



Master Fluid Solutions® Precision Engineered, Future Ready

Approved for the semiconductor
equipment industry

*Cutting-edge coolants for next-
generation semiconductor fabrication
from Master Fluid Solutions*

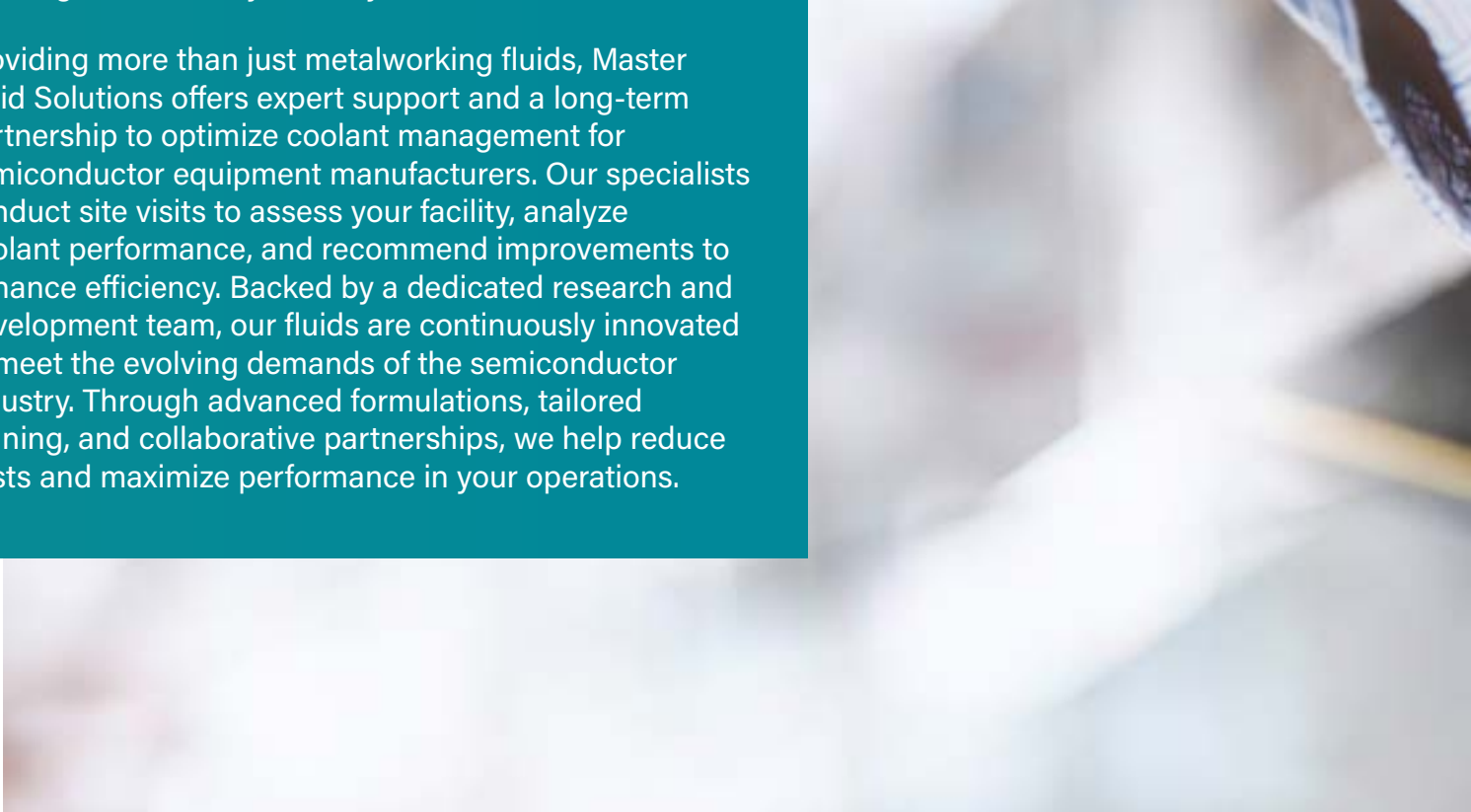


Innovative coolants and a collaborative partnership

For semiconductor equipment manufacturing, choose Master Fluid Solutions®

Master Fluid Solutions, global manufacturer of TRIM® cutting and grinding fluids, develops next-generation metalworking fluids for semiconductor fabrication, offering a range of high-precision coolants perfect for manufacturing specialized equipment such as vacuum chambers. Our range of Master STAGES™ cleaners delivers exceptional cleaning performance in spray, immersion, and ultrasonic parts vibratory finishing applications, leaving parts spotless and equipment operating at peak efficiency. We're committed to continuous innovation, keeping pace with the fast-evolving tech industry of today.

Providing more than just metalworking fluids, Master Fluid Solutions offers expert support and a long-term partnership to optimize coolant management for semiconductor equipment manufacturers. Our specialists conduct site visits to assess your facility, analyze coolant performance, and recommend improvements to enhance efficiency. Backed by a dedicated research and development team, our fluids are continuously innovated to meet the evolving demands of the semiconductor industry. Through advanced formulations, tailored training, and collaborative partnerships, we help reduce costs and maximize performance in your operations.



With a growing number of approvals from leading manufacturers including Applied Materials® and Lawrence Berkeley National Laboratory®, we have a Master Fluid Solutions product for you that will propel your semiconductor equipment fabrication into the future.

Supplying a range of equipment to the semiconductor industry, **Applied Materials®** produces vital equipment to virtually every chip manufacturer globally.

Choosing Applied Materials approved fluids will give your fabrication the opportunity to partner with a semiconductor industry leader.

Lawrence Berkeley National Laboratory® is a federally funded research center that has significantly advanced modern science and technology, with its scientists earning 16 Nobel Prizes.

Using Berkeley Lab approved fluids can open doors to partnerships with its five major National User Facilities, which host over 14,000 researchers from academia, industry, and government.





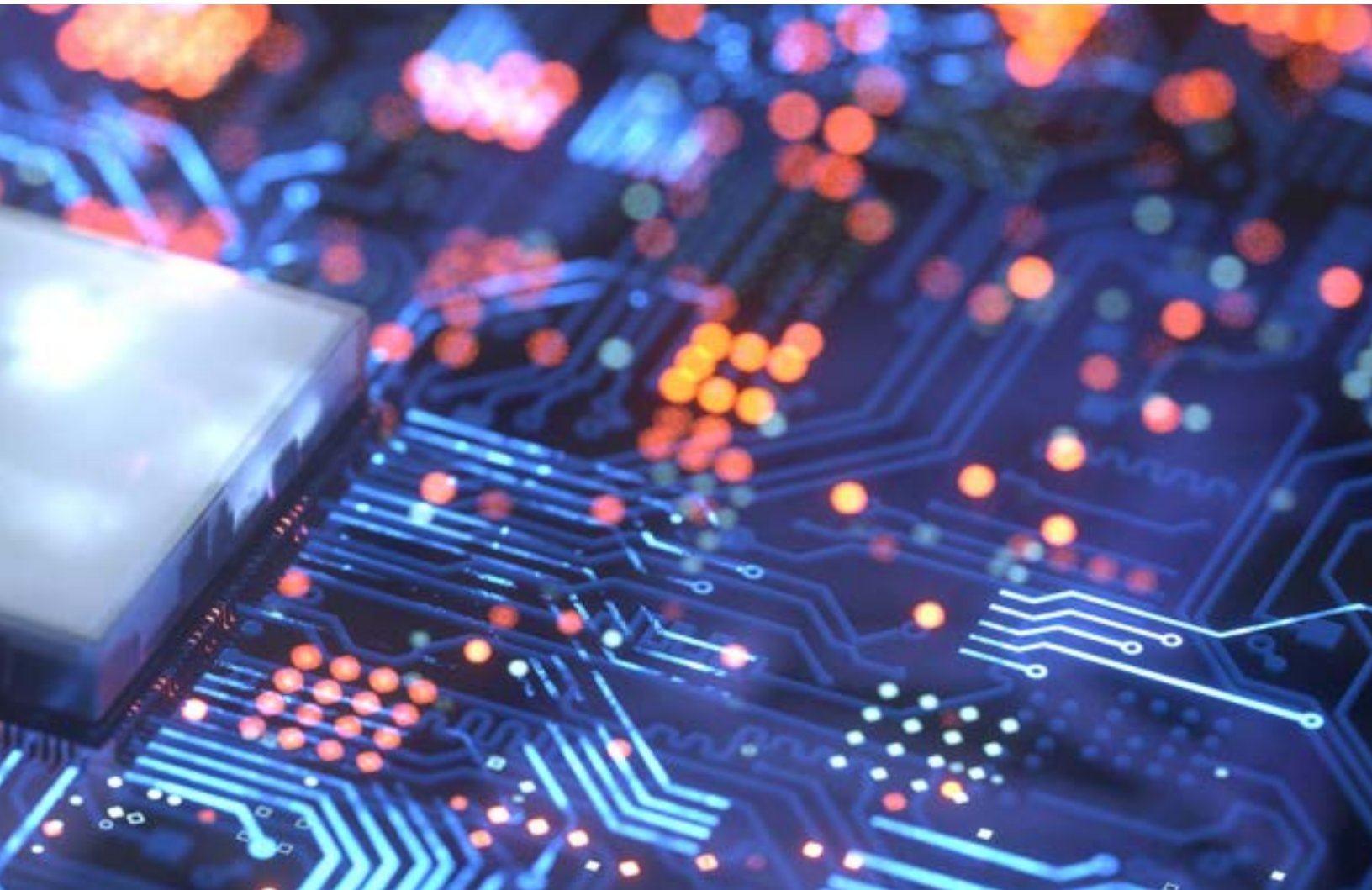
TRIM[®] MicroSol[®] 585XT

Precision high-performance microemulsion approved by Applied Materials[®] and Lawrence Berkeley National Laboratory[®] for the semiconductor industry

Engineered for exceptional precision and performance, TRIM MicroSol 585XT delivers high accuracy with every cut. This high-lubricity, semisynthetic microemulsion is formulated to meet the rigorous demands of semiconductor equipment manufacturing.

With superior cooling and mechanical lubricity, MicroSol 585XT extends sump life, minimizes foam, and has the machine-friendly characteristics expected from a premium TRIM coolant. Ideal for a variety of metals, including cast iron, steels, copper, titanium, and aluminum alloys, as well as many plastics and composites, MicroSol 585XT leaves a soft fluid film on parts for effortless cleaning and reduced maintenance.

- Superior cooling and mechanical lubricity
- Delivers high accuracy with every cut
- Extends sump life and minimizes foam
- Compatible with a very wide range of material
- Leaves a soft fluid film on parts for effortless cleaning and reduced maintenance



Case Study

Global Manufacturer Saves More Than \$126,000 per Year with MicroSol 585XT

Challenge:

Having optimized almost every aspect of their plants and achieving a highly efficient and profitable operation, a renowned manufacturer with facilities in key markets around the world was looking at ways to take their operation to the next level and reduce their fluid costs by 10%.

Application:

After a 30-day trial of TRIM MicroSol 585XT, the manufacturer saw unexpected improvements. Workers reported less chemical odor, machines were running cleaner, and downtime was significantly reduced. With lower carry off, parts came out cleaner, and fluid life extended, cutting sump cleanings in half. Switching to 585XT saved 8,350 gallons of cutting fluid and 108 gallons of defoamer annually—over \$126,000 in savings, far surpassing the 10% cost reduction goal. As a result, the company has expanded its use of MicroSol 585XT across multiple plants.

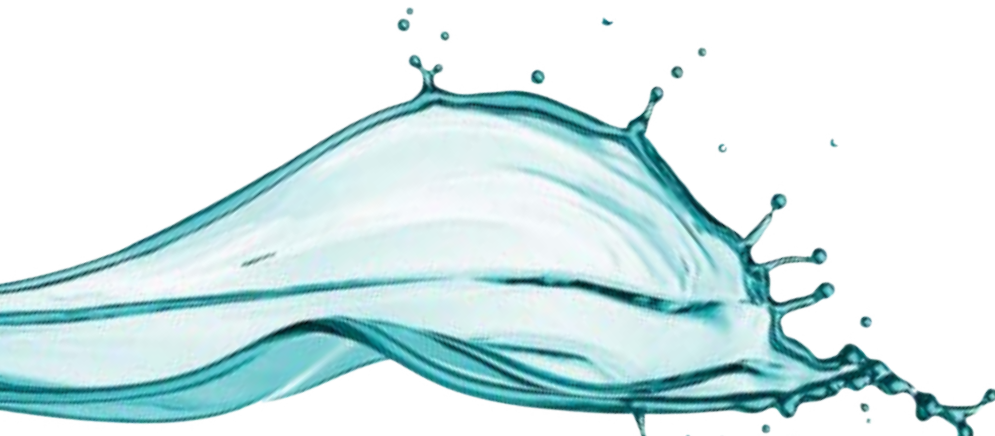
TRIM® MicroSol® 692XT

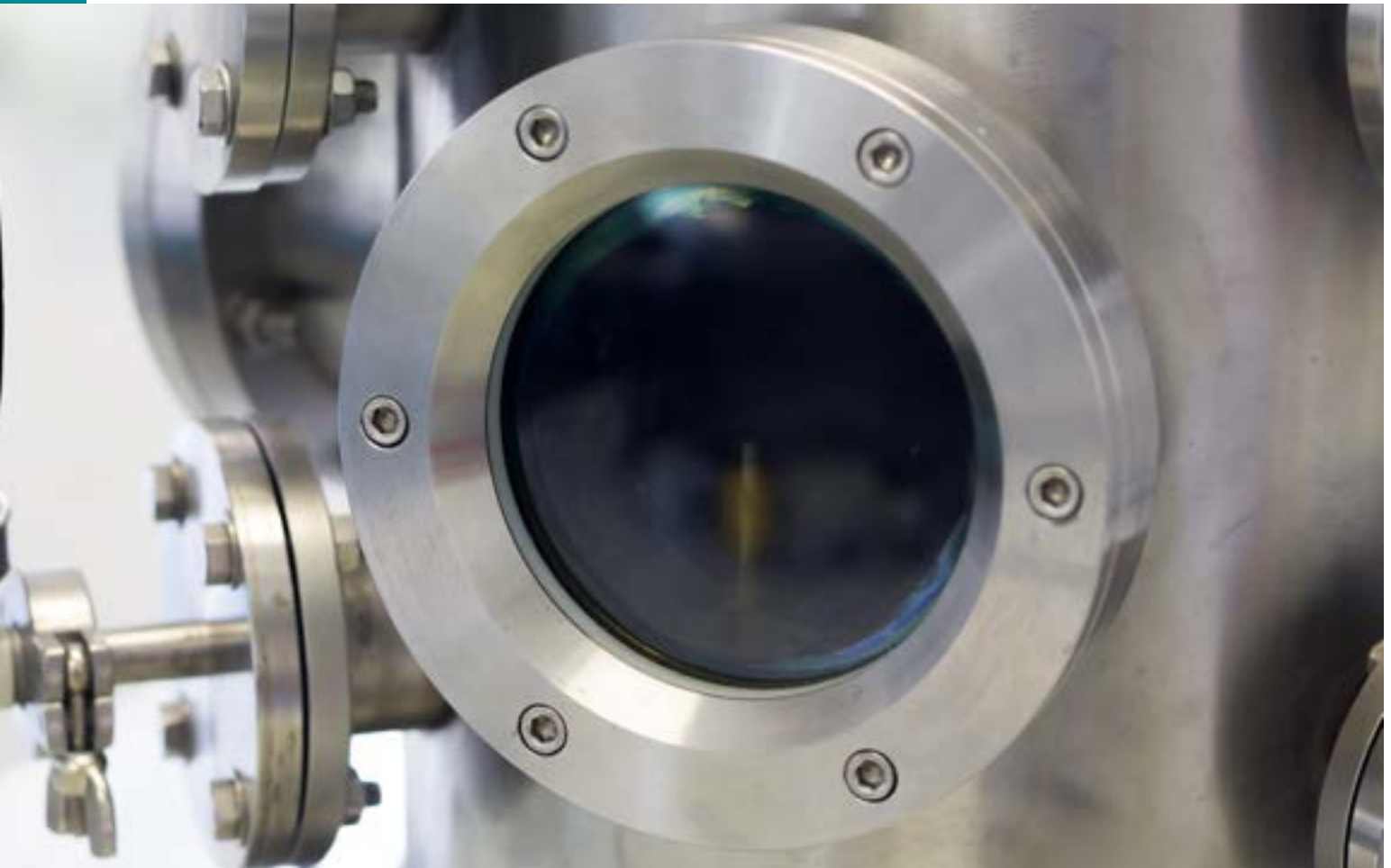
Premium, high-lubricity, low-foam microemulsion with a pending approval from Applied Materials® for the semiconductor industry

Boost efficiency and extend tool life with TRIM MicroSol 692XT, a next-generation semisynthetic microemulsion coolant designed for high-performance semiconductor manufacturing. Its advanced formula delivers superior lubricity, exceptional foam control, and extended sump life, reducing maintenance and eliminating the need for tank-side biocides. With excellent tramp oil rejection, it keeps production running smoothly, maximizing profitability and efficiency.

Ideal for mixed metal environments, TRIM MicroSol 692XT works with titanium, high-nickel alloys, steels, and copper. This halogen-free coolant offers superior corrosion protection and is an excellent alternative to chlorinated oils for high-silica aluminum alloys. It keeps machines clean and with no special disposal requirements, it's a cost-effective, sustainable choice for manufacturers.

- ✔ Superior lubricity with exceptional foam control
- ✔ Extends sump life, reducing maintenance and eliminating the need for tank-side biocides
- ✔ Excellent tramp oil rejection, keeping production running smoothly
- ✔ Ideal for mixed metal environments and compatible with a very wide range of materials
- ✔ A cost-effective, sustainable choice for manufacturers.





Case Study

Electric Vehicle Manufacturer Reduces Coolant Usage by 20% with TRIM MicroSol 692XT

Challenge:

A manufacturer drilling, tapping, and milling stainless steel and aluminum was struggling with odors from heavy bacterial growth. Despite multiple and frequent machine cleanouts, these problems persisted, leading to increased costs and a dissatisfied workforce. Desperate for improvements, the company was eager to upgrade their coolant.

Application:

Following a recommendation from Master Fluid Solutions, the company switched to TRIM MicroSol 692XT and eradicated bacterial growth and unpleasant odors, significantly improving the working environment and boosting employee morale. In addition, the customer experienced an unexpected and substantial benefit—a 20% reduction in fluid consumption.



TRIM® E715

Multi-metal machining emulsion with a pending approval from Applied Materials® for the semiconductor industry

Optimize performance and reduce maintenance with TRIM E715, a high-quality, universal soluble oil designed for demanding fluid management systems. Its stable formula ensures long operational life and consistent performance in machining and grinding applications across a wide range of materials. With high chemical and mechanical lubricity, TRIM E715 excels in medium to high-duty operations, delivering superior results while minimizing downtime and costs.

Engineered for the versatility of semiconductor equipment manufacturing, TRIM E715 is highly tolerant of hard water and features non-chlorinated, non-sulfurized extreme pressure additives to control built-up edge (BUE). Its ultra-fine emulsion reduces carryoff for lower operating costs, while fast-wetting properties enhance corrosion prevention by fully coating workpieces and chips. Compatible with the metals used in vacuum chamber manufacturing such as aluminum and steel, as well as nickel alloys, cast iron, and yellow metals, TRIM E715 requires no special disposal, making it a cost-effective and sustainable choice for precision manufacturing.

- ✔ High-quality, universal soluble oil designed for demanding fluid management systems
- ✔ Stable formula ensures long operational life and consistent performance
- ✔ Excels in medium to high-duty operations, delivering superior results
- ✔ Compatible with a wide range of metals used in vacuum chamber manufacturing
- ✔ Reduces carryoff for lower operating costs



Case Study

Aerospace Components Supplier Resolves Contamination Using Master Fluid Solutions' TRIM E715

Challenge:

A precision manufacturer of aerospace components was facing a serious bacterial contamination problem that resulted in costly machine downtime. The coolant they were applying was also causing machining issues that lead to a high volume of scrapped parts.

Application:

Switching to TRIM E715 quickly resolved the bacterial contamination issue, eliminating the need for costly cleanouts, saving the company nearly \$9,325 per year. Resolving bacterial contamination also removed the bad odors that operators frequently complained about. Furthermore, TRIM E715 also resolved the machine issues that were causing part defects meaning no more scrapped parts—another way E715 helped the company significantly reduce costs.





TRIM® E206

Versatile, high-performance emulsion approved by Applied Materials® and Lawrence Berkeley National Laboratory® for the semiconductor industry

With superior lubricity and a high oil content, TRIM E206 is an emulsion coolant designed for exceptional performance across a wide range of machining operations. Providing a greater boundary layer between the tool and the material, E206 ensures that the specialized equipment used in semiconductor manufacturing are fabricated with precision, durability, and reliability.

As an extremely versatile metalworking fluid, TRIM E206 is compatible with all ferrous and nonferrous materials and works in a wide range of operations such as heavy-duty broaching, surface and centerless grinding, and gear hobbing, ensuring optimal machining conditions.

To counteract the heat generated during machining, which can lead to material

expansion and thermal distortion, TRIM E206 keeps the cutting area cool under pressure ensuring that the semiconductor equipment created is highly reliable and accurate. Its superior lubrication not only protects tools and extends their service life but also enhances surface finish.

- Exceptional performance across a wide range of machining operations
- Ensures precision, durability, and reliability with every cut
- Provides a greater boundary layer between the tool and the material
- Compatible with all ferrous and nonferrous materials
- Extends service life and enhances surface finish

TRIM® VHP® E320

High-lubricity VHP emulsion approved by Applied Materials® for the semiconductor industry

For high-pressure, high-precision operations in semiconductor equipment manufacturing, choose TRIM VHP E320, a heavy-duty chemical emulsion coolant concentrate designed for Very High Pressure (VHP) applications that require exceptional lubrication.

Compatible with a wide range of materials, TRIM VHP E320 is especially effective on the high-strength steels and super alloys commonly used in semiconductor equipment fabrication. Its VHP-soluble oils provide the essential boundary lubrication for demanding operations like heavy-duty machining, grinding, and some stamping operations, with particular effectiveness in creep feed grinding—a key process in producing precise components and high-precision tooling for semiconductor equipment.

Offering superior anti-weld properties without relying on chlorinated EP additives, VHP E320 helps maintain a clean machine environment, producing little to no foam and leaving behind a soft fluid film for easy cleaning and reducing maintenance costs. It also supports standard metalworking recycling and disposal practices, ensuring efficiency and sustainability.

- Heavy-duty chemical emulsion coolant concentrate designed for VHP applications
- Compatible with a wide range of materials
- Provides the essential boundary lubrication for the most demanding operations
- Especially effective on the high-strength steels and super alloys
- Superior anti-weld properties without relying on chlorinated EP additives





TRIM[®] TAP Oils

TRIM TAP oils, approved by Applied Materials[®] and Lawrence Berkeley National Laboratory[®] for the semiconductor industry

With strong friction-reducing properties, TRIM TAP synthetic and synthetic blend straight oils are the perfect choice for metals with low machinability that are machined in semiconductor equipment manufacturing. For added lubricity on extremely tough jobs, TAP oils ensure longer tool life, excellent surface finish, and parts size control.

- Perfect for metals with low machinability
- Promote excellent surface finish
- Ensure parts size control
- Deliver exceptionally long tool life
- Reduce rubbing of the tool flank

TRIM[®] TAP HEAVY

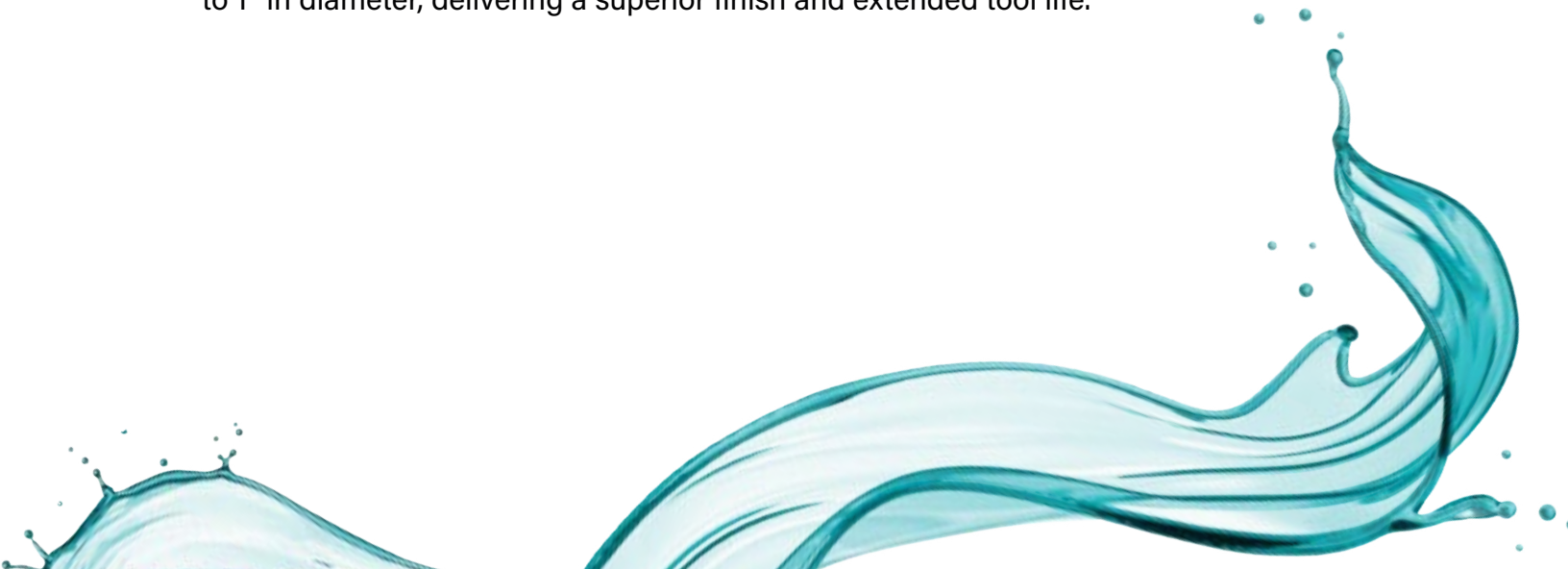
TRIM TAP HEAVY is a 100% synthetic and vegetable-based lubricant designed for tough metalworking operations, reducing friction for improved performance. Ideal for reaming, tapping, and threading, especially on large taps (>½" diameter), it delivers exceptionally long tool life, ensures parts size control, and is water washable, for easy parts cleaning.

TRIM[®] TAP LIGHT

TRIM TAP LIGHT is a synthetic, vegetable, and mineral oil blend with strong friction-reducing properties for improved machining performance. Designed for flooding applications, it enhances precision, extends tool life, and is ideal for small-diameter taps (<¼" diameter) and other tough operations, delivering the superior finish necessary in semiconductor equipment manufacturing.

TRIM[®] TAP NC

TRIM TAP NC is a synthetic and vegetable-based lubricant blend with strong friction reducing properties designed to enhance machining performance. Ideal for flooding applications and perfect for broaching, sawing, milling, tapping, threading, and more, TAP NC works effectively on metals with low machinability with taps up to 1" in diameter, delivering a superior finish and extended tool life.



TRIM® 9106

Synthetic coolant ideal for grinding aluminum and steels used in vacuum chamber manufacturing approved by Lawrence Berkeley National Laboratory® for the semiconductor industry

Enhance grinding performance with TRIM 9106, a clear, virtually odorless synthetic coolant designed for superior heat dissipation and corrosion inhibition. Ideal for grinding aluminum and steels used in vacuum chamber manufacturing, it prevents ammonia formation and allows graphite to float, while also reducing swarf clinkering. TRIM 9106 has low mist and low foam properties creating a cleaner, safer workspace.

With a moderate pH and clear working solution, TRIM 9106 minimizes residue buildup, making machines easier to clean. It effectively inhibits chip packing and is compatible with brass, aluminum, and lead serrations on magnetic grinding chucks. Offering extremely low carryoff for reduced fluid costs, it requires no special disposal, making it an environmentally friendly and cost-effective choice for precision grinding operations.

- Ideal for grinding aluminum and steels used in vacuum chamber manufacturing
- Prevents ammonia formation and allows graphite to float, reducing swarf clinkering
- Low mist and foam properties create a cleaner, safer workspace
- Minimizes residue buildup, making machines easier to clean
- Offers extremely low carryoff for reduced fluid costs



Master STAGES™ Cleaners

To clean and protect, rely on hard-working Master STAGES cleaners and corrosion inhibitors

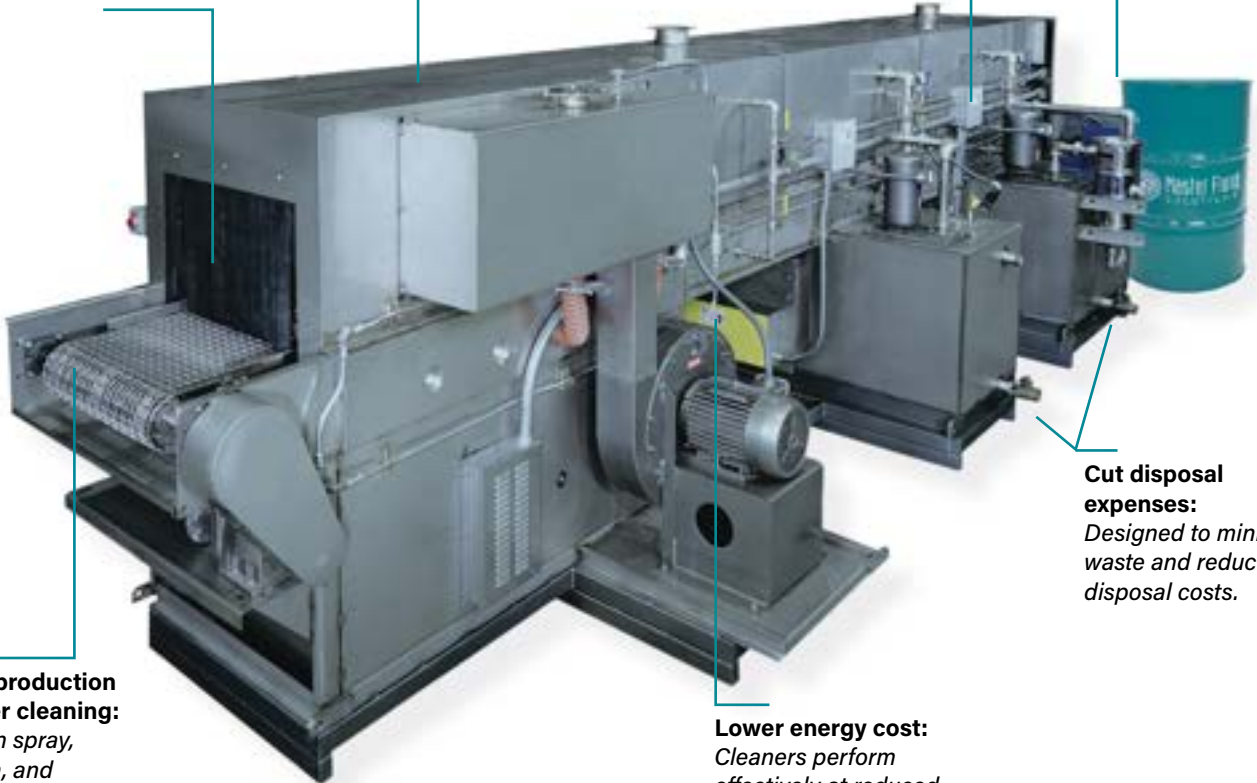
Here are all the ways Master STAGES products enhance semiconductor equipment fabrication

Eliminate rejected stained parts:
Protects components from corrosion for improved quality.

Reduce washer maintenance:
Removes both coolant residues and straight oils efficiently.

Low foaming formula:
Ensures a safer work environment with minimal foam generation.

Use lower concentrations:
Requires less product makeup, saving on material costs.



Increase production with faster cleaning:
Effective in spray, immersion, and ultrasonic vibratory finishing applications.

Lower energy cost:
Cleaners perform effectively at reduced temperatures.

Cut disposal expenses:
Designed to minimize waste and reduce disposal costs.



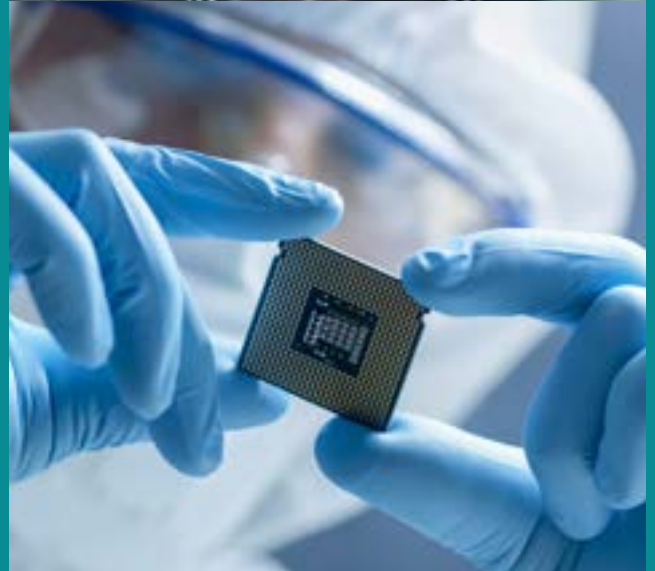
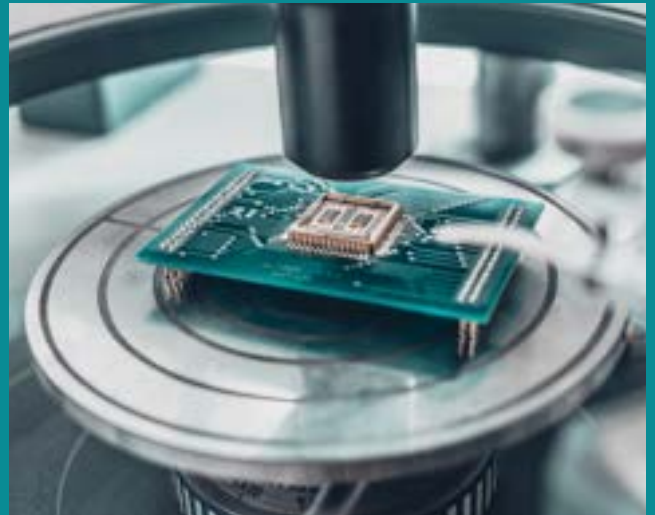
Contact us:

Partner with Master Fluid Solutions and let us provide you with a customized, fact-based analysis that shows how our premium coolants can optimize your production by saving time, material, and costs, while improving quality.

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



www.masterfluids.com



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