

Evaluation of “VCI” Impregnated Products for the Retail Gun Market

- Background:** Companies are starting to create products for the retail gun/fishing market with “VCI” technologies.
- Purpose:** Evaluate the effectiveness of the competitors VCI products and compare the results to the Bull-Frog products.
- Materials:** Bull Frog Gun Sleeve
 Bull Frog Strips
 Bull Frog Emitter Cup
 Bull Frog Lubricant with Rust Blocker
 Beretta VCI Gun Sleeve, manufactured by Gun Soc
 “Inhibitor” VCI Pro Chips
 VCI 80 oil
 1010 Carbon Steel Panels
 Razor Blade Test Kit
 VIA Test Kit
- Method:** Razor Blade Test
 VIA Test
 ASTM-D-1748 Humidity Test
- Procedure:** The Razor Blade and VIA tests were performed according to standard procedures for each.

Results:

Razor Blade Test

Material	Panel #1	Panel #2	Panel #3
Beretta VCI Gun Sleeve	Pass	Pass	Pass
Bull-Frog Gun Sleeve*	Pass	Pass	Pass
Control	Fail	Fail	Fail

VIA Test

Material	Panel #1	Panel #2	Panel #3
Beretta VCI Gun Sleeve	3	3	3
Bull-Frog Gun Sleeve*	3	3	3
“Inhibitor” VCI Pro Chips	1	1	2
Bull-Frog Strips*	3	3	3
Control	0	0	0

ASTM-D-1748 Humidity Test

Product	Time to Failure (hours)
VCI 80 oil	385
Bull Frog Lubricant with Rust Blocker*	1000*

*- typical results



Conclusion: The Beretta VCI Gun sleeve does provide Vapor Phase Corrosion protection but does so by being heavily nitrite based. The "Inhibitor" VCI Pro Chips provide little to no vapor phase corrosion inhibition. The Bull Frog Lubricant with Rust Blocker provided superior corrosion protection when compared to the VCI 80 oil.

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VIA Test Grades (Grade 2 or 3 are passing)

- Grade 0: Blind test
No corrosion inhibiting effect
- Grade 1: Blind test
Minute corrosion inhibiting effect
- Grade 2: Blind test
Medium corrosion inhibiting effect
- Grade 3: Blind test
Good corrosion inhibiting effect

