



**SURFACE FINISHING**



# Protecting the future. Together.

Comprehensive Surface Finishing Solutions



## The Quaker Houghton Approach

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Our value proposition is based on advanced technology and unmatched performance. We take a solution driven approach comprised of world-class products and services to reduce operating costs, improve productivity, increase product quality and strengthen our customers' competitive advantage. We have a dedicated team of technical and applications experts to support our customers' process and operational requirements. We invest in innovation and product development in order to continuously provide cutting-edge technology. Our Surface Finishing products assist our customers in:

- Cleaning and removing a wide variety of soils
- Applying conversion coatings to promote paint adhesion and corrosion resistance
- Stripping paint, carbon, and rust from substrates being remanufactured as well as ancillary products for paint shop and general in-process cleaning
- Reduce waste and comply with regulatory requirements

We offer our customers engineering and technical services including product development, analytical, environmental and physical testing. We welcome customers to visit our Zion, Illinois location with a fully-staffed technical department and state-of-the-art laboratory facility for a hands-on experience in the testing and analysis of their parts.

## Surface Finishing Solutions

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Quaker Houghton's Surface Finishing product line includes start-to-finish paint pretreatment, metalworking and wastewater treatment chemicals for general manufacturing applications including:

- Agricultural equipment
- Construction equipment
- Automotive parts
- Lawn and garden equipment
- Appliances
- Sport and leisure vehicles
- Exercise equipment
- Outdoor grills
- Office equipment and furniture
- Aluminum products
- Job shops and coaters

Quaker Houghton's surface finishing pretreatment chemicals offer comprehensive chemical solutions that ensure optimum performance of parts. From cleaners to sealers to derusters to conversion coatings, our pretreatment solutions prepare metal and plastic parts for the application of paints and coatings. Our long history in supplying surface finishing chemicals allows us to provide the expertise needed to analyze your operations and recommend the best solutions to improve your processes. Our partnership with some of the leading heavy equipment manufacturers has positioned us as the supplier-of-choice for their pre-treatment needs.

Our total environmental management solutions for industrial metal finishing applications help our customers meet their unique waste water requirements. We understand the waste water needs of industrial manufacturers, so we are in the unique position of providing consultative and analytics services to recommend the best chemical solutions to neutralize, precipitate heavy metals and dissolved phosphates, reduce sludge, and clarify waste water.

## Pretreatment Fluid Solutions

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Our pretreatment chemicals, including cleaners, conversion coatings and final rinses, prepare metal and plastic substrates for the efficient and effective application of coatings. In the lab or in the field, we will analyze your operations and provide cost-effective solutions for your unique challenges that result in superior parts performance and quality. Our pretreatment fluids enhance paint adhesion, improve corrosion protection and provide increased durability of the finished ware and includes:

- **Coral Eco-Treat® and HOUGHTO-PREP® ZP technology**
  - Ambient, No/low phosphate pretreatment solutions
- **Cleaners**
  - Spray wand cleaners
  - Alkaline spray cleaners
  - Acid spray cleaners
  - Immersion cleaners
  - Maintenance cleaners

- **Sealers and phosphates**
  - Iron phosphates
  - Zinc phosphates
  - Final seals and rinses
- **Derusters and de-scalers**
- **Chromate conversion coatings - hexavalent and trivalent for aluminum**
- **Non-chrome metal treatments**
- **Paint strippers**

## Remanufacturing Solutions

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### **Automotive/Off-Road/Railroad Industry:**

The HOUGHTO-REMAN™ line of products contains specific formulated materials designed for cleaning oil, grease, paint, dirt, and carbon from motor blocks, transmissions, housings, pistons, connecting rods, etc. Products and systems are designed to perform on new multi-alloy components as well as older cast and steel only units. Quaker Houghton focuses on reconditioning aluminum alloys including castings, steel, magnesium, titanium, stainless alloys and other materials commonly used in engine and power components.

### **Our Performance**

Our products perform exceptionally on aluminum and magnesium castings including heads, blocks, manifolds, etc. in removing carbonized/burned-on petroleum byproducts that result from engine operation. During this chemical cleaning and stripping process, the components are deoxidized and will be restored to a like-new appearance and condition, thus allowing for OEM performance.

## Environmental Services

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Quaker Houghton offers a complete package for treating industrial waste water ranging from pH adjustment products to polymers to specialty blended treatment coagulants. Our complete package is primarily designed to help our customers with environmental compliance as well as improve reliability, lower operating cost, and improve efficiency with:

### Specialty Products

- Remove heavy metals
- Remove/reduce dissolved phosphates
- Clarify water
- Reduce sludge
- Reduce metal complexes
- Ph adjust
- Split oil
- Reduce chromium/destroy cyanide
- Kill/prevent bacteria
- Reduce/remove odor

### Technical Support

- Initial audit consisting of product and process recommendation and regular audits to maximize cost and efficiency
- Increasing operator capabilities and effectiveness through training and support
- System operation manual
- Operator License Training (if applicable)
- Analytical laboratory influent and effluent analysis

### Laboratory Services

- Product Development
- Quality Control
- Analytical Services
- Performance Testing

## Advanced Fluids Backed by Laboratory & Technical Support

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Our goal is to provide our customers with quality surface finishing chemical products to ensure that their processes run efficiently and trouble-free while meeting quality and performance expectations.

Our laboratories are equipped with complete process, analytical and performance testing capabilities for the testing of surface finishing chemical applications:

- The process laboratory is utilized for running panels and production parts for product selection, analysis and troubleshooting washer specific issues.
- The analytical laboratory is utilized to perform bath analysis and surface analysis for routine service and troubleshooting.
- The performance testing laboratory is utilized to evaluate paint and pretreatment performance using accelerated and physical testing methods.

All three groups work together to verify product quality, identify issues and formulate an action plan to resolve them, and to prevent future issues. We deliver the highest-quality products based on the latest technologies, and provide continuous support, both in the laboratory and in the field.

### Product Development

Quaker Houghton's product development team applies current market research, the latest technologies available, and knowledge of customer operations to identify and qualify chemical pretreatment programs, troubleshoot customer or prospective customer issues and the initial development of chemical pretreatment programs to meet our customers' surface finishing needs.

Product development is performed based on:

- Customer needs
- Energy efficient pretreatment programs
- Environmentally-friendly systems

- Market trends
- Troubleshooting pretreatment chemicals and processes for customers and prospective customers

### **Analytical Support to Identify and Resolve Your Surface Finishing Challenges**

Our commitment to fast turn-around on analytical results reduces downtime and increases profitability for our customers. The fully-staffed analytics laboratory at Quaker Houghton offers a variety of routine and troubleshooting services including:

- Chemical testing on parts
- Process bath analysis to ensure proper system maintenance
- Water analysis
- Analysis of waste water contamination levels
- Finished product defect analysis
- FTIR Spectrophotometer
- FTIR Microscope
- ICP
- Gas Chromatography/Mass Spectrometer
- Ion Chromatography
- Scanning Electron Microscope
- UV Visible Spectrophotometer
- Ion Selective Electrodes for Fluoride

Potentiometric Titrations



### **Performance Support Tailored to Your Unique Surface Finishing Environment**

Quaker Houghton offers a wide variety of physical and environmental performance testing to assist you in maintaining your metal finishing process quality. Our testing laboratory and staff are experts at simulating a customer's process environment so we can accurately predict the outcome. Performance testing capabilities include:

- Salt Spray Testing (ASTM B 117)
- Humidity Resistance (ASTM D 2247)
- Filiform Corrosion (ASTM D 2803)
- Water Immersion (ASTM D 870)
- Cyclic Corrosion Testing (SAE J2334, Customer Specific Procedures)
- Detergent Resistance (ASTM D 2248, Customer Specific Procedures)
- Impact Resistance (ASTM D 2794)
- MEK Rub (ASTM D 5402)
- Cross-Hatch Adhesion (ASTM D 3359)
- Conical Mandrel Bend (ASTM D 522)
- Pencil Hardness (ASTM D 3363)
- Paint Film Thickness
- Powder coating, e-coating, and wet spray paint capable

# Forward Together™

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