

## DeCORE SCI-45ECO

**DeCORE SCI-45ECO** is a very low foaming, water soluble, anionic corrosion inhibitor used primarily for the prevention of rust on steel and cast iron. It also provides limited short term corrosion inhibition on brass, copper and other non-ferrous metals. It is not recommended for use on aluminum.

### SPECIFICATIONS

Appearance @ 25°C:	Clear almost colorless liquid
Color (Gardner):	2 max.
pH (as is):	9.0 – 11.0
% Activity:	43.5 – 46.5

**SOLUBILITY** (10% by weight): DeCORE SCI-45ECO is soluble in water, alcohols, and glycols. It is insoluble or dispersible in solvents and oils.

### TYPICAL PROPERTIES

Density @ 25°C                      ~1.05 g/ml

- Corrosion inhibitor for metal in aqueous systems at pH  $\geq 7$
- Not stable in acid systems
- Virtually non-foaming
- Effective at low use levels (0.25% - 1.0% by weight)
- Nitrite free
- Readily Biodegradable
- Non-phenolic
- Contains no amines, phosphorous or sulfur

### APPLICATIONS

- Synthetic coolants and cutting fluids
- Industrial cooling towers
- Water based lubricants
- Alkaline metal cleaners
- Aerosol formulations
- Low foam alkaline cleaners
- Radiator fluid additive
- Water based paints and coatings

*Continued*

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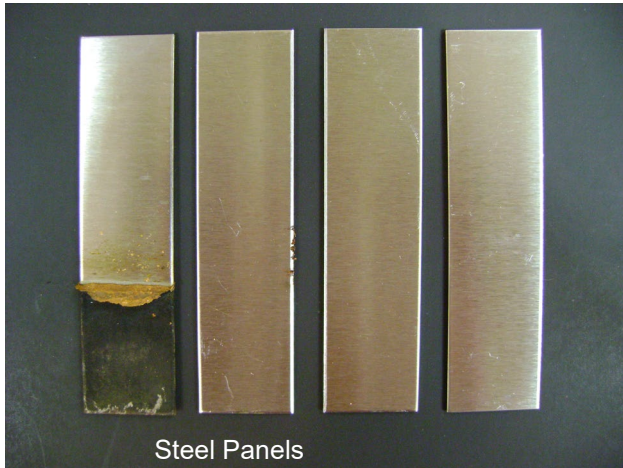
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## **CORROSION TESTING OF DeCORE SCI-45ECO**

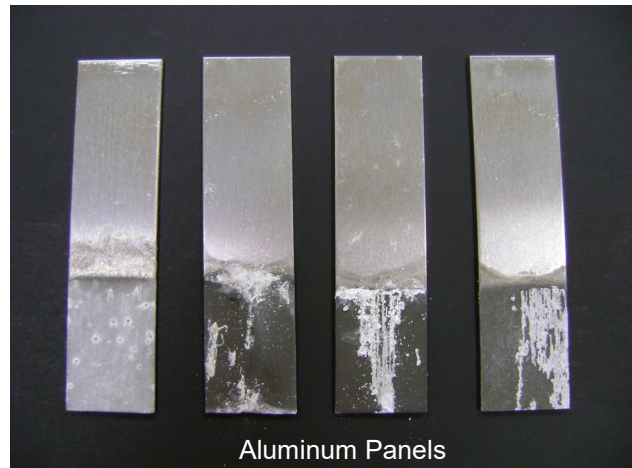
Metal coupons were partially submerged in a solution containing from 0.25% - 1.0% by weight of DeCORE SCI-45ECO in hard water (100 ppm as CaCO<sub>3</sub> & 71 ppm as chloride) and stored in sealed glass jars at room temperature. The top halves of the panels were exposed to the vapor phase.

The photos below show results at 90 days of testing at room temperature.



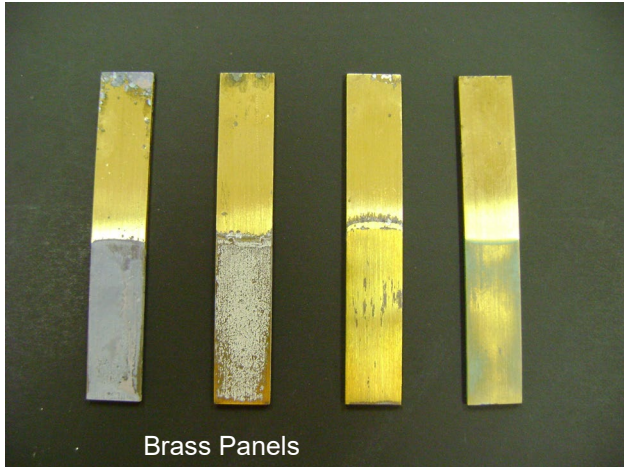
Steel Panels

**Control    0.25%    0.50%    1.0%**



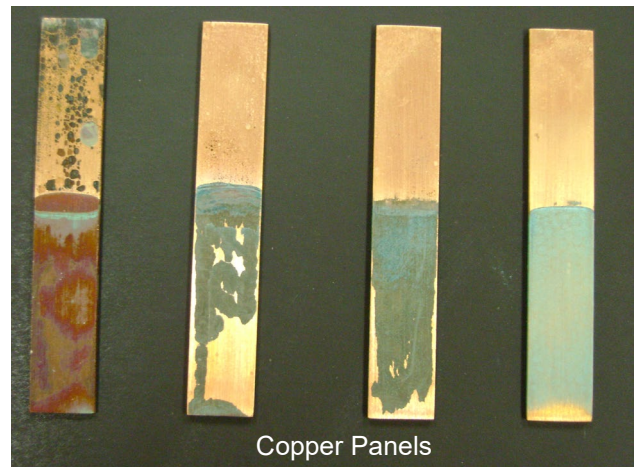
Aluminum Panels

**Control    0.25%    0.50%    1.0%**



Brass Panels

**Control    .25%    0.50%    1.0%**



Copper Panels

**Control    0.25%    0.50%    1.0%**

### **Metal Panels Used:**

Steel Panels: Q-Panel: Type RS, low carbon, cold-rolled steel, 0.063" thick, ½ hard

Aluminum Panels: Q-Panel: Type AR - Alloy 2024T3 bare, 0.063" thick, 120 hardness

Brass Panels: Metaspec: Alloy CA-260, 1/16<sup>th</sup> thick, ½ hard, polished

Copper Panels: Metaspec: CA-110, annealed, 1/16<sup>th</sup> thick, (99.9% Cu)

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