POETON
EST. 1898

APTICOTE
FROM POETON

APTICOTE 300

ANODISING

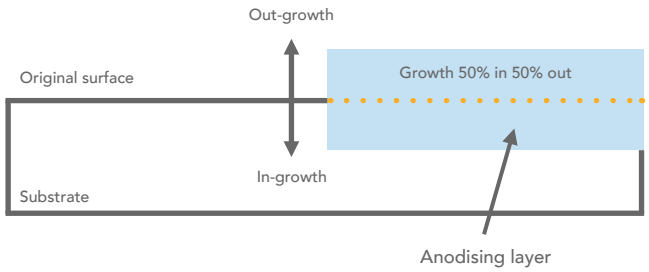
Apticote 300 covers a range of anodising processes, including hard, sulphuric, chromic, tartaric sulphuric acid and boric sulphuric anodising. Each of these processes offers its own unique benefits, from maximising hardness to ensuring the highest levels of corrosion resistance and lowest impact on fatigue strength.

Anodising is an electrolytic process for aluminium alloys, which transforms the surface layer into aluminium oxide. Within an acid bath, the part becomes the anode and, utilising various metal cathodes, a closely controlled DC voltage is applied across them.

Hard anodising is distinct from sulphuric and chromic acid anodising in that the electrolyte is chilled. The thermodynamics are then such that a much thicker and harder coating is produced, one that provides wear resistance as well as corrosion protection.

ALUMINIUM OXIDE GROWTH

The diagram below illustrates how the anodising process causes equal growth of the aluminium oxide layer both internally and externally.



APTICOTE 300 OPTIONS	
Apticote 300N	For maximum hardness and wear resistance
Apticote 300W	For improved fatigue strength
Apticote 300A/D	For maximum fatigue strength, combined with corrosion protection
Apticote 300M	For greatest coating thickness
Apticote 300SU	For best versatility
Apticote 300CR	For anti-corrosion properties
Apticote 300TSA	Chromic replacement

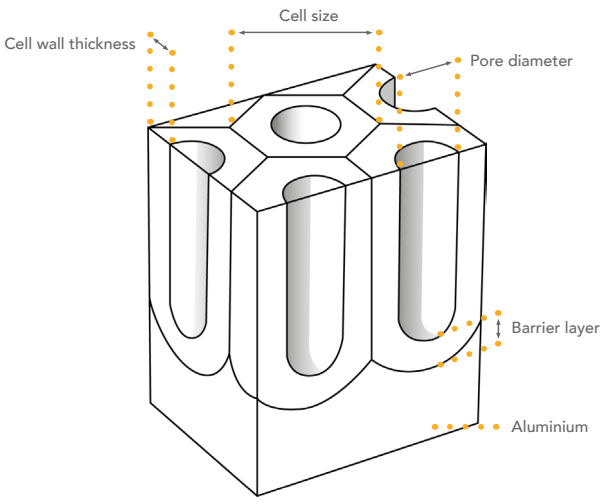
SEALING DETAIL

Anodising creates a micro-column structure. For maximum protection, anodised layers are usually sealed immediately after the main coating process, filling the micro-columns and preventing access to the substrate. Typical sealing techniques include: Hot water, Nickel acetate and Di-chromate (Aerospace only). It is also possible to infuse the layer with a polymer (see Apticote 350/355 information sheets).

KEY FEATURES & APPLICATIONS

Apticote 300 exhibits a wide range of complementary properties and application uses, such as:

- High hardness
- Very low wear
- Excellent corrosion protection
- Precise coating thickness
- Uniform coverage
- Excellent paint adhesion
- Coats a range of aluminium alloys
- Can be dyed black or red
- Gears and pulleys
- Valve blocks
- Hydraulics
- Pneumatics
- Pistons
- Hinges
- Swivel joints
- Rod-ends
- Food chutes
- Nozzles and venturi



Microsection of an anodic film showing cellular porosity

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