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## Test Methods for Determination of Water Soluble Salt Contamination on Steel Surfaces

Prior to mechanical surface preparation (abrasive blasting) for application of ErgonArmor coatings and linings, steel surfaces should be tested for ion or soluble salt contamination. This contamination, if left on the surface can cause disbonding of coating or lining systems. Steel surfaces should be checked for ion contamination prior to the application or repair of ErgonArmor systems. ErgonArmor recommends utilizing the SSPC Technology Guide 15 Field Methods for Extraction and Analysis of Soluble Salts on Steel and Other Nonporous Substrates to familiarize yourself with the methods of extraction and analysis of test results.

For previously used tanks, it is advisable to test for acidity using narrow range pH indicating paper and distilled or deionized water. Establish the pH reading of the water being used. Wet the surface to be tested, using a minimum amount of water. Press the pH paper onto the wet surface, remove it, and read the measured pH.

If the pH of the surface is more than 2 pH units lower than the water reading or less than 4.0, the surface should be washed and neutralized. This can be done with high-pressure water and dilute tri-sodium phosphate or ammonium hydroxide. If the pH of the surface is greater than 2 pH units higher than the water reading consult ErgonArmor technical support.

To determine the presence of chlorides, sulfates, and nitrates, qualitative test paper and quantitative test kits should be used. These kits are available through K.A. Tator or S.J. Pinney. Chlor-Rid offers a test kit for all three ions. The test kit chosen must be able to read at or below the values stated in the "Allowable Soluble Salts Level Table" below.

If soluble salts are present on the surface at concentrations above those listed in the table below, the surface should be washed with clean water until levels are acceptable. You may also use additives such as Chlor-Rid, Salt-X, or a similar solution as per their directions.

### ALLOWABLE SOLUBLE SALTS LEVEL TABLE

Soluble Salt	Immersion (ug/cm <sup>2</sup> )	Atmospheric (ug/cm <sup>2</sup> )
Chlorides	<3	<5
Nitrates	<5	<15
Sulfates	<5	<15
Total of All	<10*	n/a

\*Any combination of these three salts at their maximum concentration shall not exceed 10 ug/cm<sup>2</sup> for immersion application