

Plastic Coatings



Not just Plastic Coatings...

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The experts in finishing

For more than seventy years Plastic Coatings Ltd has been the leading coating specialist, focused on world class solutions & services.

We offer the widest range of coating materials including Thermoset & Thermoplastic Polymers, Epoxy, Fluoropolymers, Electrophoretic or E-Coat Paint, Primers and more.

Our reputation, expertise and resources for coating are second to none. Supported by world class quality systems and approved by top coating manufacturers such as PPG, Akzo Nobel, Axalta and approved by supply chains including Rolls Royce, BAE, GKN, Nissan, JLR, Ford, British Telecom and many more.

Our management system is approved by Lloyds Register to the following standards:

IATF 16949
ISO 9001
ISO 14001
ISO 45001



Whatever you require contact our experts to discuss the most effective and efficient solution to your individual requirements.

- Bonded Lubricant Coating
- Non-stick
- Electrophoretic Painting
- Electrostatically Sprayed Thermoplastics
- Plastic Coating
- Platisol Coating
- Epoxy Coating
- Powder Coating (Electrostatic)
- Thermoplastic Dip Coating
- Low Friction Coating
- Specialist Coating
- Pre-treatment
- Shot Peening
- Delivery Collection Service

We also manufacture original equipment telecommunication dropwire clamps for British Telecom and their sub-contractors.

Contact us for a free quote

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made better...



Our corrosion resistant coatings are used extensively in severe atmospheres such as oil rigs, chemical processing plants and sub-sea applications.

Corrosion Resistance

Corrosion is visually unappealing, reduces service life, and requires extra maintenance. It can lead to premature failure resulting in unnecessary cost and potential reputation damage.

One way to avoid corrosion is to create a barrier between the component and its environment. This is usually done through a coating system.

Selecting the most appropriate coating system for each requirement is key to getting the cost benefit right.

That's where it pays to talk to the coating experts Plastic Coatings Ltd. We will work with you to understand your specific requirement and identify appropriate treatments (such as gritblast, phosphate, plating etc.) and coating materials to achieve both environmental and commercial demands.

Applicable processes

- Electrophoretic Painting
- Wet Spraying/Low Friction Coating
- Plastisol Coating
- Thermoplastic Dip Coating
- 2 Pack Paints
- Epoxy

Please see pages 12-15

Up to

20 years

Service life, depending upon the system used and testing criteria.

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+1000%

Increase in service life of rubber components coated with low friction coatings and exposed to repeated abrasion.

Applicable processes

- Wet Spraying/Low Friction Coating
- Fluidised Bed Dipping
- Platisol Coating
- Powder Coating (Electrostatic)

Please see pages 12-15



/ Non-stick coating used on a mould tool eliminating the need for release agents.

High Performance Coatings

Dry Film Lubrication / Low Friction / Anti-Galvanic Corrosion / Release

We offer a comprehensive range of solutions that facilitate the ease of product assembly/disassembly, increase component longevity and help reduce maintenance.

Our coatings contain varying proportions of technical materials, resins and other ingredients, exactly what is contained in each of the different coatings' material recipes depends upon the desired coating film performance. Often it is not just the non-stick or low friction type of performance that is required, there will be a need for corrosion resistance, chemical resistance, humidity resistance, high and low temperature resistance and even colour coding for identification.

Applications include:

- Chutes
- Fasteners
- Seals
- Pistons
- Valves
- Chain Links
- Gaskets

Coating solutions include:

- ECTFE, PFA, PTFE alternatives
- Molybdenum disulfide
- Graphite
- Halar®
- Nylon
- Xylan®/Xylar®

Non-stick

Our non-stick coating solutions are ideal for applications that demand freedom of movement during the manufacturing process or for food preparation/handling situations where minimal adhesion between the material and the component is a necessity.

Typical components include:

- Cookware
- Moulds
- Runners
- Rollers

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Insulating & EV Coatings

Thermoplastic coatings are an excellent insulator and are used extensively in electrical applications where insulation of up to 15kV can be achieved. Further benefits of the insulating properties can include a 'warm-to-touch' or soft feel and sound deadening or noise reduction.

Benefits include:

- No VOCs
- No chlorine or any other halide
- No sulphur or nitrogen
- No Triglycidyl isocyanurate (TGIC)
- No Phthalates or other plasticisers
- No Bisphenol A
- No heavy metals
- Low in smoke and toxic fumes in the event of a fire
- Self-extinguishing coatings

Certain thermoplastic coating systems can withstand up to 20,000 hours of salt spray in accordance with ASTM B117 with no blistering, cracking, corrosion or flaking.

Plastic Coatings Ltd have been working on electrical component insulation for vehicles for well over 10 years, predominantly with motorsport companies and KERS (Kinetic Energy Recovery Systems). We've also been working on electrical insulation of safety critical components for Aerospace and Defence applications for more than 20 years.

Applicable processes

- Powder Coating (Electrostatic)
- Fluidised Bed Dipping
- Plastisol Coating
- PVC Coating

Please see pages 12-15

Up to

15kv

Can be achieved depending on coating system and thickness.



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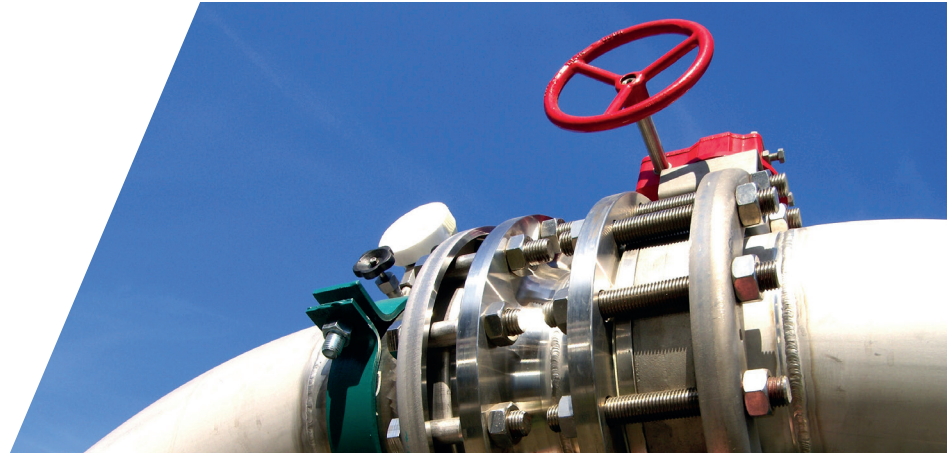
Resistant

Against high concentrations of harmful chemicals.

Applicable processes

- Wet Spraying/PTFE Alternatives
- Fluidised Bed Dipping
- Plastisol Coating
- Powder Coating (Electrostatic)

Please see pages 12-15



Chemical Resistance

Regardless of the industry you work in, chemical exposure can shorten the life span of a component. From automotive applications (brake fluids, coolant, petrol and diesel) to aerospace applications (aviation fuel, air conditioning fluid and lubricants) to domestic applications (household cleaners, bleach and detergents) and the chemical industry (hydrochloric acid, hydrofluoric acid, granular ingredients, resins and strong alkalis) we have one of the widest ranges of chemically resistant coatings available from one supplier.

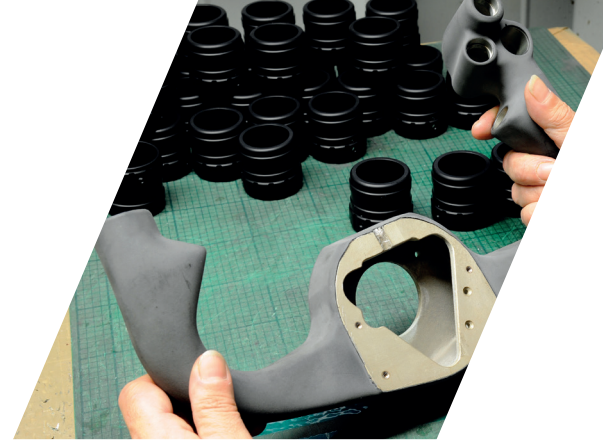
For further information please consult our technical team, specifying your requirement e.g nature of metal to be protected and the temperature and chemical composition you would like to resist.

Plastic Coatings offers vital protection and durability to valve components that are required to perform continuously in the most demanding environments. Many of our coated products are supplied to industries where repairs or maintenance due to damage or corrosion mean costly downtime.

Applying the right type of coating to key components ensures longer life and reliability for equipment in a wide range of situations.

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Our Processes



Powder Coating (Electrostatic)

Common powder coating materials include Epoxy, Epoxy Polyester & Polyester Powder Coating. There are various sub grades of these materials available for different industries such as Architectural, Automotive and Rail industries. The range of coating materials available means the cost of coating can be tailored to suit your project needs.

The powder coating process involves spraying electrostatically charged particles of powder around a substrate (component) which is earthed via its hanging point. At this point the particles of powder are held on to the substrate (component) purely by the induced (electrostatic) charge.

Both component and powder are then stoved in accordance with best practice and the powder manufacturers' technical guidelines, ensuring full cure is achieved (chemically cross links). This irreversible change results in a smooth, attractive, durable finish.

Features include:

- Excellent decorative finish
- Variety of colours available
- Swift turnaround
- Environmentally friendly process (no solvents used)
- Thin, hard, long lasting coating
- Textures, hammer and metallic finishes
- Excellent corrosion resistance combined with Electropaint
- 4 Electrostatic powder lines

Electrophoretic Painting (E-Coat)

E Coat, EP Paint, Electropaint, Electrophoretic Paint - known by various names, has become established in recent years as an economical and corrosion resistant finish on its own or as a primer.

Predominantly used in the automotive market for under bonnet and passenger compartment components it is a black paint finish with a uniform thickness ranging from 15 microns up to 30 microns. The coating system's economical benefits mean that it has in recent times been adopted by varying industries as an undercoat or finish of choice where cosmetics are less critical than performance.

Features include:

- Black paint thickness ranging from 15 microns up to 30 microns
- All over coating due to submersion process
- Excellent corrosion resistance, in excess of 1000 hours to ASTM B117
- Good as a primer to enhance performance of other coatings
- Economical
- Fast turnaround as process is 'always on'
- Prototype to production volume



Fluidised Bed Dipping

Thermoplastic coating material is ground into a fine powder and kept in a steel box (Fluid Bed) open at the top and with a fine gauze across the bottom, fine enough not to let the powder particles through. Air is then introduced up through the gauze which makes the powder particles rise and act like a box of fluid, hence 'Fluidised Bed'.

Metal components are pretreated, usually degreased and shotblasted, heated up to between 250 and 400 degrees C depending upon the coating required, then dipped into the Fluid Bed of plastic. The powder particles melt onto the metalwork forming a smooth continuous coating.

Coating materials used can be Low Density Polyethylene, the PPA® range, Talisman®, Deconyl® Nylon 11 (Rilsan®) and Vyflex® PVC.

Features include:

- Thicker coatings (0.3mm up to 1.5mm)
- Smooth continuous coating
- Very long service life
- Extreme corrosion resistance
- Excellent chemical resistance
- Good edge (metal) coverage
- Excellent UV and weather resistance
- Non-toxic coatings
- Warm to touch properties
- Insulating properties

Plastisol Coating

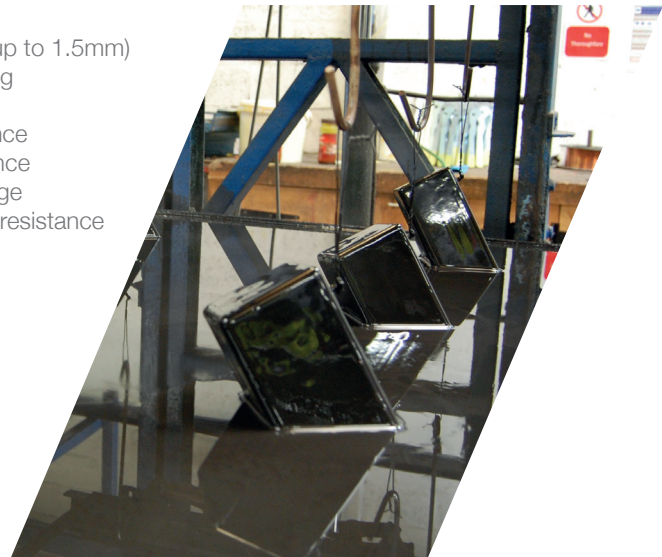
Vylastic® or Plastisol coating is an excellent insulator, and as such is used extensively in electrical applications. Further benefits of the insulating properties include a 'warm-to-touch' or soft feel and sound deadening or noise reduction.

In addition the coating is renowned for extreme severe corrosion resistance, excellent chemical (acid and alkali) resistance and its ability to resist impact damage or chipping.

Our trade name for the application of plastisols is Vylastic® PVC dip coating and Polymer EV250 for electric vehicle applications.

Features include:

- Extreme severe corrosion resistance
- Sound deadening
- Severe Impact resistance
- Wear resistance
- Cushion coating, protecting sensitive surfaces
- Electrical resistance
- Chemical resistance (acids and alkalis)
- Soft feel coating



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Wet Spraying

PTFE alternative coatings are often known by their familiar or trade names, Teflon®, Xylan®, Fluoroplastic, Fluoropolymer or Fluorocarbon coating and they take the form of a liquid paint which is sprayed onto a substrate (metals, rubbers, plastics etc.) that needs to be enhanced.

The liquid coating contains varying proportions of the technical materials, resins and other ingredients, exactly what is contained in each of the different coatings' material recipes depends upon the desired coating film performance. Often it is not just the non-stick or low friction type of performance that is required, there will be a need for corrosion resistance, chemical resistance, humidity resistance, high and low temperature resistance & even colour coding for identification.

Features include:

- Non-stick or excellent release properties
- Good dry lubricant
- Excellent low friction
- Thin coating which does not interfere with fit
- Heat resistance up to 300 degrees C
- Anti-squeak
- Insulating properties
- Conductive versions available





Pre-treatment

Any coating is only as good as its pre-treatment. The key to coating performance, whether it is corrosion resistance, chemical resistance or coating adhesion etc. is to have a properly applied coating over a suitable combination of pre-treatments – consider this a ‘coating system’ rather than just a coating.

Proper definition and specification of a ‘coating system’ gives assurance of coating performance and ensures that the performance is achieved at a cost appropriate to the product and the customer.

Depending upon what you need your coating system to achieve, pre-treatment will have several stages including:

- Stripping
- Degreasing
- Blasting
- Shotpeening
- Phosphating
- De-embrittlement
- Primers
- Undercoats

Plastic Coatings Ltd have all of these treatments in-house, controlled to the same exacting standards as our coating application facilities.



Enquiries

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