English

Elcometer 134

CHLOR*TEST Salt Detection Kit (Patent Pending)

Operating Instructions

elcometer

English

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Thank you for your purchase of this Elcometer 134 Chlor*Test Salt Detection Kit. Welcome to Elcometer.

Elcometer are world leaders in the design, manufacture and supply of inspection equipment for coatings and concrete. Our products cover all aspects of coating inspection, from development through application to post application inspection.

This Elcometer 134 Chlor*Test Salt Detection Kit is a world beating product. With the purchase of this product you now have access to the worldwide service and support network of Elcometer. For more information visit our website at www.elcometer.com

1 ABOUT THIS TEST KIT

Chloride Salts left on a surface before application of a coating can result in the coating system being forced off the surface by corrosion or blistering before the full life of the coating has been reached.

This Elcometer 134 Chlor*Test Salt Detection Kit allows the surface to be tested for chloride salts prior to application of a coating.

The kit contains sufficient material for 5 tests at separate locations.

1.1 STANDARDS

This instrument can be used in accordance with the following National and International Standards :

ISO 8502-5

SSPC Guide 15

1.2 WHAT THE BOX CONTAINS

Each Elcometer 134 Chlor*Test Salt Detection Kit contains:

- Detection kit, x 5 (each containing: Bottle of Chlor*rid Extract Solution, Sleeve, Titration Tube)
- Titration Tube Snapper
- Strap
- Clip

Your Elcometer 134 Chlor*Test Salt Detection Kit is packed in a cardboard and foam package. Please ensure that this packaging is disposed of in an environmentally sensitive manner. Consult your local Environmental Authority for further guidance.

2 GETTING STARTED

Read these instructions fully before opening an Elcometer 134 CHLOR*TEST packet.

2.1 PRECAUTIONS

- Protect hands and eyes.
- Do not touch arrow ends of glass titration tube with fingers as salt from the skin will cause reading errors.
- Keep the titration tubes out of reach of children
- Discard used tubes carefully according to relevant local regulations.

2.2 THE TEST BOX

A strap (length of string) is included in the box. If the string is looped through the small holes in the ends of the box, the box can then be tied around your waist; you then have both hands free for climbing and testing without having to hold the box.

Before testing, punch out the perforated hole in the box lid. The hole will be used later in the test procedure for holding the test sleeve and solution.

2.3 BEFORE TESTING

- Test locations of paint blistering, pits and de-lamination of coating.
- When testing corroded surfaces, remove rust and dust before applying the test.

2.4 RESPONSIBILITY

It is the sole responsibility of the user to ensure that titration tubes are not used when they are either beyond their expiration date or have colour which is different to that referenced in “Titration tubes specification” on page 8.

The Manufacturer and/or the Manufacturer’s Distributor shall not be otherwise liable for any incorrect measurement or any damages, whether damages result from negligence or otherwise.

Manufactured by: CHLOR RID International, Inc.

Supplied by: Elcometer Limited, www.elcometer.com

3 TEST PROCEDURE

1. Remove cap from CHLOR*EXTRACT solution bottle and pour entire contents into the test sleeve. If applying to a horizontal surface, clip the sleeve to prevent loss of solution, removing any excess air.

2. Peel off the blue pressure sensitive backing from test sleeve; remove the air from the test sleeve by squeezing between fingers and thumb.

   When evacuating air, take care not to spill CHLOR*EXTRACT from the sleeve.

3. Firmly apply test sleeve to test surface. Lift and hold the free end of the test sleeve upright to allow extract solution to come into contact with test surface. Use other hand to massage the solution through the test sleeve against the surface for 2 minutes.

4. When massage is complete, remove the test sleeve:

   For **vertical or overhead surfaces,** the solution will flow down to the closed end of the test sleeve.

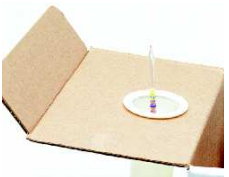
   For **horizontal surfaces,** press and slide finger across sleeve to move solution to closed end of sleeve prior to removal. Use the clip to help retain the solution during sleeve removal.

5. Using caution and avoiding touching the ends of the titration tube, snap off both ends with the metal snapper provided and insert the titration tube into the test sleeve with smaller numbers and arrow at bottom.

6. Insert sleeve with extract solution and titration tube into the hole previously made in the box lid.

   Wait approximately 1½ minutes or until solution has wicked up to the top of the titration tube.

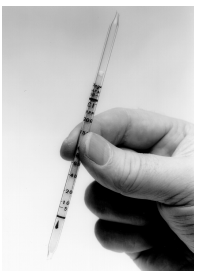
   The Cotton at the top of the titration tube will change colour to amber when fully saturated.



7. Immediately remove and read the number on the titration tube at the interface of the colour change**.**

   Pink is normal, white is the chloride level.

   This number is calibrated in micrograms per centimetre squared (µg/cm^2) and parts per million (ppm); **for this test the ratio is 1 to 1.**



When chloride levels exceed surface cleanliness specification requirements, the surface should be washed to remove the salt.

4 TITRATION TUBES SPECIFICATION

4.1 PERFORMANCE

Measuring Range:	1 - 60 µg/cm^2
Sampling Time:	1.5 minutes
Colour Change:	Pink to White
Detectable Limit:	1 µg/cm^2
Storage Condition:	In a cool and dark place, not exceeding 25°C (77°F)

4.2 CORRECTION FOR AMBIENT CONDITIONS

No temperature correction is necessary at the sample solution temperature between 5°C (41°F) and 80°C (176°F).

4.3 IONIC EFFECTS

Coexistence of Bromide ions, Iodide ions or Cyanide ions respectively with Chloride ions gives higher readings. Sulphide ions produce a brown stain in the indicator and the coexistence with Chloride ion produces a brown stain in the bottom of the stained layer and gives higher readings.

A test solution pH value within the range 3.5 to 11 does not affect the readings. Less than pH 3.5 or more than pH 11 gives higher readings than would be normal for the Chloride ions present in the solution.

4.4 CHEMICAL REACTION IN THE DETECTOR TUBE

$NaCl + Ag_2CrO_4 = AgCl$

5 RELATED EQUIPMENT

In addition to the Elcometer 134 Chlor*Test Salt Detection Kit, Elcometer produces a wide range of other coating testing equipment. Users of the Elcometer 134 Chlor*Test Salt Detection Kit may also benefit from the following Elcometer products:

- Elcometer 130 Salt Contamination Meter
- Elcometer 134A Chloride Ion Test Kit for Abrasives
- Elcometer 134W Chloride Ion Test Kit for Water/Liquids
- Elcometer 138 Bresle Kit and Patches
- Elcometer 138/2 Surface Contaimination Kit

For further information contact Elcometer or your local supplier. Details of Elcometer offices around the world are given on the outside cover of these operating instructions. Alternatively visit the Elcometer website, www.elcometer.com