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Evaluation of VpCI-377 for Customer

Background: A customer is currently utilizing a Fuchs oil based rust preventative (RP) for the corrosion protection of their components and then wrapping the parts in VpCI-126 film. They are interested in finding a replacement for the oil that will be compatible with the VpCI-126 film. Cortec's distributor company suggested for them to utilize the VpCI-377 for this application.

Purpose: Compare the VpCI-377 to the Fuchs oil on the components provided by Distributor

Materials: VpCI-126 Blue Film, manufactured by Cortec in the United States of America
2 packages of components, treated with Fuchs RP
Ecoair VpCI-377
Ecoair VpCI-414 Cleaner

Method: Modified ASTM-D-1748

Procedure: The following procedure was followed:

1) 2 trays of components arrived heavily coated with oil and wrapped in VpCI-126 film.
2) The film was removed from both trays and the components were inspected.
3) One set of components and the tray they arrived on were cleaned with the Ecoair VpCI-414 to remove the Fuchs oil.
4) Next these components were coated with VpCI-377 from an Ecoair container and allowed to fully dry.
5) Both of the trays were labeled and then placed in VpCI-126 Blue film and heat sealed.
6) After 24 hours the trays were placed in the modified ASTM-D-1748 Humidity cabinet and periodically inspected.
7) The components were removed from the modified ASTM-D-1748 chamber after 1632 hours, inspected, photographed and a report was written.
    a. The chamber was kept between 115°F and 120°F and 100% Relative Humidity (RH), but was reduced to room temperature and 50% RH for a total of 248 hours during the test at varied intervals.

Results: Less than 1% of the total surface area of the components treated with VpCI-377 and wrapped in VpCI-126 Blue film was corroded.
Greater than 10% of the total surface area of the components treated with the Fuchs oil and wrapped in VpCI-126 Blue film was corroded.

Conclusion: VpCI-377 greatly outperformed the Fuchs oil when utilized with the VpCI-126 Blue film for the corrosion protection of the components tested. The synergy between Cortec products was clearly evident by the tenfold decrease in corrosion between the sample with VpCI-377 and the sample treated with the Fuchs oil.

Project #: 05-239-1825