



# INDUSTRIAL CHEMICALS ENGINEERED FOR SPRAY WAND APPLICATIONS

## Cleaners & Degreasers

### CUSTOMER SUPPORT LAB

Our Research & Development lab is very well equipped and staffed with highly qualified chemists and engineers to carry out research and product development, equipment design and to perform customer required testing as needed. Our lab is ISO 9001:2000 certified for design requirements and is an integral part of our customer support activities. Below is a partial list of the equipment and testing available for our customer's benefits!

### QUALITY ASSURANCE LAB

As part of our company being ISO 9001:2000 certified, all raw materials and finished products must meet our stringent quality specifications. Every batch of product we make is traceable to its raw materials. All reagents used are certified to the applicable NIST standards and each test we perform complies with the applicable ASTM methods or the generally accepted analytical chemistry methods.

### DOCUMENTATION SUPPORT

For further information, recommendations and other regulatory information please refer to the individual Product Data and Material Safety Data Sheets and/or contact Lincoln Chemical.

Our LCC Solve-It and LincClean product lines were developed to clean the most tenacious soils. We have a wide variety of alkaline cleaners for practically any application.

Lincoln Chemical has a cleaning product that can meet your toughest cleaning requirements such as stubborn oils, grease, carbon-based soils, fatty acid soils, waxy corrosion inhibitors, and light corrosion.

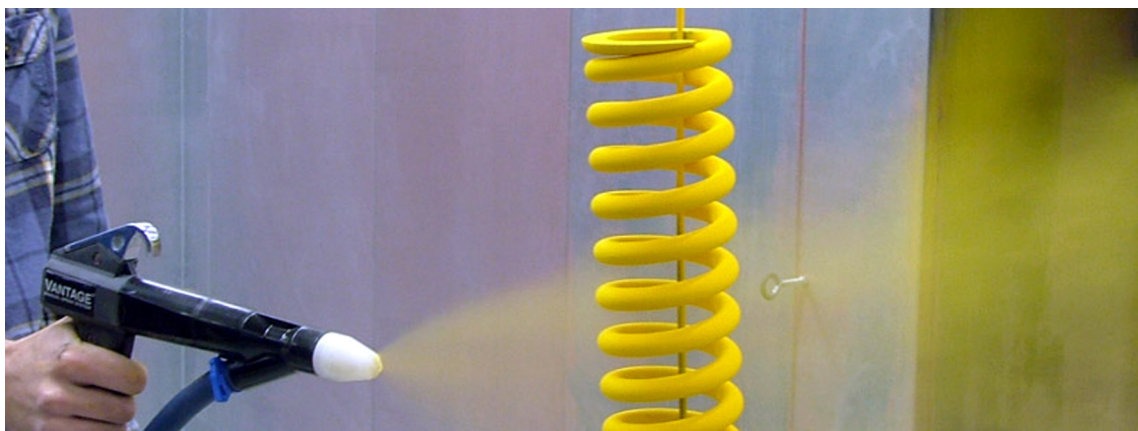
We have a full line of multi-metal safe cleaners as well as products developed exclusively for ferrous alloys. The industry has proven our products to be highly effective in all of these types of operations.

We offer a wide variety of alkaline cleaners designed to meet the most challenging industry needs. Most products operate economically at low concentrations and temperatures. Products are moderate foaming and are ideally suited for use with automatic control equipment.

Alkaline cleaners have long been the prevailing choice in the paint pretreatment industry. These cleaners are designed to remove the toughest, most tenacious soils with a lower concentration of product. Alkaline cleaners are the best type of cleaners in operations where soil loads fluctuate from day to day. These cleaners remove a variety of soils in a very cost effective manner. Alkaline cleaners in the market today operate at temperatures of between 120 and 160°F.

Neutral pH cleaners are an ideal choice when cleaning light soils. These cleaners are based on surfactants that are designed to "lift" the soils off the parts without using aggressive caustic cleaners. That makes them more environmentally friendly, while at the same time making them safer for the operators than conventional cleaners.

Innovations such as low conductivity cleaners, neutral pH cleaners and rust removers will increase your plant safety without adversely effecting productivity. We also have products that are designed for use in multi-stage spray systems, agitated immersions, soak tanks, and belt washers.





# The Leader In Service

## Conversion Coatings

### IN-HOUSE EQUIPMENT

- 7 Stage Pilot Spray Washer
- Agitated Immersion Washers
- Powder Paint Booth
- Industrial Cure Oven
- Liquid Paint System
- Salt Spray Cabinets
- Humidity Chamber
- Electronic & Analytical Balances
- Conductivity & pH Meters
- Scanning Electron
- Atomic Force Micrography

### TESTING CAPABILITIES

- Conversion Coating Weights
- Paint Adhesion Testing
- Paint Adhesion Measuring
- Dry Film Thickness
- Impact Test
- Conical Mandrel Test
- Film Hardness Test
- Salt Spray Test
- Total Dissolved Solids
- Total & Active Acid Test
- Alkalinity Test

### CUSTOMER SERVICE

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Phosphatizing helps prevent corrosion and prepares the metal surface for improved paint adhesion. A spray wand can be a simple one-stage cleaner/phosphatizer operation for large, low-volume parts that do not require a high degree of corrosion resistance.

On the other hand, they can also be used in more complex operations using cleaners and iron phosphates that provide much better corrosion and paint adhesion results. The iron phosphate coating inhibits corrosion and improves the adhesion and durability of paint when applied to most metals by means of a steam or hot water high pressure spray wand applications.

Our cleaner-coater series of products simultaneously cleans the surface while producing and depositing a highly uniform iron phosphate coating. These products provide excellent cleaning of light to medium shop soils, drawing compounds, rust preventatives, and water soluble machining fluids. Typical contact times will vary depending on the severity of soils and types of metals being cleaned and temperature.

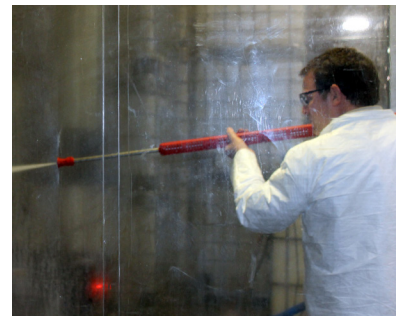
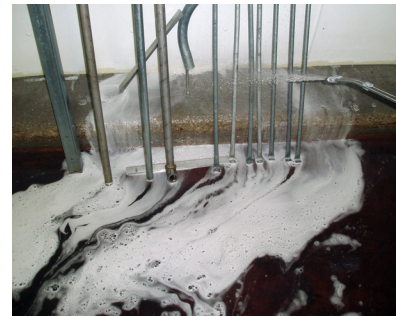
Our stand alone coater series of products are used to provide an iron phosphate coating on parts that have been previously cleaned with our LCC Solve-It or LincClean products. A rinse must be used between the degreasing process and the iron phosphate process.

Our LincPhos series will produce a tightly bonded iron phosphate conversion coating on steel and iron parts while slightly etching zinc, galvanized and aluminum parts. We have products that are very effective on cold and hot rolled steel as well as cast iron parts. This product series contains both our cleaner-coater products and stand alone coater products as described above.

Optimum corrosion resistance results may be obtained by the use of a steam or hot water high pressure wand system when using these products. These products will lay down coatings comparable to what someone might expect to find in more complex washer systems.

Our LincKote series of products are the newest technological advance in spray wand chemicals. They are non-phosphate and low phosphate inorganic conversion coatings. These tested and field proven products deliver exceptional results and, in most cases, enhance corrosion resistance and paint adhesion durability over conventional iron phosphate systems. These new coatings contain no regulated heavy metals and they significantly reduce phosphate from the spray wand process. In addition, these products can be used with no heat.

Lincoln Chemical's wide surface pretreatment product line, along with the expertise of our sales and technical staff, enables us to custom create customer-specific pretreatment packages when necessary.



Learn more about Lincoln Chemical and take a tour of our manufacturing, blending, & testing facilities.

