Blockade GC coated fasteners

(with blue tint)

Corrosion control around all aircraft mechanical fasteners and rivets, including control of down-hole corrosion.

Blockade GC promises reliable and improved corrosion control around aircraft mechanical fasteners and rivets, including effective control of down-hole corrosion. This eco-friendly, low cost coating is applied to hardware at the factory and delivered parts are ready for install, with no additional processing steps. Blockade GC works by blocking the galvanic couple between mated components, inhibiting the formation of corrosion.

For aircraft program managers, Blockade GC significantly reduces repair costs and maintenance time associated with corrosion around fasteners and rivets by inhibiting the initiation of corrosion.

Blockade GC on Cd plated steel fasteners Scribe over holes on coated 7075 panel



3000 hours B117 expsoure

Minimal corrosion in hole and scribe





Install parts as directly received from the factory

Thin coating layer (2 to 5 µm) for compliance with engineering designs

Excellent adhesion of primer overcoat to Blockade GC coated fasteners and rivets

3000 hours B117

Blockade GC

Cd plated steel

fasteners without

Total Corrosion Control

Improve corrosion control around all rivets and fasteners, including down-hole corrosion

Durable and dense barrier that blocks the galvanic couple between mated components

Protection for any metal or plated fastener types, including Cadmium or Zinc-Nickel plated

Reliable Protection

Achieve consistent and predictable corrosion control

Factory application of coating ensures

complete coverage

of every part

Consistent protection with or without the use of wet install primers or additional CPC

Low Cost

Use low-cost fastener types and recognize performance greater than or equal to Titanium

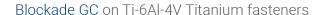
Smart, eco-friendly

Smart, eco-friendly sol-fel formulation yields lower-cost production and application processes

Proven performance with low-cost fastener types, including SS 316

Use low-cost fastener types and recognize corrosion protection greater than or equal to higher cost materials.







500 hours B117 expsoure

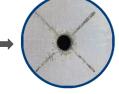


-



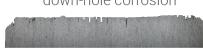
Ti-6Al-4V fasteners without Blockade GC







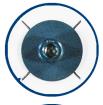
down-hole corrosion



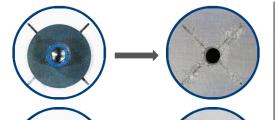
cross section of fastener holes after B117



Blockade GC on 316 Stainless Steel fasteners

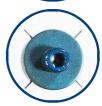


500 hours B117 expsoure





316 SS fasteners without Blockade GC



AA7075-T6 panels, coated: Surtec 650V TCP + 44GN072 Primer + 03W127A Topcoat





Product maturity

Luna is currently seeking specifc aircraft platform partners to validate and qualify Blockade GC. In progress (updated Dec 2019):

- Air Force Commercialization Readiness Program with B-52 and KC-135
- Other fasteners: ZnNi plating and IVD Al
- Additional chemical/fluid immersion tests

This work is based upon support by the United States Navy under Contract No N68335-16-C-0121. Any opinions, findings and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the United States Navy.