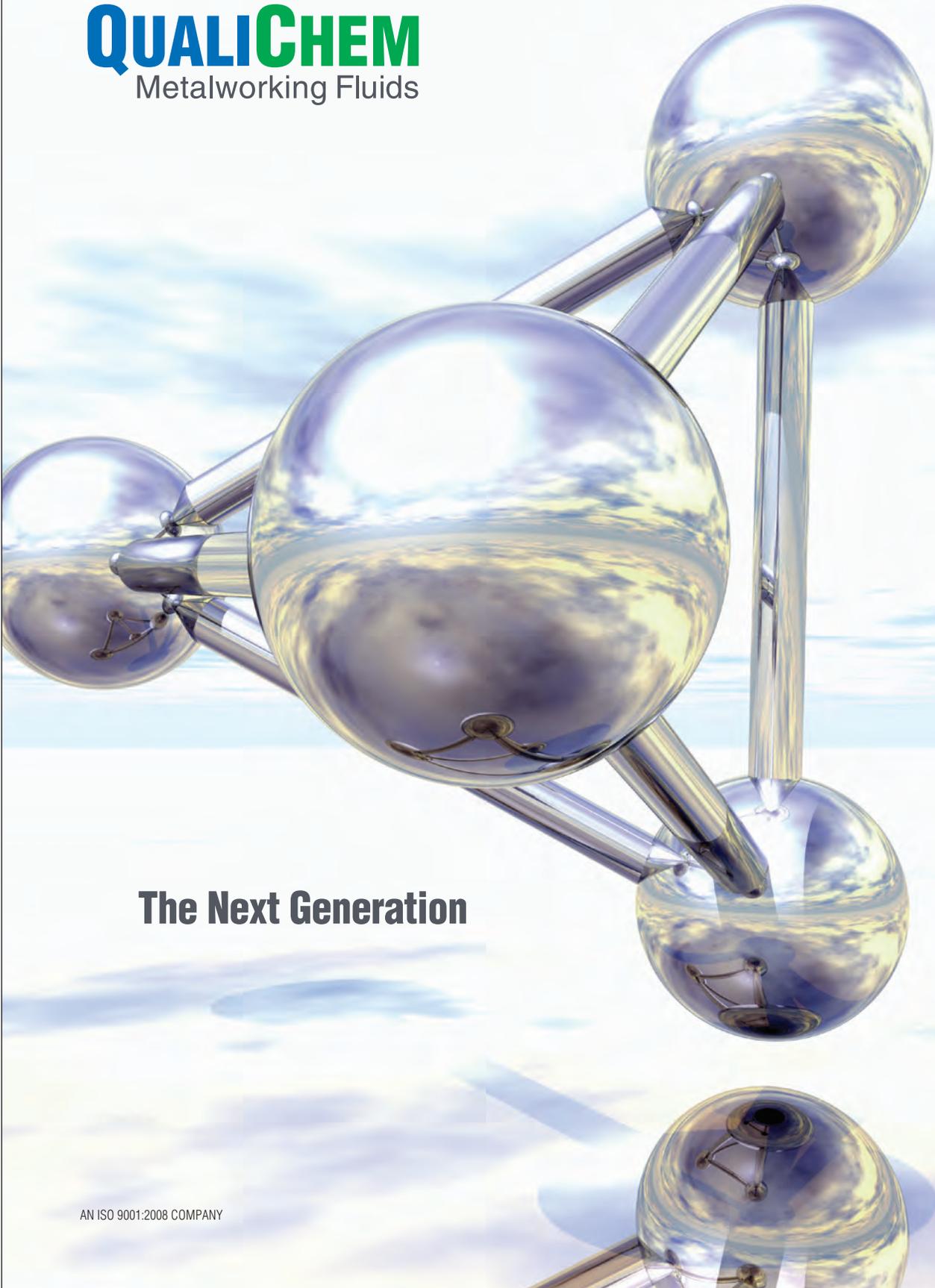


QUALICHEM

Metalworking Fluids



The Next Generation

AN ISO 9001:2008 COMPANY

Formulatory Expertise & Comprehensive Technical Support

The QualiChem Family of Metalworking Fluids

CUTTING, GRINDING & SPECIALTY FLUIDS

WATER DILUTABLE FLUIDS

Premium Series

XTREME COOL	Full Solution Synthetics
XTREME CUT	Semi-Synthetics
XTREME GRIND	Grinding Synthetics
XTREME MAG	Magnesium Machining Fluids
EQO-PURE	Natural & Synthetic Vegetable-Based
CARB GRIND	Carbide Grinding Fluids

Select Series

Q-COOL	Synthetics
Q-CUT	Semi-Synthetics
Q-MAG	Magnesium Machining Fluids
Q-SOL	Soluble Oils

STRAIGHT OILS/NEAT OILS

Premium Series

EQO-GRIND	Synthetic Based Grinding Oils
EQO-MAX	Vegetable Oil Based Cutting Fluids
XTREME CUT	Precision Machining & Turning Oils
XTREME DRILL	Gun Drilling & Deep Hole Drilling
XTREME GRIND	Grinding & Finishing
XTREME HONE	Honing & Super Finishing
QUICKTAP	Tapping Fluid

Select Series

Q-BROACH	Broaching (various types)
Q-HONE	Honing Oils
Q-LAP	Lapping Oils
Q-MIST	Spray Mist Lubricants (MQL)
MET-CUT	Machining & Turning
MET-DRILL	Gun Drilling & Deep Hole Drilling
MET-GRIND	Grinding
QUICK SLIDE	Slideway Lubricants

We are committed to providing cutting-edge technology to maximize your productivity and reduce your manufacturing costs.

CLEANERS

MET-KLEEN	Spray Wash, Ultrasonic, Vibratory, Immersion & Machine Tool Cleaners
Q-BRITE	Acid Cleaners
Q-KLEEN	Acid Cleaners
RUST KLEEN	Rust Removers
CITRUS CUTTER	Floor & Maintenance Cleaner
TUFF CUT	Floor & Maintenance Cleaners
EQO-KLEEN	Machine Tool Cleaner
BIOSOLV	Non-Petroleum Solvent Cleaners
CITRA-SOLV	Natural Solvent-Based Cleaners
ULTRA SOLV	Solvent Cleaners

CORROSION PREVENTATIVES

Q-GUARD	Water-Based Synthetic
Q-KOAT	Oil-Based
Q-SHIELD	Solvent-Based
SOL-KOAT	Water-Based Emulsion

METAL FORMING FLUIDS

Q-TUBE	Tube Mill Fluids
AQUA FORM	Water-Based Drawing & Forming
AQUA DRAW	Wire Drawing, Water Dilutable
MET-FORM	Oil-Based Drawing and Forming
SYN-FORM	Synthetic-Based

METALWORKING ADDITIVES

Antifoam & De-foam Agents
Corrosion Protection Additives
De-Scaling Agents
pH Adjusters
Lubricity Enhancers
Water Softening



Revolutionizing Metalworking Technology

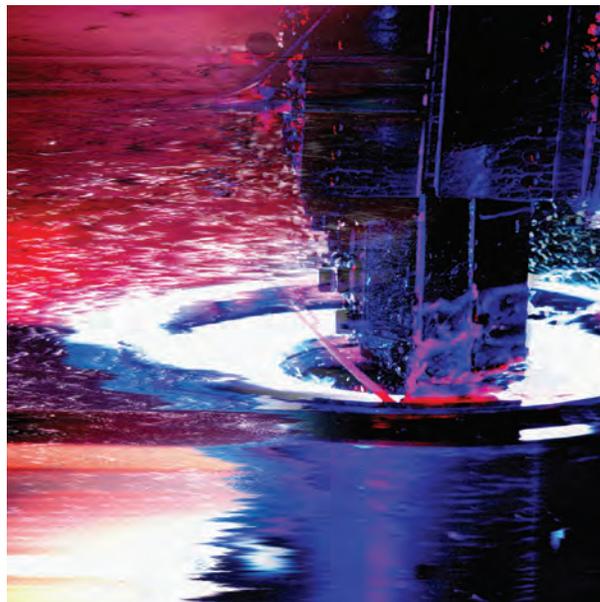
QualiChem is the fastest growing fluids manufacturer in the metalworking industry.

QualiChem offers advanced product technologies covering a wide range of metalworking applications including: cutting and grinding fluids, metal cleaners, corrosion preventatives, and metal forming fluids. In addition to high quality manufacturing, QualiChem provides complete technical, sales, and laboratory support for all of our metalworking fluids.

QualiChem has the highest performing cutting and grinding fluids on the market today, which is fueling our rapid growth. By applying the latest advances in additive technology and looking beyond those typically used in metalworking formulations, our team of chemists has developed breakthrough technology that is defining *the next generation of metalworking fluids*.

QualiChem's comprehensive lines of synthetic and semi-synthetic products provide cooling and lubrication levels to excel in virtually any cutting and grinding application. Cutting performance is achieved without the common problems of foam, sticky residues and dermatitis.

We deliver innovative chemistry to maximize productivity in the metalworking market.



The Next Generation of Metalworking Fluids

Defining the Leading Edge

QualiChem is committed to pursuing advances in fluid technology. Innovation is the key.

Our chemists are erasing old paradigms and providing innovative chemistry to deliver tomorrow's metalworking fluid technology today. We continue to break new ground with advanced chemistry to help you keep pace with machine tool improvements and part design requirements. You can count on our fluids to provide:

- Increased tool life
- Superior surface finishes
- Faster cycle times
- Reduced coolant usage
- Improved health and safety characteristics
- Exceptional fluid aesthetics (excellent cleanliness, low odor & low residue)

Meeting Industry Demands

QualiChem's product development is driven by performance and safety.

Our environmentally friendly, high-performance fluids deliver productivity gains and bottom line manufacturing savings to you. QualiChem fluids are designed to address the latest Environmental, Health & Safety issues to ensure the highest level of safety for users, thereby reducing your liability.

PRODUCT CASE STUDY

EQO-PURE 452

QualiChem's heavy duty vegetable derived micro-emulsion cutting and grinding fluid with extreme pressure additives designed for the most severe machining of hardened steels and stainless steel as well as exotic alloys such as titanium, Inconel, Hastelloy and Waspaloy

SITUATION & RESULTS: A production facility for deep-hole drilling and exploration recently tested the QualiChem EQO-PURE 452 on 440C stainless steel with excellent results.

TESTIMONIAL: "EQO-PURE 452 is the closest thing to oil I've ever seen. Tool life improved 350% with a noticeable improvement in surface finish." (See photo on right.)

QualiChem products deliver customer satisfaction with proven machining performance.

QualiChem's experienced development team understands the intricacies of today's modern manufacturing methods and machine tools. Higher speeds and feeds require fluids to deliver greater performance in tougher environments. Our cutting and grinding fluids meet increasing demands at the point of cut while maintaining operator-friendly aesthetics.

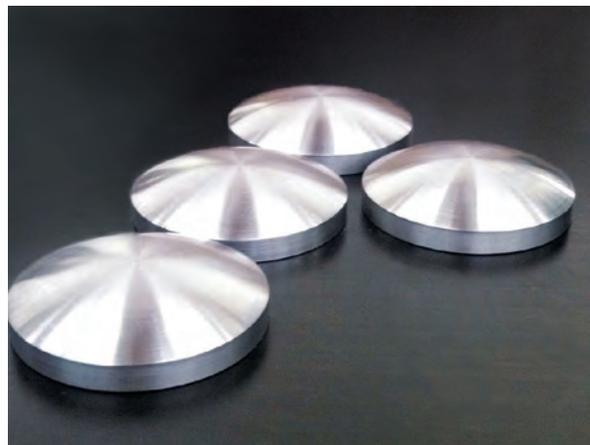
PRODUCT CASE STUDY

XTREME CUT 292

QualiChem's high performance semi-synthetic fluid designed for extremely difficult machining applications

SITUATION & RESULTS: A large specialty machine shop that machines multiple alloys including titanium, Hastelloy, brass and bronze replaced their highly chlorinated, sulfurized straight cutting oil with XTREME CUT 292. The results were remarkable - 100% improvement in tool life and 77% reduction in coolant usage for an annual tool life savings of over \$40,000 per machine.

TESTIMONIAL: "QualiChem's product runs much cleaner, and the operators love it! XTREME CUT 292 has reduced mist, and improved housekeeping greatly."



Example of superior surface finishes achieved when parts were turned on a lathe using EQO-PURE 452

The QualiChem Advantage

**QualiChem provides
customized laboratory
support services to
help you maintain your
fluids, investigate
solutions to complex issues
and increase product
performance**

Securing Your Future with our Expertise

The QualiChem team of metalworking fluid experts has the manufacturing knowledge and industry experience to recommend the best QualiChem product to maximize performance and cost effectiveness for any cutting and grinding process. Our engineering expertise will effectively address all of your specific fluid requirements and help you improve the performance of your most challenging applications.

Supplying the Right Product for the Right Application

Whether you are a job shop operating small CNC machines or a manufacturer with large central systems, QualiChem has the ideal cutting and grinding fluid to get the job done.

Selecting the right cutting and grinding fluid is the first step. With an extensive line of cutting and grinding fluids, there is no question QualiChem has a product that fits your application. A QualiChem expert will work with you to identify the best product for your application to ensure product compatibility and cost efficiency in your specific operating conditions. This may be achieved by using a proven product from one of the QualiChem product lines, or a custom formulated product for your specific application.

QualiChem also formulates fluids for unique applications, such as magnesium machining and carbide grinding, and for specific industries, such as aerospace, tube mills, bearing and automotive.

Protecting Your Investment

Proper fluid management is critical to protect your fluid investment. Lack of control increases usage rates, disposal costs, labor and downtime. QualiChem offers laboratory services to monitor systems and ensure optimal performance.

Analytical Trend Analysis (ATA)

Routine samples are pulled on a predetermined schedule and sent to QualiChem. QualiChem runs a battery of tests and documents the results. ATA reports generate trend analysis to ensure fluids run within normal operating parameters. With the scrutiny provided by an ATA, unplanned production losses and system pump outs are minimized.

Laboratory Service Request (LSR)

Non-routine samples are analyzed at the QualiChem lab to assist in troubleshooting or to determine the right QualiChem product for your application.

**We offer comprehensive technical support for our product lines
with fluid experts, either on-site with service engineers or from
our state-of-the-art laboratory.**



QualiChem Corporate Headquarters, Manufacturing Plant and Laboratories

All metalworking products sold by QualiChem are manufactured at our facility in Salem, VA. Local stocking and delivery are provided through our premier distribution network.



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