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Comparing BioCorr to Various Rust Preventive Fluids used for Transmissions

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Background: Customer sent four liquid samples to Cortec. These samples will be tested in accelerated corrosion testing and compared to various Cortec products, including BioCorr FT, which was developed to meet the product standards for transmissions.

Sample Received: Armor Dry Coat Rust Preventative
NCOC Unicoat 627
NCOC Unicoat 672
NCOC NC-3098

Method: ASTM D-1748 Humidity Cabinet (120°F, >95% humidity)

Materials: Armor Dry Coat Rust Preventative
NCOC Unicoat 627
NCOC Unicoat 672
NCOC NC-3098
BioCorr
BioCorr FT
1010 carbon steel panels
Lab grade methanol

Procedure: The following procedure was used:

- 1) Prior to testing, seven carbon steel panels were cleaned with methanol.
- 2) After cleaning, panels were treated as follows:
 - a. No treatment (control)
 - b. Dipped in Armor Dry Coat
 - c. Dipped in Unicoat 627
 - d. Dipped in Unicoat 672
 - e. Dipped in NC-3098
 - f. Dipped in BioCorr
 - g. Dipped in BioCorr FT
- 3) After dipping, all panels were allowed to air dry overnight.
- 4) Panels were then placed in ASTM D-1748 humidity cabinet.
- 5) All panels were visually inspected periodically.
- 6) After 500 hours, all panels were removed from ASTM D-1748 humidity cabinet.
- 7) Panels were visually inspected and photographed.

Results:

The following results were found:

Panel Treatment	Time to Corrosion (Hours)
None (control)	<24
Armor Dry Coat	360
Unicoat 627	336
Unicoat 672	120
NC-3098	336
BioCorr	DNF*
BioCorr FT	500

Photos:





UNICOAT 627



UNICOAT 672



BIOCORR



BIOCORR FT

Interpretations: After 500 hours of ASTM D-1748 humidity testing, both versions of BioCorr provided the best corrosion protection. The various products currently used by customer lasted between 120 and 360 hours, while BioCorr FT lasted 500 hours.