

POETON

High Specification Coatings

Engineering Industries

Apticote Coatings for the Engineering Industries

Poeton offers a wide range of coatings for the engineering industry.

- Wear resistant coatings, including hard chrome, thermally sprayed coatings and electroless nickel
- Anti-corrosion coatings, including anodic treatments for lightweight alloys of aluminium, titanium and magnesium
- Anti-fretting coatings
- Low friction coatings for sliding situations
- Anti-galling coatings
- Thermal barrier coatings
- Electrically insulating coatings



Typical Apticote Applications in Engineering Industries

- **Farming machinery** - couplings, splines, shafts
- **Excavators** - pneumatics, hydraulics
- **Lifting machinery** - rams, clutches and pulleys
- **Mining industry** - hydraulics
- **Water industry** - pumps and valves
- **Construction industry** - lifting gear,
- **Textile components** - guides, heaters, spinners, rollers

The Poeton Apticote range of coatings can deliver wear and corrosion resistance across a wide spectrum of heavy engineering application. Our specialty is precision coating, reducing the need for expensive post-coating finishing operations - an important aspect when dealing with shafts and rams. And if it comes to a need for reduced friction or anti-fretting, our polymer coatings, combined with our hard engineering coatings, can solve many problems in clutches, couplings and splines.

We are at the forefront of surface coating and treatment suppliers to some of the world's leading Engineering companies, and one of our crucial advantages is our technical support and laboratory backup. Using our expertise in characterising and understanding wear and corrosion processes, we work with our customers on a project basis, ensuring that the most effective coating solution is identified.

A case-history

Industrial scale rubber moulding

Problem - Rubber moulding is a major engineering business, made more difficult by the enforced removal of solvent-based release agents. Whilst water-based products can just about do the job, they are less effective and less durable than the environmentally unfriendly versions. Our customer was complaining of lower production rates, high costs for his release agents, and unacceptable down-times.



Solution - Poeton undertook a laboratory research project, testing the rubber product against a range of our non-stick coatings. It takes a very specialist coating to cope with the stickiness of elastomeric materials, but we found just the one - the Poeton **Apticote 460G** advanced electroless nickel/polymer composite. Now the customer has greatly reduced his down-time and eliminated a lot of the costs involved in using release agents. What's more, as a bonus, the surface characteristics of the finished moulding are vastly superior.

Which Apticote coating do I specify?

Apticote Coating	Features	Application areas and benefits
Apticote 100	Precision hard chrome	We specialise in precision plating, using jigging and robbers custom designed in our workshop, avoiding the need for expensive post-grinding or finishing. Parts include rams, shafts, pneumatics and hydraulics. We can provide an undercoat of thin-dense chrome for ensured corrosion protection.
Apticote 300	Hard anodising and sulphuric acid anodising of aluminium, and titanium anodising	Our sulphuric acid anodising gives more than 1500 salt spray protection, and we can rack plate in large batches, ideal for corrosion protection of aluminium castings and brackets. Our Apticote 300 hard anodising provides exceptional wear resistance, and is suitable lightweight structural parts that might be subject to mild erosion.
Apticote 350 & Apticote 355/356	Composite hard anodising of aluminium	A range of anodic specialised processes with polymer infusion, providing exceptional wear and corrosion protection (up to 15,000 hours salt spray) for aluminium alloys used in the more aggressive environments.
Apticote 400	High quality electroless nickel coatings	Ideal for precision parts needing anti-fretting and corrosion protection, on parts such as splines, couplings and gasket faces. The Apticote 400P variant gives exceptional corrosion protection.
Apticote 450	An electroless nickel/polymer composite	Providing very low friction, wear resistance and anti-fretting on couplings, clutches and splines. Also good for anti-galling on threads.
Apticote 800	Thermally sprayed coatings	We offer a wide range of metals, cermets and ceramics for wear resistance on heavy engineering parts, and for electrical insulation. Poeton will advise on which of our many coatings, cermets, ceramics and alloys, is the best choice for your application.
Apticote Keronite 3000	An electro-ceramic coating for aluminium, magnesium and titanium	The ultimate wear protection for parts made in lightweight alloys. Also, electrically insulating.

A case-history

Industrial scale labelling

Problem - Labelling Systems is one of Europe's largest labelling companies with a capacity of 6.7 billion tickets, tags and labels every year. Several of the label presses operate a re-lam and de-lam technique that peels the backing paper from a self-adhesive stock, allowing the machine to print onto the adhesive. It then joins the two substrates together again.

The stock can stick to the rollers when the machine is running, and to minimise the problem, our customer had been covering the rollers with a layer of silicone paper - not a very effective or cost efficient solution, involving down-time and costly labour.



Solution - Poeton had a tried and tested product waiting for this problem, the **Apticote 810SP**, an advanced thermal spray/polymer composite. Normal non-stick coatings are just not robust enough to last very long under such arduous operating conditions, but the unique **Apticote 810SP** system has solved the problem of how to get a non-stick coating to firmly anchor to the print rollers, and stay there whilst it performs its 'easy release' function for the labels.

Now the machines are churning out the labels trouble-free, with more rollers being coated by Poeton every month.

Disclaimer

The information contained in this leaflet is intended for guidance. Whilst every effort is made to understand the environment in which the coating is designed to work, success can only be determined by trials and in-service testing.



Poeton Industries Ltd,
Eastern Avenue,
Gloucester, GL4 3DN

NADCAP Accreditation is held by Poeton Industries Ltd with Poeton (Gloucester) Ltd Accredited for Plasma Spray (coatings) and Chemical processing, and Poeton (Cardiff) Ltd Accredited for Chemical Processing and NDT

For more information, please contact our Sales or Technical Department, (44) 1452 300 500, info@poeton.co.uk