

Preliminary Report

Comparison of Biocorr to Rust Check T for Command Tooling Systems

Background: Command Tooling Systems currently utilizes RUSTCHECK T from Stirling Lubricants for their rust prevention. They are interested in a safer water based product to replace oil-based that will provide the same level of corrosion protection they currently receive.

Purpose: Compare the corrosion prevention capabilities of the Biocorr Rust Preventative to RUSTCHECK T oil in the ASTM-D-1748 Humidity cabinet.

Materials: Biocorr Rust Preventative (RP)
RUSTCHECK T
1010 Carbon Steel Panels
Steel Parts provided by Command Tooling Systems

Method: ASTM-D-1748

Procedure: The following procedure was followed:

- 1) 1010 Carbon Steel panels were coated as follows:
 - a. Panel A40 was rinsed with methanol and left untreated as a control
 - b. Panel B40 was dipped in Biocorr RP and allowed to fully dry
 - c. Panel C40 was sprayed with RUSTCHECK T, suspended, and the excess was allowed to drip off
- 2) Four of the components from Command Tooling Systems were rinsed with methanol and prepared as follows:
 - a. Part D40 was dipped in Biocorr RP and allowed to fully dry
 - b. Part E40 was sprayed with RUSTCHECK T and the excess was allowed to drain off the part
 - c. Part F40 was dipped in Biocorr RP and allowed to fully dry
 - d. Part G40 was sprayed with RUSTCHECK T and the excess was allowed to drain off the part.
- 3) The panels and parts were suspended in the ASTM-D-1748 chamber and periodically inspected.

- 4) After 297 hours the parts were removed from the ASTM-D-1748 chamber and the panels were left in the chamber
- 5) After 456 total hours in the cabinet the 1010 Carbon Steel Panels were removed, all the parts were inspected, photographed, and a report was written.

Results:

1010 Carbon Steel Panels

Panel	Time to Failure (hours)
A40	< 24
B40	456
C40	456

Components provided by Command Tooling Systems

Parts	Time to Failure (hours)
D40	288
E40	288
F40	288
G40	288

Conclusion: BioCorr provided equal corrosion protection to the 1010 carbon steel panels and steel parts from Command Tooling Systems when compared to the RUSTCHECK T. Compared to RUSTCHECK T, Biocorr RP is safer to work, easier to handle and forms a very thin dry film.

Project #: 05-218-1525









