Master STAGES™ Whamex™

Machine Tool Sump and System Cleaner

Master STAGES™ Whamex™ is a safe, fast-acting concentrated formula that will save machine cleaning downtime while removing the oily residues, scums, and insoluble soap deposits that reduce coolant life. Whamex is made for cleaning out machine tool sumps and larger systems, coolant supply lines, and coolant recycling equipment. Whamex is compatible with most waste treatment (including ultrafiltration) and will not degrade TRIM metalworking fluids when used as directed.

Maintenance



Whether cleaning true grit or light soil from machines, work surfaces, glass, or floors, there's a highly-concentrated, cost-effective Master STAGES cleaner to get the job done and save hours of maintenance. So, don't just get it clean — get it Master STAGES clean! Master STAGES highly concentrated Whamex™ sump and central system cleaners for interim and full cleanouts extend sump life, are very cost effective, and greatly reduce downtime.

All Master STAGES environmentally-friendly products are safe for human contact and free of harmful, and corrosive chemicals.

Aerospace Approvals

Company	Specification
GE Aerospace	No specification available
General Dynamics	HSDS100214-01
Raytheon Technologies/Collins Aerospace/Pratt & Whitney	PMC 1246
Rolls-Royce	No specification available

Choose Whamex:

- A very specialized formula that draws many years of hands-on experience in machine clean outs
- Quickly breaks down and lifts off insoluble scum deposits hidden in lines and difficult to reach areas — getting rid of these residues is one of the best ways to extend coolant life in your system
- Very hard water tolerant allowing it to be effective in raw water or used coolant
- Environmental approvals are simplified because Whamex contains no nitrites, phosphates, barium, phenols, or butyl cellusolve; this formula has very low V.O.C. content and no SARA 313 reportable ingredients
- When used as directed below, this product is compatible with TRIM brand semisynthetic and soluble oil coolants, as well as most competitive coolants. Will remove heavy soils from machines without affecting paints, coatings, seals, hoses, or skirting, and it won't leave a slippery residue
- Short-term corrosion inhibitors prevent flash rusting of machine surfaces and ways

Whamex especially for:

Applications — machine cleaning inside and machine cleaning outside

Soils — coolant residues, heavy oils, and light oils

Materials — cast iron and steels

Industries — aerospace, automotive, machine tool, and medical

Whamex is free of — 2-butoxyethanol (Butyl), barium, nitrites, NPEs, phenols, phosphate, and SARA 313 listed ingredients

Master Fluid SOLUTIONS™

Master STAGES™ Whamex™

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Application Guidelines

- Machine cleaning for machines using emulsion cutting fluids
- Use a high-flow sump cleaner such as a Yellow Bellied Sump Sucker™, to quickly remove spent fluids and residues.
- Add up to 0.1% Master STAGES™ CLEAN DF1 to control foam in high-pressure, high-flow systems.
- All used coolant or rinse water must be recycled or disposed of in accordance with local, state, or provincial, and national environmental regulations.
- To learn about the "Preferred Method for Cleaning Machine Tools and Central Systems"; and the "Quick Cleaning Method For Noncritical Interim Cleaning" check out pages 10-12 of the The Handy Pocket Guide to a Clean Shop.
- For additional product application information, including performance optimization, please contact your Master Fluid Solutions' Authorized Distributor at https://www.masterfluids.com/th/en-th/distributors/index.php or your District Sales Manager, or email us at thailand-info@masterfluids.com.

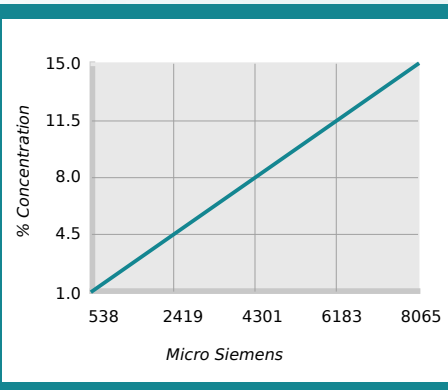
Physical Properties Typical Data

Color (Concentrate)	Yellow
Color (Working Solution)	Colorless
Odor (Concentrate)	Mild, pleasant
Form (Concentrate)	Liquid
Flash Point (Concentrate) (ASTM D92-90)	> 100°C
pH (Concentrate as Range)	10.5 - 11.5
pH (Typical Operating as Range)	10.0 - 11.0
Coolant Refractometer Factor	2.5
Cleaner Conductivity Factor	0.00186
Titration Factor (CL-1 Titration Kit)	0.43
Number of Cleaner Vials (CL-1 Titration Kit)	2
Cleaner Indicator A or B (CL-1 Titration Kit)	B

Recommended Metalworking Concentrations

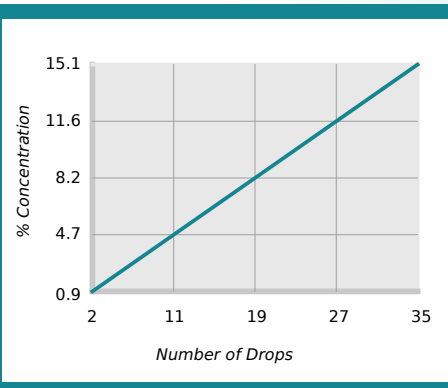
Design Concentration Range	1.0% - 15.0%

Concentration by Conductivity



% Concentration = Conductivity in Micro Siemens x Factor
Conductivity Factor = 0.00186

Concentration by Titration



% Concentration = No. of Drops x Titration Factor
Titration Factor = 0.43

Request SDS

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Mixing Instructions

- Recommended usage concentration in water: 1.0% - 15.0%.
- To help ensure the best possible working solution, add the required amount of concentrate to the required amount of water (never the reverse) and stir until uniformly mixed.

Ordering Information

1000-litre IBC

Additional Information

- Industrial use only
- Consult Master Fluid Solutions before using on any metals or applications not specifically recommended.
- This product should not be mixed with other metalworking fluids or metalworking fluid additives, except as recommended by Master Fluid Solutions, as this may reduce overall performance, result in adverse health effects, or damage the machine tool and parts. If contamination occurs, please contact Master Fluid Solutions for recommended action.
- Master STAGES™ is a trademark of Master Chemical Corporation d/b/a Master Fluid Solutions.
- The information herein is given in good faith and believed current as of the date of publication and should apply to the current formula version. Because conditions of use are beyond our control, no guarantee, representation, or warranty expressed or implied is made. Consult Master Fluid Solutions for further information. For the most recent version of this document, please go to this URL:

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