



**MG TECH**

PRODUCT CATALOGUE

# Liquid PCB Plastic Coating

## Electronic Circuit Waterproofing

A heat-free, plastic-based industrial protective coating — a real 20–200  $\mu\text{m}$  layer that makes PCBs, sensors and electronic circuits waterproof and mechanically strong.

[mgcoat.com](http://mgcoat.com)

## What it is

Liquid PCB Plastic Coating (MGCoat) is an industrial protective coating that makes printed circuit boards, sensors and electronic circuits waterproof. It is applied at room temperature with no oven or heat and forms a strong, non-transparent, plastic-based layer 20–200  $\mu\text{m}$  thick that protects against water, humidity, washing, condensation and corrosion while adding mechanical strength. It can be removed with a dedicated solvent for repair.

## Key advantages

### Real waterproofing

Engineered grades from rain-resistant to full immersion, tested powered at 24 V DC and 220 V AC.

### Heat-free, room temperature

Applied at 15–45 °C, initial dry in 8–10 min — safe for heat-sensitive boards.

### Mechanical reinforcement

A real 20–200  $\mu\text{m}$  plastic layer (not a 1  $\mu\text{m}$  film) that resists handling, vibration and scratches.

### Non-transparent coverage

White, black or grey finish hides the sensitive board design while protecting it.

### Multi-layer, made to grade

2–4 passes to reach the protection grade and thickness your application needs.

### Reworkable

Removable with a dedicated solvent for repair — your board is not locked forever.

## Technical specifications

<b>Initial dry time</b>	8-10 minutes
<b>Full cure (max. mechanical strength)</b>	12 hours
<b>Application temperature</b>	15-45 °C (optimal 25-35 °C)
<b>Operating temperature (cured)</b>	-55 °C to +90...110 °C
<b>Thickness per pass</b>	20-200 µm (normal grade 50-100 µm)
<b>Recommended passes</b>	2-4, repeatable to target thickness
<b>Dry time between passes</b>	10 minutes
<b>Coverage</b>	1 L ≈ 1 m <sup>2</sup> at 300-500 µm (more area when thinner)
<b>Colours</b>	White, black or grey (light-transmitting)
<b>Base / finish</b>	Plastic-based, non-transparent
<b>Reworkable</b>	Removable with a dedicated solvent
<b>Adhesion</b>	Film / membrane adhesion
<b>Shelf life</b>	5 years sealed

## Protection grades

Environment	Voltage	Passes
<b>Full water immersion</b>	AC 220 V	<b>4 passes</b>
<b>Full water immersion</b>	DC up to 24 V	<b>3 passes</b>
<b>Rain / splash resistant</b>	AC 220 V	<b>2 passes</b>
<b>Rain / splash resistant</b>	DC up to 24 V	<b>2 passes</b>

10 minutes initial dry are required between passes.

## How it is applied

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1. Clean the board and let it dry fully.
2. Mask connectors and any areas that must stay exposed.
3. Apply by full dip (or spray / brush). Make sure every part is covered with no trapped air.
4. Wait 10 minutes initial dry, then repeat — 2 to 4 passes per the required protection grade.
5. Visually inspect: the whole board must be covered, with no air pockets.
6. Full cure for 12 hours for maximum mechanical strength, then test.

## Verified tests

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### Powered immersion test

AC & DC, 27 V and 220 V — continuous operation

### Humidity test

+95 % RH — continuous operation

### Salt-spray test

Continuous operation

### Operating range

−55 °C to +110 °C

### Durability

The cured plastic film keeps protecting until it meets heat above 120 °C or a hard scratch (drill / cutting blade).

## Real test



1. PCB board



2. Submerged in water after coating



3. Powered and working under water

## Where to use it

Automotive ECUs & modules

Motorcycle electronics

Drones & FPV

CCTV & outdoor cameras

Marine sensors & boat lights

EV & battery management (BMS)

Solar inverters

LED boards & signage

Repair workshops

## Why MGCoat

Many market coatings are ultra-thin transparent films that add no mechanical protection. MGCoat builds a real plastic layer — non-transparent, reinforced, immersion-capable and reworkable — tested powered under water at 24 V DC and 220 V AC. It is a stronger, more durable choice for harsh, outdoor and high-reliability environments.

## Packaging & pricing

1-5 L	Standard packaging	
50 L	+ 10 L free	
100 L	+ 24 L free	
Up to 5 L		<b>\$199 — Turkey only</b>
50 L and above		<b>\$124 / unit — export packaging</b>

Pricing and specifications are confirmed at the time of order.

## Safety & handling

- Plastic-based: like most plastics it is somewhat flammable in liquid form — never expose the liquid to open flame.
- Once cured it is a stable plastic film and keeps working up to 120 °C.
- Reworkable: removable with a dedicated solvent for repair.
- After coating, always visually confirm full, air-free coverage of the board.

## Order & contact

Get a quote or place an order — message us directly on WhatsApp. Available in English, Russian, Turkish, Arabic and Persian. We also welcome resellers and regional partners.

[Order on WhatsApp](#)

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