorter and the exothermic peak increases.
(**) The final curing cycle should be defined according to each specific customer application. Moreover, the curing time will be adapted to size and quantity.
(***) All mentioned information is based on results gained from experience and tests. We guarantee the accuracy of the data, but they are given without acceptance of liability for application and characteristics of finished products, depending on technology and working methods of final users.
(****) Performance and reliability can be negatively affected for some applications if values fall outside the indicated range.

Application & Use Instructions

1. Control the temperature of the application environment between 20°C – 25°C and relative humidity below 30%.
2. Application must be carried out in a well-ventilated environment.
3. Ensure that the surfaces on which the resin will be applied are completely clean and dry.
4. Manual application: In a clean container, pour the desired amount of resin (A) Performance and reliability can be negatively affected for some applications if values fall outside the indicated range.
5. Continuously mix the components for at least 1min.
6. Pour the mixture into another clean container and mix again for at least 1 minute, this ensures the correct mixing of the two components.
7. If many bubbles form during mixing, they can be removed using a vibrating table or vacuum chamber.
8. Pour the resin over the components to be protected.
9. It is not recommended to apply large quantities at once. The curing of the resin occurs through an exothermic reaction that causes an increase in temperature, which can lead to the appearance of cracks and fissures.

Removal Instructions

- For cleaning before curing, acetone > 60% or industrial grade thinner can be used, after curing only mechanical removal is effective, using spatulas.

Storage and Handling

1. The product should be stored in a clean, dry place, out of direct sunlight, at temperatures below 40°C, hermetically sealed.
2. In its liquid state, PoliCap is flammable.
3. Contact with skin and eyes causes irritation.
4. In case of contact, wash the affected areas with running water.
5. If irritation persists, seek medical attention.
6. For more information consult the MSDS.
7. Keep the product away from hot surfaces and fire.