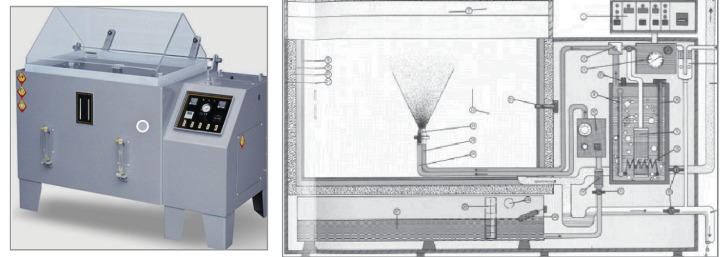


## General Corrosion Data for Fastener Finishes

There are two popular tests use on fasteners to compare their resistance to corrosion. These test are conducted using procedures that allow a specifier to compare various finishes and materials in a controlled environment. The results do not relate to years of service. Here is an explanation of the tests.

### Salt Spray (ASTM B117)

This test is used to compare performance of various finishes in a salt environment. This testing is conducted using a cabinet with a controlled environment consisting of fog with 5% salt solution at 95 degrees F. The test runs continuously with the specimens being visually judged every 24 hours for percent of total surface loss due to red rust along with the number of hours that have accumulated to that point.



EXAMPLE OF SALT SPRAY TEST CABINET

### Kesternich (DIN 50018)

This test is used to compare performance of various finishes in an acidic environment. This testing is conducted using a cabinet with a controlled environment consisting of an injection of 0.2 liters of SO<sub>2</sub> gas, moisture to a relative humidity of 100% at a temperature of 400 Centigrade. This atmosphere is held for 8-hours, then the door of the cabinet is opened and ambient air is allowed to circulate through the cabinet for 16 hours. This 24-hour period comprises one full cycle. The test runs continuously with the specimens being visually judged every 24 hours for percent of total surface loss due to red rust along with the number of cycles that have accumulated to that point.



EXAMPLE OF  
KESTERNICH CABINET  
(ASTM G-85 SULFUR  
DIOXIDE TEST)

## CORROSION PROTECTION INFORMATION



The following information was compiled from known data that compares various finishes in a controlled environment. The material set forth herein is for general information only and cannot be construed as a substitute for competent professional advice or service. Any part considering application use of this information does so at their own risk and assumes any and all liability from application or use. Consult a corrosion specialist to determine the best fastener for your condition.

### SALT SPRAY RESULTS

The chart provides general information with regard to corrosion resistance of various plating and coatings. Contact TFC for detailed information.

#### SALT SPRAY Per ASTM F1941 & B117 (0% red rust)

Rev. 042111

#### Carbon steel and 410 stainless steel materials

#### Coating

Coating	Salt Spray
.00015" min. (3 um) zinc plating with clear chromate	15hrs
.0002" min. (6um) zinc plating with clear chromate	24hrs
Passivated 410 Stainless Steel	48hrs
.0003" min. (8 um) zinc plating with clear chromate	48hrs
.0003" min. (8 um) zinc plating with yellow di-chromate	120hrs
.0005" min. (12 um) zinc plating with clear chromate	72hrs
.0007" min. (14 um) mechanical zinc with clear chromate	72hrs
Epoxy (E-Coat) (ACQ Compatible)	100hrs
TRI-SEAL™ Long-life coating	1,000hrs