



**Master Fluid**  
SOLUTIONS®

*Improve Performance,  
Streamline Production,  
Enhance Profitability*



**INNOVATIONS**  
FOR LONGER SUMP  
AND TOOL LIFE

*TRIM® Metalworking Fluids*



Neo-Synthetics

Microemulsions

Emulsions

Semi-Synthetics

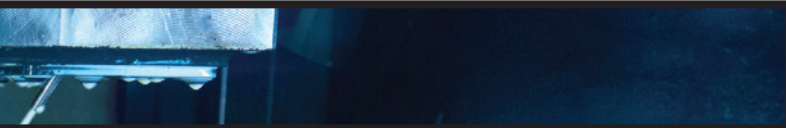
Synthetics



# INNOVATIONS FOR LONGER SUMP AND TOOL LIFE

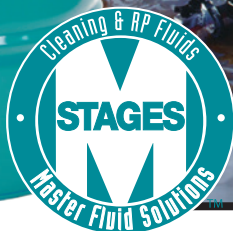
*Achieve cutting edge production with TRIM® cutting and grinding fluids*

- > significantly reduce fluid and tool costs
- > reduce downtime and labor
- > lower disposal costs
- > assure code compliance
- > excellent operator acceptance
- > a safer workplace for employees
- > immediate savings to the bottom line



TRIM® Product	Product Characteristics
<b>TRIM® HyperSol™ 888NXT</b> <i>NEW!</i> <i>Neo-Synthetic Precision Aerospace Machining Fluid</i>	Revolutionary, patented neo-synthetic technology offers unsurpassed versatility and performance on hard aerospace metals– titanium and high-nickel alloys, stainless steels, and Inconel® – and superior lubricity for machining soft, gummy aluminum alloys. Low foam, low odor, long running, meets most strict environmental regulations.
<b>TRIM® MicroSol® 692XT</b> <i>NEW!</i> <i>Premium, High-lubricity, Low-foam Microemulsion</i>	Ultimate lubricity. Delivers extended sump and tramp oil life, greater bio stability, and better foam control versus previous generation semisynthetic microemulsions. Compatible with very wide range of materials including titanium, high nickel alloys, steels, copper, and aluminum alloys.
<b>TRIM® MicroSol® 642RX</b> <i>NEW!</i> <i>High-lubricity, Low-foam, Medical Grade Microemulsion</i>	Specifically formulated for the medical device industry. Low-foaming, clean running, highly-lubricious with long sump life, and free of animal-derived raw materials. Fluid of choice for medical instruments, ortho instruments, prosthetic devices, endoscopy, and surgical tools.
<b>TRIM® MicroSol® 590XT</b> <i>Advanced Technology Aerospace Semisynthetic</i>	Specifically designed for aerospace; protects sensitive alloys from surface stains and corrosion. Maximum lubricity. Unsurpassed sump life and foam control. No boron or DCHA, nonchlorinated, needs no tankside additives.
<b>TRIM® MicroSol® 585XT</b> <i>Extended-life, Nonchlorinated Semisynthetic</i>	Extended-life, high-lubricity, microemulsion coolant delivers excellent cooling and mechanical lubricity. Well suited for machining and grinding gray iron, mixed metal situations, titanium and aluminum alloys.
<b>TRIM® MicroSol® 685lf</b> <i>High-lubricity, Low-foam Semisynthetic</i>	Heavy-duty soluble oil performance with the cleanliness of a low-foaming semisynthetic. For a very wide range of materials including stainless steel, titanium and nickel-based alloys, and composites.
<b>TRIM® MicroSol® 455</b> <i>Low-foam Ferrous Semisynthetic</i>	Low-foam, semisynthetic microemulsion for high-volume cast iron, ferrous, and some aluminum and nonferrous metalworking. Prevents leaching of elemental iron. Eliminates clinkering and oxidation of ferrous micro fines.
<b>TRIM® E925</b> <i>Chlorine-free, High-performance Emulsion</i>	Superior finish on aerospace titanium and aluminum alloys, exotics, stainless, and high tensile strength steels. Exceptional performance and sump life with more lubricity to the point-of-cut. Nonchlorinated.
<b>TRIM® E925AE</b> <i>DCHA-free, High-performance Emulsion</i>	DCHA-free, superior finish on aerospace titanium and aluminum alloys, exotics, stainless, and high tensile strength steels. Exceptional performance and sump life with more lubricity to the point-of-cut. Nonchlorinated.
<b>TRIM® E923</b> <i>Chlorine-free, Extreme-lubricity Emulsion</i>	Boron- and formaldehyde-free emulsion with extremely high EP content. For use in the most difficult applications, often replacing neat oils.
<b>TRIM® SC620</b> <i>Premium Low-oil Semisynthetic</i>	High lubricity, low foam, low odor semisynthetic for high-performance machining and grinding. Rejects tramp oil and extends coolant life, saves time and material. Finishes rival those of soluble oils. Multi-metal compatibility.
<b>TRIM® SC520</b> <i>General-purpose Semisynthetic</i>	Low cost, low odor for the multi-material, multi-operational shop. Controls built-up edge, improves tool life. Superior machining results on high-speed milling and turning. Controls chip welding on soft, gummy materials.
<b>TRIM® C390</b> <i>High Performance Aerospace Synthetic</i>	High-performance aerospace synthetic coolant customized for machining composites for the global aerospace industry. Proprietary synthetic lubricant technology provides superior lubricity. Extremely low foaming.
<b>TRIM® C350</b> <i>Premium, High-lubricity Synthetic</i>	Longer tool life, less residual stress on machined parts. PRTR compliant; free of chlorine, phenol, nitrite, copper, triazine, silicone; NO NPE or SARA 313 chemistry. Rust protection on aluminum, titanium, nickel, and steel alloys.
<b>TRIM® C270CG</b> <i>High-performance Synthetic</i>	Synthetic coolant concentrate operates at very high fluid pressures and volumes with little to no foam. Very stable formula; exceedingly long operational life with consistent performance. Nonchlorinated.
<b>TRIM® C276</b> <i>Clean-running Synthetic</i>	Specially synthesized. Machine- and operator-friendly, great sump life and tramp oil rejection. For centerless and cylindrical form grinding, high-speed, single-point turning, and down-the-hole work.

Master STAGES™ Cleaners



# INNOVATIONS FOR LONGER SUMP AND TOOL LIFE

Rely on hard-working  
Master STAGES™ to clean and protect

- > spray, immersion, or ultrasonic parts cleaning
- > multi-metal operations
- > metalworking fluid removal
- > cleaners with built-in and water-based RPs
- > vibratory finishing
- > reduce disposal costs
- > immediate savings to the bottom line



	Master STAGES™ Product	Product Characteristics
Parts Cleaners	<b>Master STAGES™ CLEAN 2017</b> <i>Economical, Heavy-duty Spray Cleaner</i>	Removes heavy soils and oily residue from ferrous and magnesium parts. Often used in rebuild operations and for cleaning up cast iron, stamped or drawn steel parts, or removing heavy RP coatings.
	<b>Master STAGES™ CLEAN 2029</b> <i>"One Step" Parts Washing Fluid with Corrosion Inhibitor</i>	High detergent, low foam, and good in-process rust prevention with just "One Step." Mild pH for a safer work environment. Use at 3%-5% and 120°F-180°F (49°C-82°C) for best results and lowest foam.
	<b>Master STAGES™ CLEAN 2115AL</b> <i>Low-foam Spray Washing Compound</i>	Aluminum-compatible, high-performance, low-foam synthetic washing compound; for very high-pressure spray washers, de-burring, and water jet cutting. Exceptional sump life, foam control, and tramp oil rejection.
	<b>Master STAGES™ CLEAN IP 2019s</b> <i>Silicated Low-foam Cleaner</i>	Very low foaming, concentrated. Removes straight oils and coolants from steel, cast iron, and most aluminum parts. An excellent cleaner and very economical. Rejects oil for easy skimming or centrifuging to extend bath life.
	<b>Master STAGES™ CLEAN 2030</b> <i>Ultrasonic and Immersion Washers</i>	Concentrated, very high-performance cleaner for washing all metals including brass, copper alloy, and aluminum in ultrasonic or immersion washers. Oil-rejecting properties for longer bath life and economical operation.
Corrosion Inhibitors	<b>Master STAGES™ CLEAN 2430</b> <i>Near-neutral Washing Compound</i>	Mild pH, highly concentrated, washing compound/corrosion inhibitor for aluminum and steel alloys, cast iron, copper, brass, bronze, and zinc. Great detergency and long life in single- and multi-stage spray washers.
	<b>Master STAGES™ RPO 6BF</b> <i>Barium-free, Low-odor, Corrosion Inhibitor</i>	Nonstaining, water displacing, thin-film rust preventative for use on a variety of metals, bearings, and precision parts. Six- to eight-months protection for indoor and in-process parts in storage, as well as parts in transit.
	<b>Master STAGES™ NOCOR® E6</b> <i>Low V.O.C. Emulsion, Corrosion Inhibitor Concentrate</i>	Super-concentrated, barium-free, water-based emulsion protects steel and ferrous metals for up to six months indoors at dilutions of 4%-16%. Low V.O.C., economical. Moderate pH, very low odor, and nonflammable.
	<b>Master STAGES™ NOCOR® S2</b> <i>Water-soluble Corrosion Inhibitor</i>	Use NOCOR S2 at 3%-7% in water for up to two months indoor rust prevention. Barium free, low V.O.C., and economical to use. Can be used in rinse stage of parts washers.
Maintenance Cleaners	<b>Master STAGES™ Whamex™</b> <i>Machine Tool Sump and System Cleaner</i>	Safe, fast-acting, concentrated formula saves machine cleaning downtime while removing the oily residues, scums, and insoluble soap deposits that reduce coolant life. For use with emulsions and semisynthetics.
	<b>Master STAGES™ Whamex XT™</b> <i>Low-foam Machine Tool Sump and System Cleaner</i>	Same safe, fast-acting, concentrated formula as Whamex, yet made for synthetics and semisynthetics. Nonfoaming; saves machine cleaning downtime, removes oily residue and scum, and extends coolant life.
	<b>Master STAGES™ Task2™ Grime Fighter</b>	Super-concentrated, industrial strength cleaner/degreaser. NO butyl, caustic, silicate, phosphate, nitrite, phenol, or borate. Safe on all metals. Full strength or dilute up to 100:1. Certified "Readily Biodegradable" by OECD. Pratt & Whitney Aerospace Approval PMC 1247-1. Handy 1-quart spray bottle.
	<b>Master STAGES™ Task2™ All Purpose Cleaner</b>	Removes heavy, oily, or greasy soils from all common surfaces. NO butyl, caustic, silicate, phosphate, nitrite, phenol, or borate. Safe on all metals. Use full strength or dilute. Certified "Readily Biodegradable" by OECD. Pratt & Whitney Aerospace Approval PMC 1247-1. Handy 1-quart spray bottle.
	<b>Master STAGES™ Task2™ Glass Cleaner</b>	Cuts through tough shop soils to clean glass, ceramics, stainless steel, chrome, and plastic surfaces. Free of butyl, caustic, silicate, phosphate, nitrite, phenol, or borate. Safe on all metals. Handy 1-quart spray bottle.
	<b>Master STAGES™ CLEAN F2™</b> <i>Non-butyl Floor and Multi-purpose Cleaner</i>	Strong and super concentrated for use on floors and hard surfaces. Very economical to use and safe for human contact at 20% concentration!
	<b>Master STAGES™ CLEAN AMO™</b> <i>Natural-solvent Cleaner and Degreaser</i>	A maize 'N Orange.™ Natural solvent cleaner can be mixed with water and used for a wide range of industrial cleaning jobs. Outstanding at removing oily, greasy, or resinous soils at room temperature.

*XYBEX® Fluid Recycling Equipment*

XYBEX SYSTEM  
1000



*Customers who recycle their fluids  
realize a 40%–80% reduction in  
coolant and fluid purchases.*

# INNOVATIONS FOR LONGER SUMP AND TOOL LIFE

*Reduce costs dramatically with XYBEX® fluid recycling equipment*

- > significantly reduces coolant usage
- > reduces downtime, repair costs, and labor
- > greatly reduces disposal fees
- > easily pays for itself with cost savings



### SumpShark® Sump Cleaner

Cleans virtually any machine tool sump quickly by filtering sludge and chips from coolant. Available in multiple configurations, sizes, and power sources.



### Cecor® Drum Top Sump Cleaner

Economical vacuum unit which converts an existing open-top drum into a powerful machine tool sump cleaner.



### SmartSkim® Sump Caddy™

Effectively removes troublesome tramp oil from coolant for longer sump and tool life, better surface finish, and cleaner machines and workplace.



### Hydroblend®

Water-driven, positive displacement proportioner dispenses coolant concentration on demand. Option for alkaline parts washing.



### SmartSkim® CoolantLoop™ Recycling system

Removes tramp oils and fines from coolant. Cleans and recycles coolant, significantly reducing coolant and disposal costs.



### Mini Dos

Compact, low- to mid-flow, fluid-driven proportional injector. Segregates harsh chemicals from critical internal components.



### Hydro Systems Hydro Foamer

Durable, low-cost dispenser for Master STAGES™ maintenance cleaners produces foaming stream for cleaning machine tools or large clean-in-place parts.



### Palm Abbe® Digital Refractometer

For fast, accurate, laboratory-precision readings in degrees Brix. Self-calibrating to water, ready to use in seconds. Easy-to-read display.



### Dema Cleaner Mixer

Easily mix cleaners for maintenance tasks with up to 8 different concentrations via selectable dials.

*Contact us*

Let us create a detailed, fact-based, customized analysis to prove just how much we can save your operation in time, material, and cost, while improving quality, with the premium coolant just right for your production.

For prices and additional information, contact your Master Fluid Solutions Representative.



[www.masterfluids.com/na/en-us/](http://www.masterfluids.com/na/en-us/)



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