TC-11® Corrosion Inhibitor

Versus

Corrosion Block® and CorrosionX®

July 2006

.

Corrosion Test Methodology

1. Identical Type S Steel Q-Panels are chemically cleaned and treated once with a competing product.
2. The Q-Panels are mounted in a vertical position for 24-hours.
3. The Q Panels are mounted on a test panel.
4. The Q-Panels are exposed to identical environmental exposures – full tropical sunlight, intermittent rainfall, a salt breeze, and a nightly condensation cycle.
5. The Q Panels are photographed at 24-hour intervals using sunlight as the light source.

Start of Test

Corrosion Block

TC-11

CorrosionX

Day One

Corrosion Block

TC-11

CorrosionX

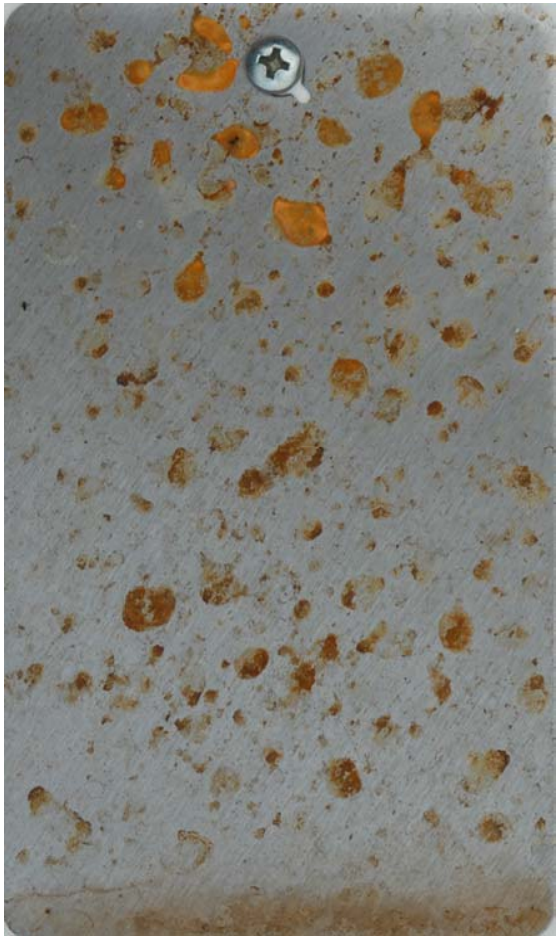
Day Two

Corrosion Block

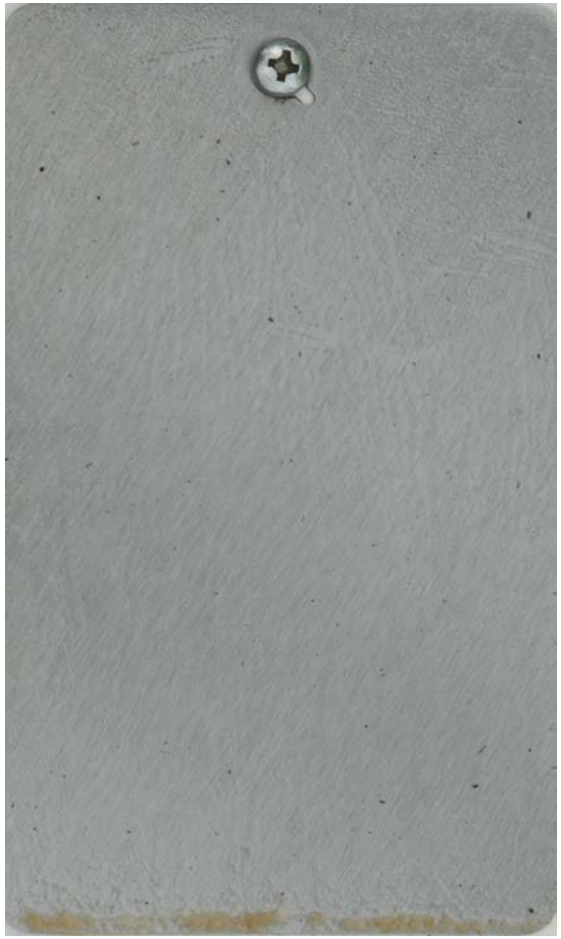
TC-1

CorrosionX

Day Three



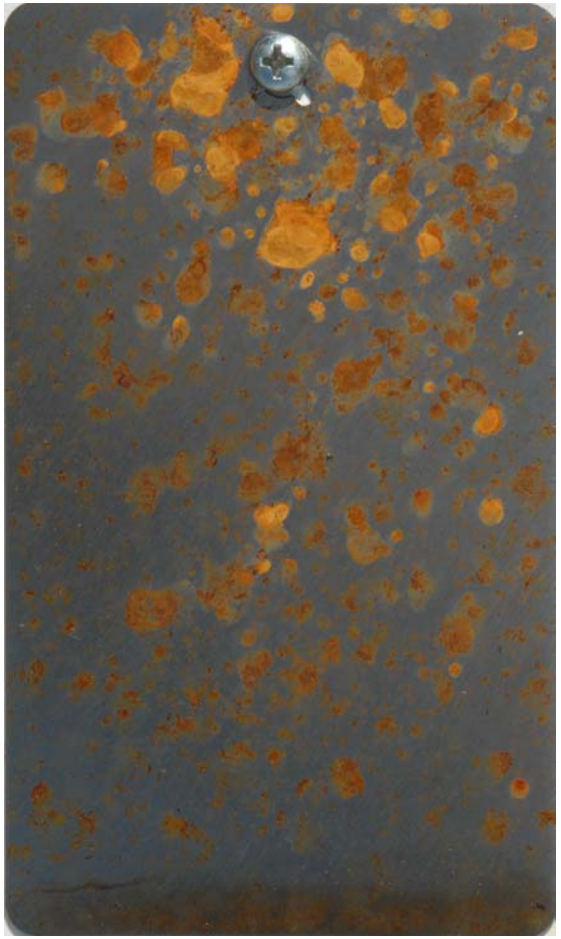
Corrosion Block



TC-11

CorrosionX

Day Four

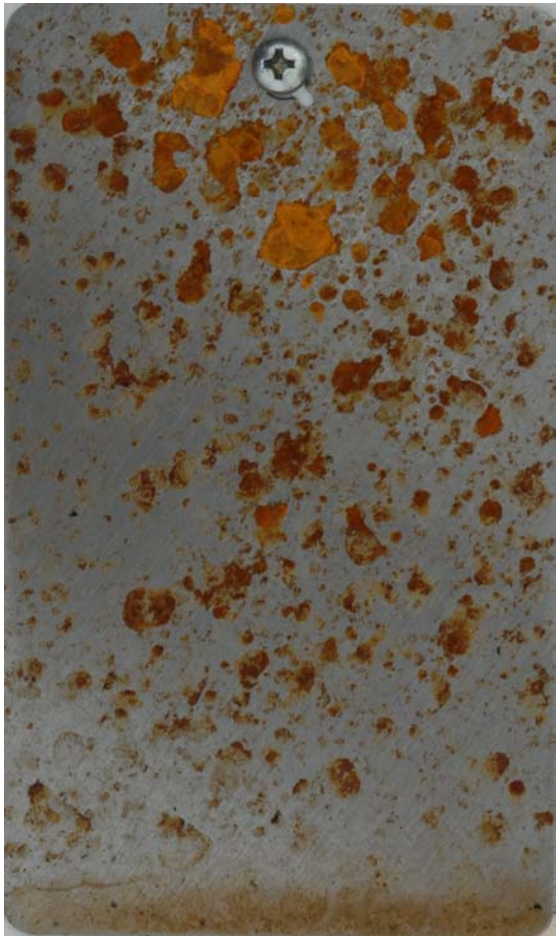


Corrosion Block

TC-11

CorrosionX

Day Five

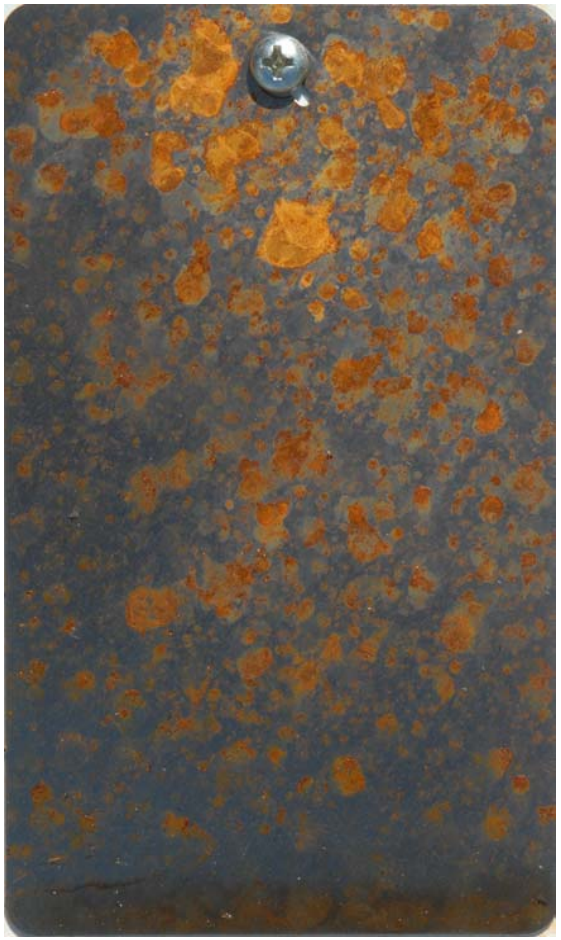


Corrosion Block

TC-11

CorrosionX

Day Six

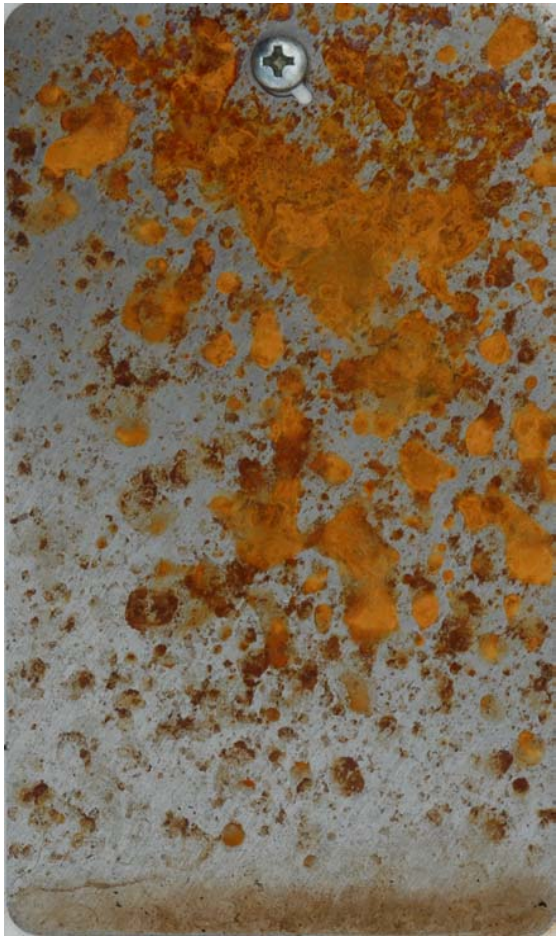


Corrosion Block

TC-11

CorrosionX

Day Seven

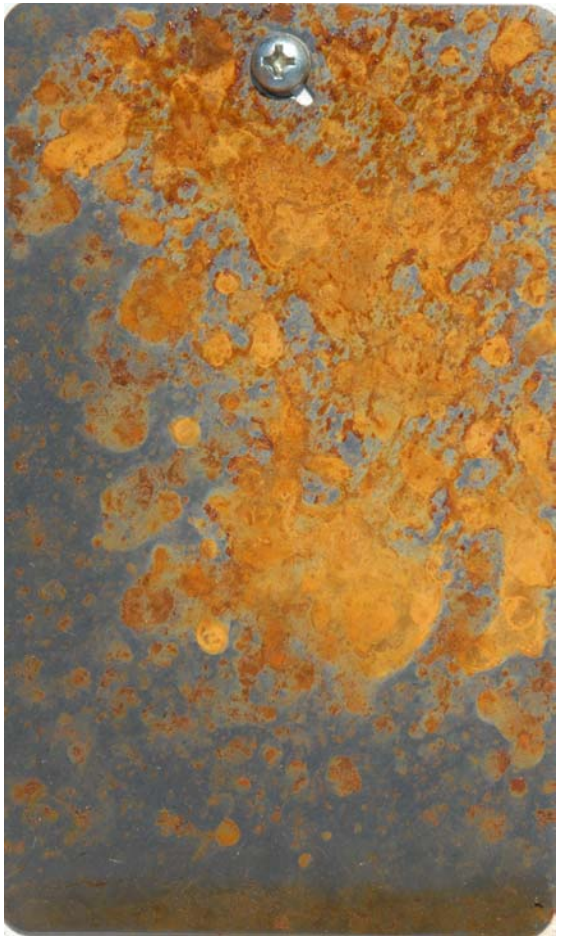


Corrosion Block

TC-11

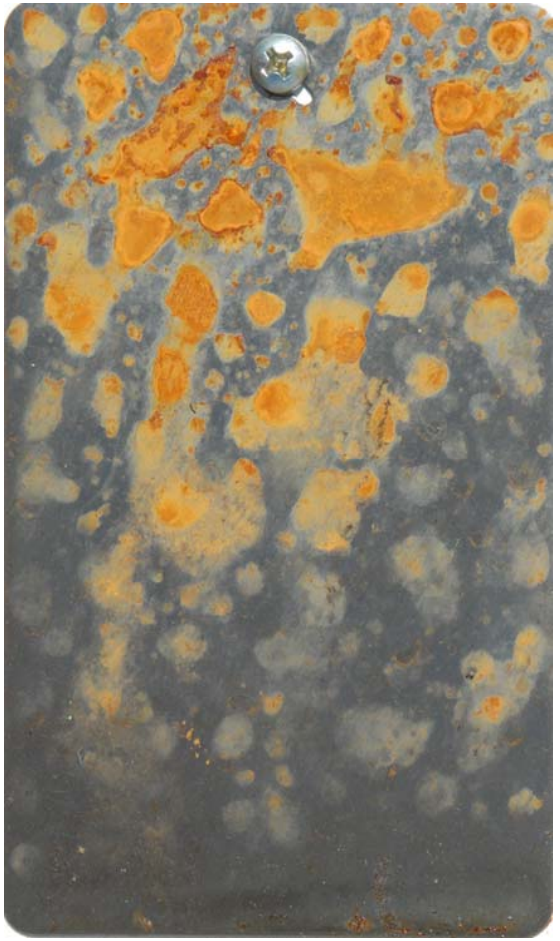
CorrosionX

Day Eight



Corrosion Block

TC-11



CorrosionX

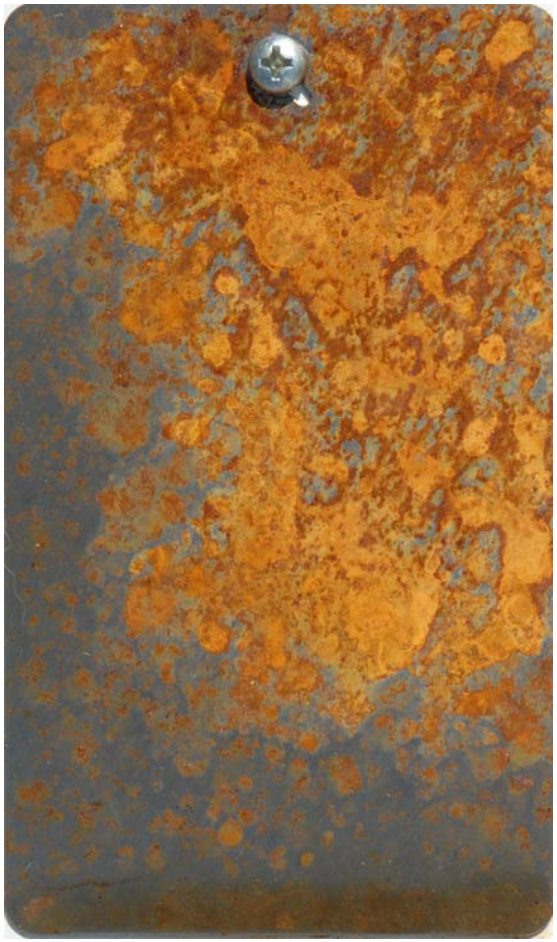
Day Nine

Corrosion Block

TC-11

CorrosionX

Day Ten



Corrosion Block

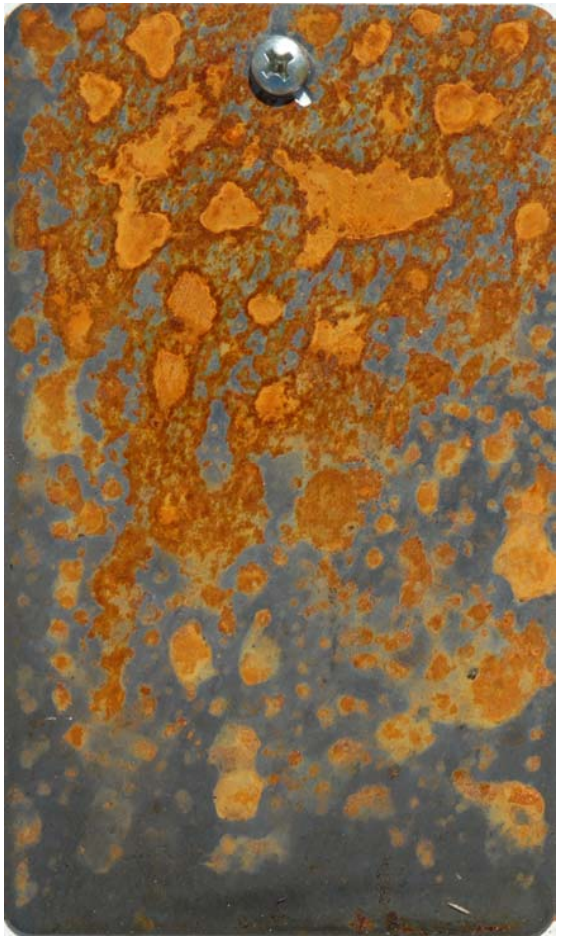
TC-11

CorrosionX

Day Eleven

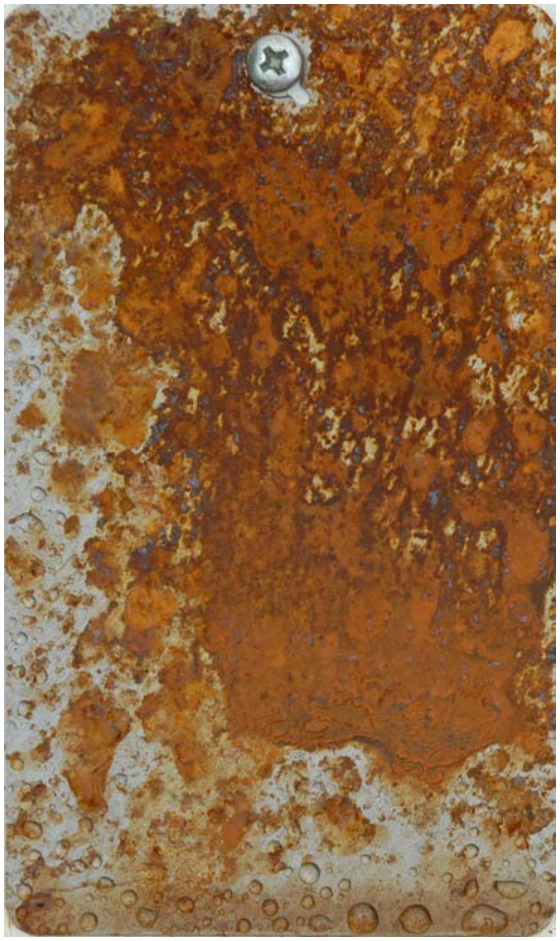
Corrosion Block

TC-11



CorrosionX

Day Twelve



Corrosion Block

TC-11

CorrosionX

Day Thirteen

Corrosion Block

TC-11

CorrosionX

Day Fourteen

Corrosion Block

TC-11

CorrosionX

Day Fifteen

Corrosion Block

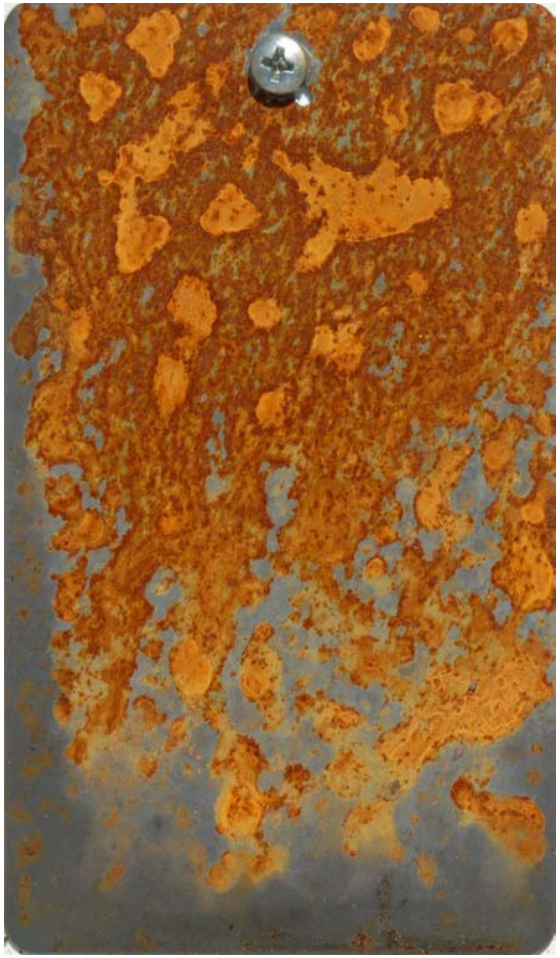
TC-11

CorrosionX

Day Sixteen

Corrosion Block

TC-11

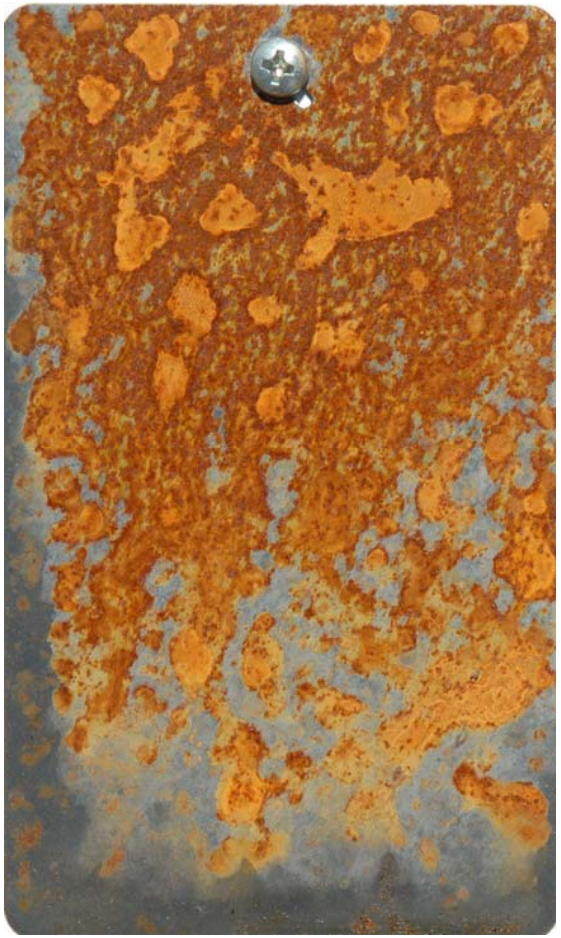


CorrosionX

Day Seventeen

Corrosion Block

TC-11

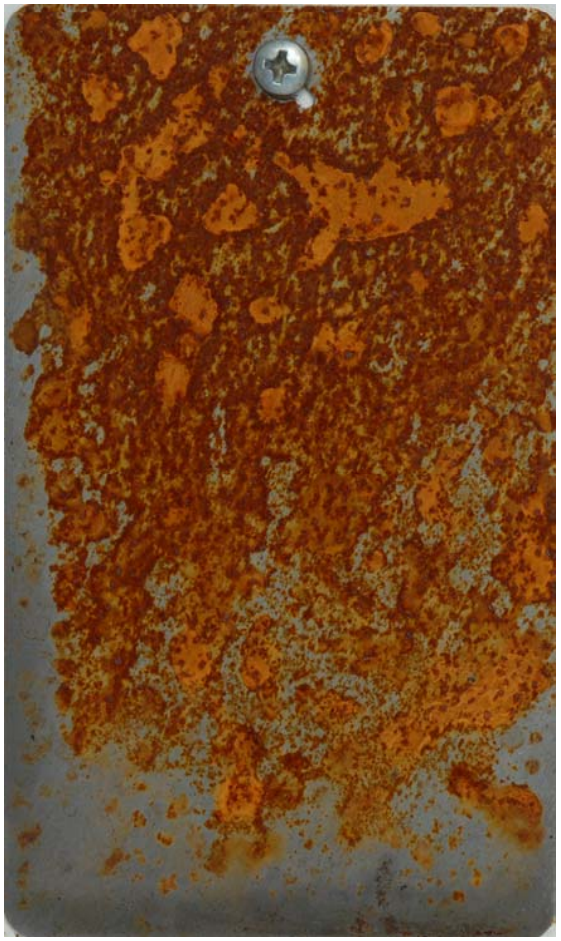


CorrosionX

Day Eighteen

Corrosion Block

TC-11

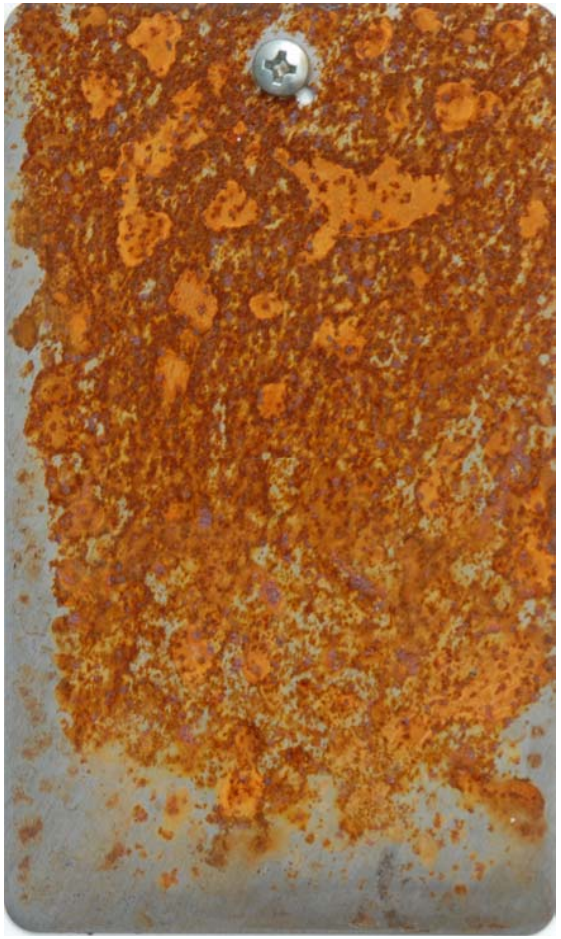


CorrosionX

Day Nineteen

Corrosion Block

TC-11

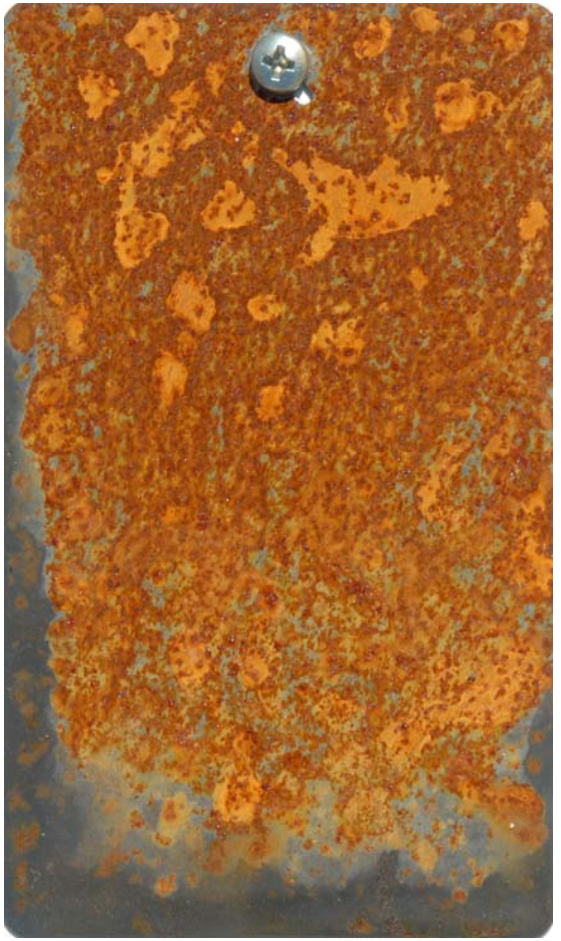


CorrosionX

Day Twenty

Corrosion Block

TC-11

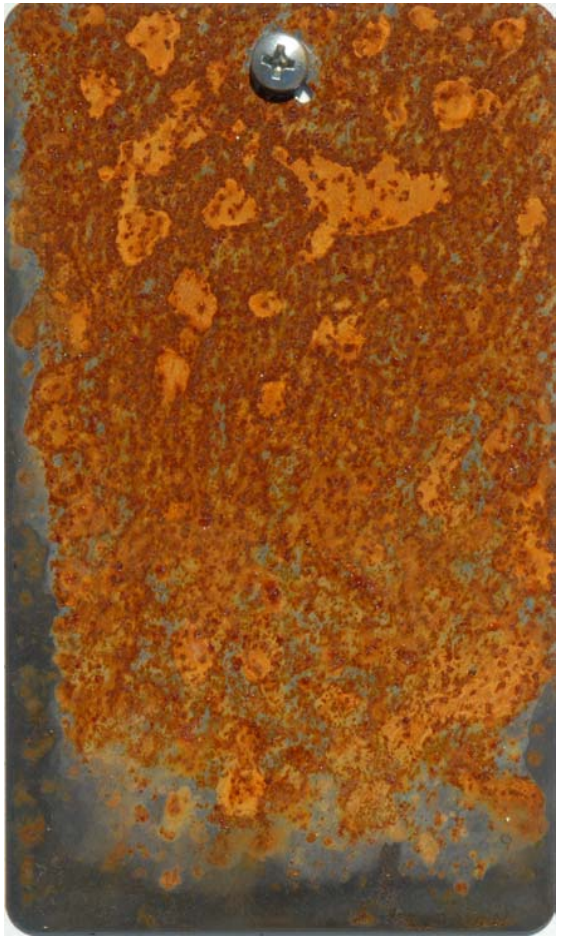


CorrosionX

Day Twenty-One

Corrosion Block

TC-11

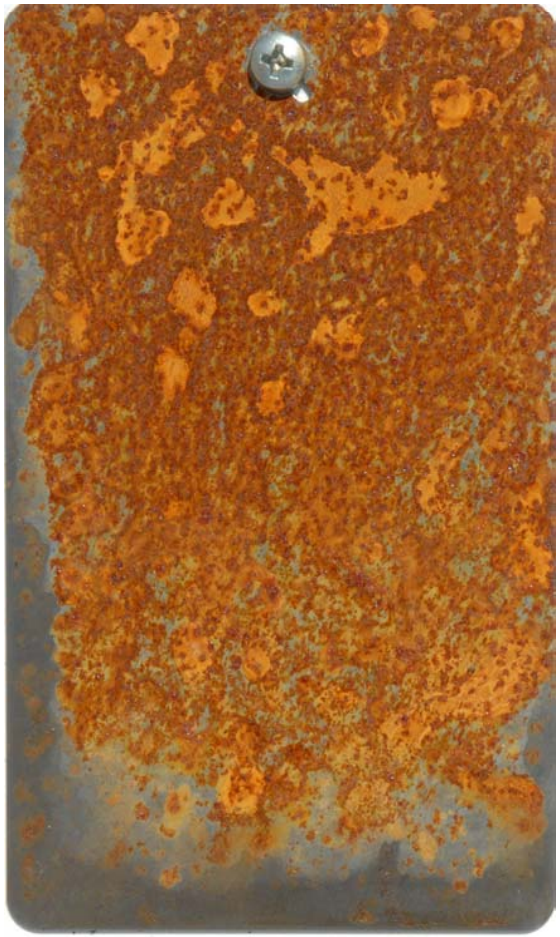


CorrosionX

Day Twenty-Two

Corrosion Block

TC-11

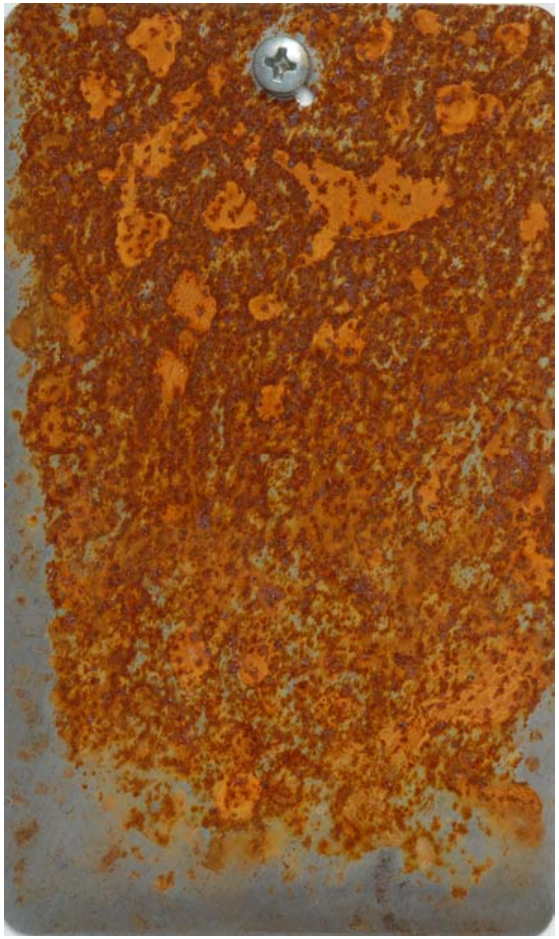


CorrosionX

Day Twenty-Three

Corrosion Block

TC-11



CorrosionX

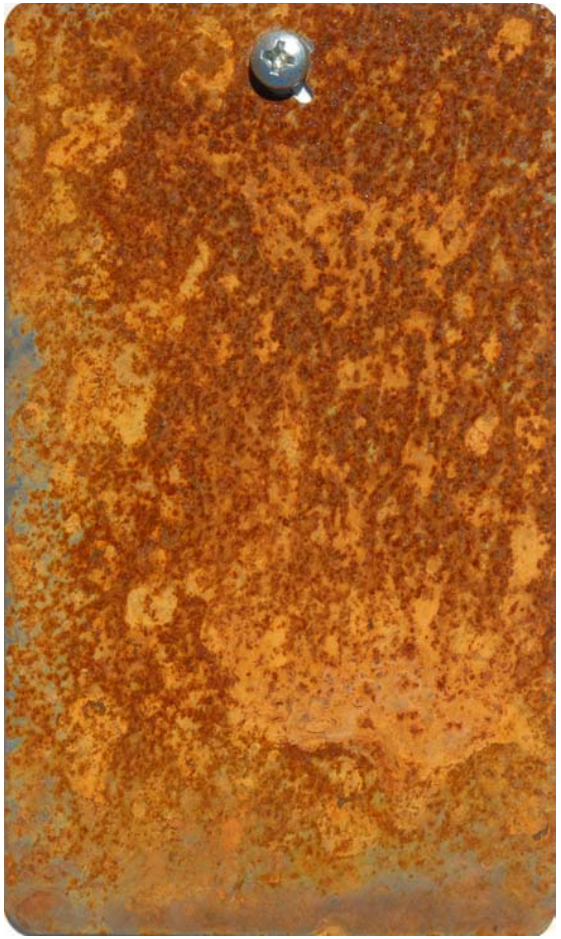
Day Twenty-Four

Corrosion Block

TC-11

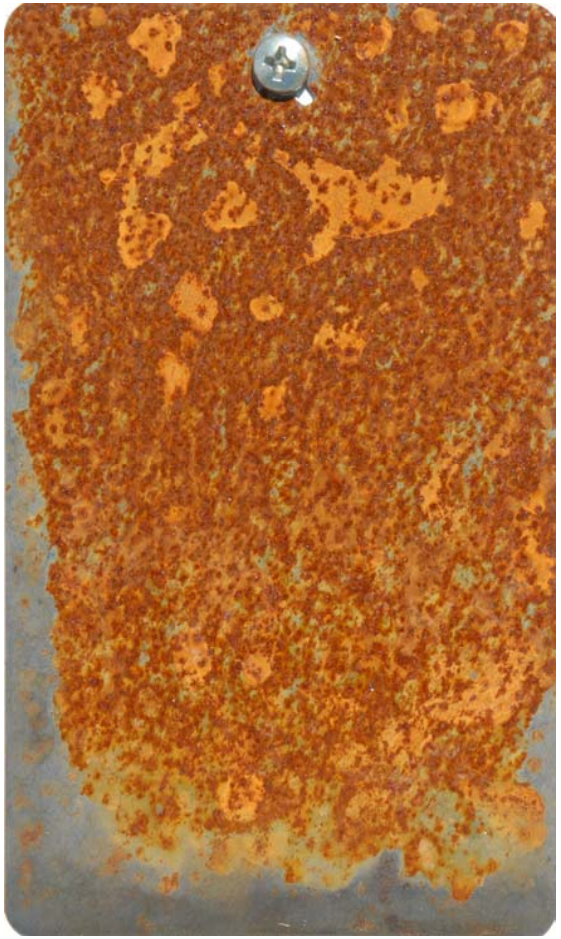
CorrosionX

Day Twenty-Five



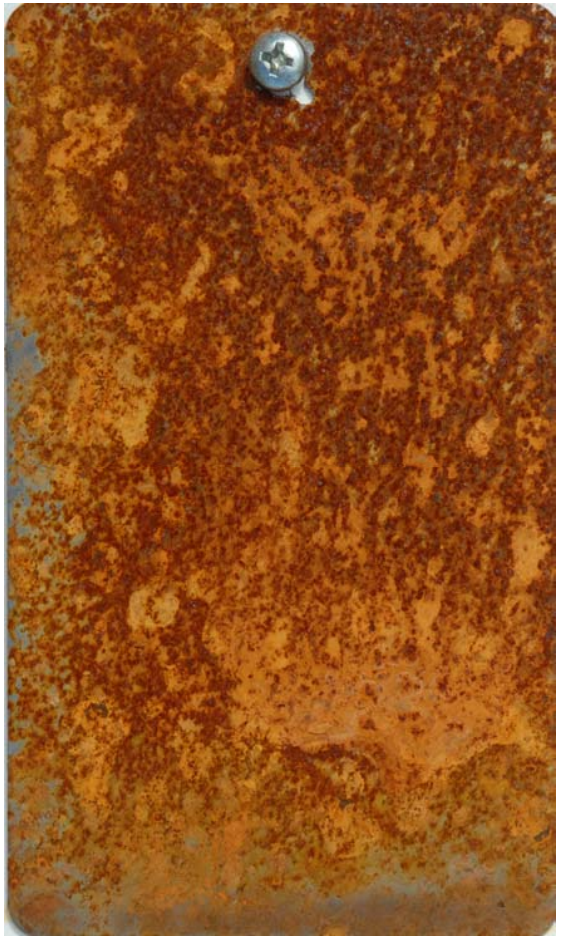
Corrosion Block

TC-11



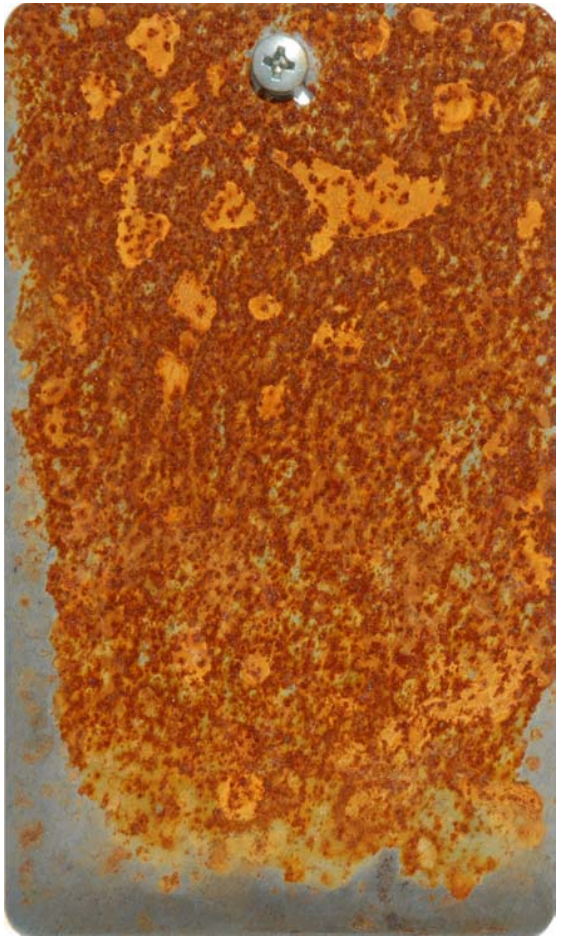
CorrosionX

Day Twenty-Six



Corrosion Block

TC-11

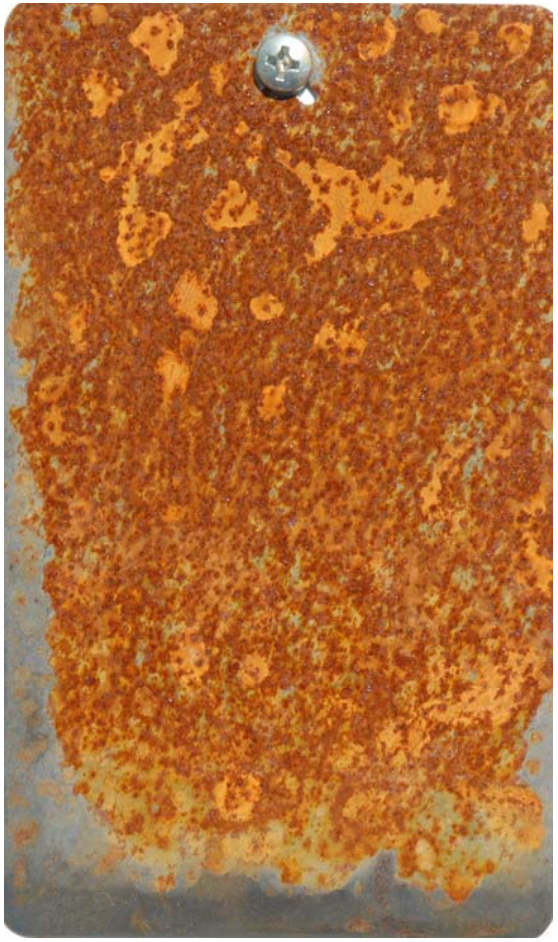


CorrosionX

Day Twenty-Seven

Corrosion Block

TC-11



CorrosionX

Corrosion Test Summary

1. **Corrosion Block failed after two days of exposure to ambient conditions .**

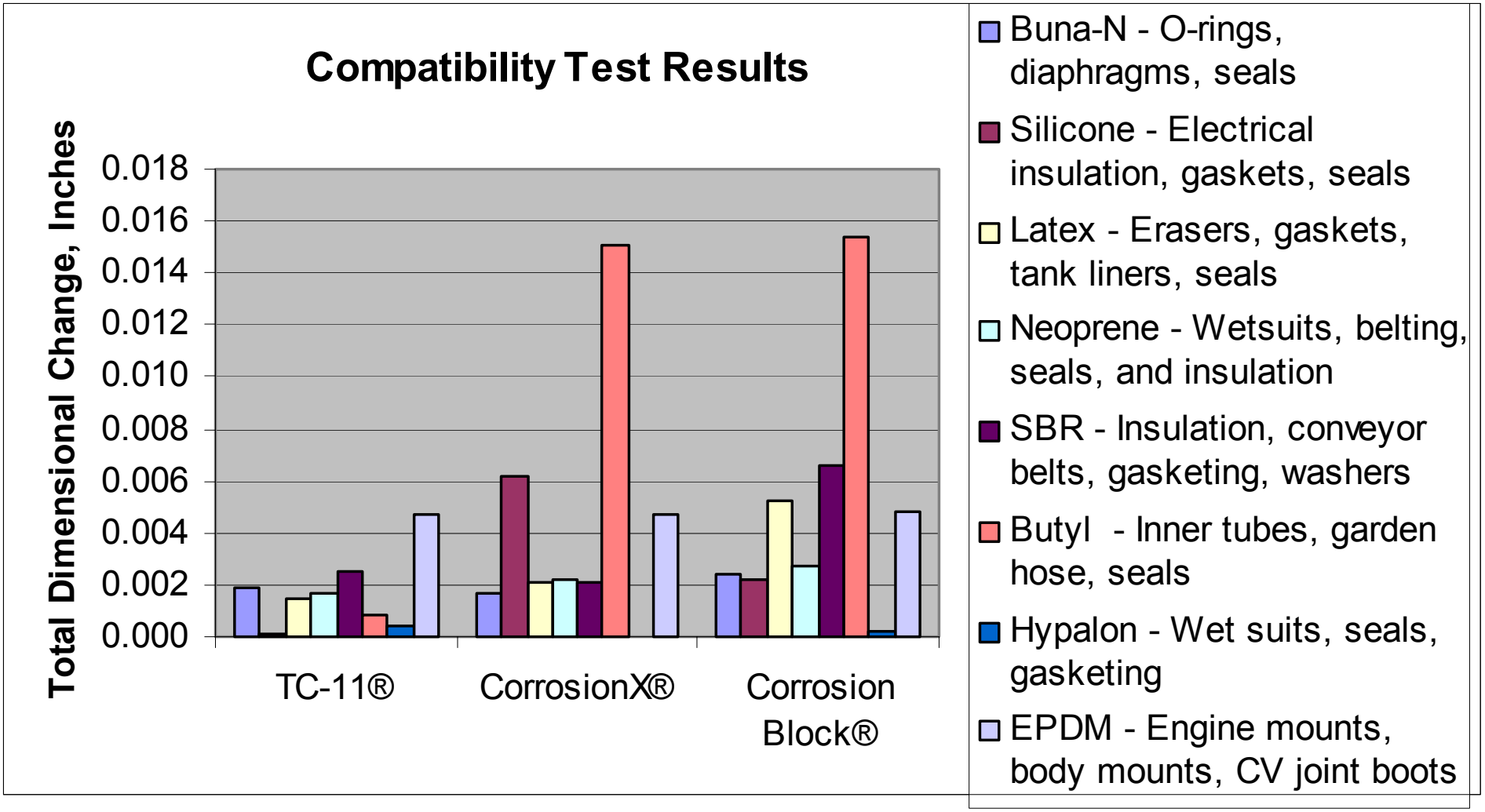
2. **CorrosionX failed after three days of exposure to ambient conditions.**

3. **TC-11 failed after 24 days of exposure to ambient conditions.**

4. **TC-11 offers significantly better corrosion control performance than Corrosion Block or CorrosionX.**

Compatibility Testing Methodology

- The test coupons were 1” diameter x ½” thick pieces of elastomer selected on the basis of sensitivity to solvents.
- The thickness of each coupon was measured with a digital micrometer.
- The coupon was treated once with a product.
- The thickness of the coupon was measured for a two week period with a micrometer.
- The thickness of an untreated coupon was measured for a two week period.
- The difference in the dimensional changes between the treated coupon and the un-treated coupon was calculated.
- The test results were plotted on a graph in the order of performance.


Compatibility Test Results
Total Dimensional Change, Inches
0.018
0.016
0.014
0.012
0.010
0.008
0.006
0.004
0.002
0.000
TC-11®
CorrosionX®
Corrosion Block®
Buna-N - O-rings, diaphragms, seals
Silicone - Electrical insulation, gaskets, seals
Latex - Erasers, gaskets, tank liners, seals
Neoprene - Wetsuits, belting, seals, and insulation
SBR - Insulation, conveyor belts, gasketing, washers
Butyl - Inner tubes, garden hose, seals
Hypalon - Wet suits, seals, gasketing
EPDM - Engine mounts, body mounts, CV joint boots

Compatibility Test Conclusion

TC-11 is much more compatible with sensitive elastomers than Corrosion Block or CorrosionX.