

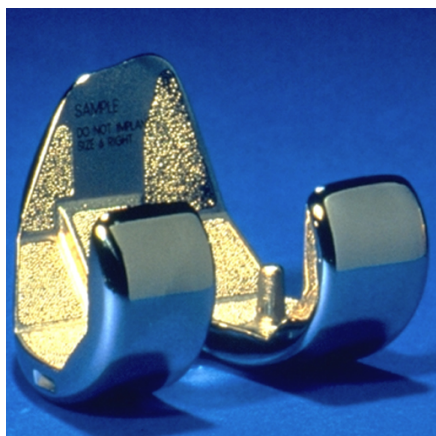
CLEAN 2017

Economical Heavy-duty Spray Cleaner



Master STAGES™ CLEAN 2017 is an economical heavy-duty spray cleaner that removes heavy soils and oily residues 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.

Immersion



Ultrasonic parts cleaning

CLEAN 2017 saved 44% per year

A manufacturer of joint replacement systems and medical tools had a multi-step process to clean parts utilising spray washing, dunk tank immersion cleaning, and a final two-part ultrasonic cleaning process. A project to reduce cost without sacrificing cleanliness was initiated by Master Fluid Solutions. Through extensive tests on cleaners and processes, Master Fluid Solutions found the customer could eliminate one cleaning process, use less cleaner itself, and consume less energy through the use of Master STAGES CLEAN 2017 — for a combined savings of 44% per year in cleaner material and process energy costs.

Choose CLEAN 2017:

- Very economical way to remove heavy soils and light rust
- Low foaming at ambient temperatures, and even lower when used above 49°C
- Can be recycled using XYBEX® equipment
- Contains no solvents, borates, silicates, nitrites, or amines
- Long bath life
- Excellent compatibility with magnesium
- Will prevent flash rusting and provide one-to-two days of in-process corrosion inhibition if not rinsed

CLEAN 2017 especially for:

Applications — corrosion inhibition, parts washing, rust prevention

Soils — coolant residues, greases, oils, sulphurised oils and waxes

Metals — cast iron, copper, magnesium, stainless steels, steels and titanium

Industries — automotive, bearing, general engineering, general fabrication, general industry, job shop, machine tool manufacturers, medical and tool manufacturing

CLEAN 2017 is free of — amines, borates, nitrites, silicates, solvents

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Application Guidelines

- CLEAN 2017 is normally used at concentrations from 1%-7%. We recommend 3% as a starting concentration to provide reserve surfactant.
- This product is suitable only for steel, stainless steel, cast iron, titanium, pure copper, and magnesium parts. Do not use on aluminium alloy, copper alloy, or zinc.
- Operating temperature should be between 21°C to 99°C for spray cleaning.
- CLEAN 2017 will work well in immersion washers as well as ultrasonic baths under 49°C.
- High pH cleaners such as CLEAN 2017 often produce "soaps" as part of their cleaning action. CLEAN B1 is effective at reducing foam resulting from the formation of these soaps and may be used in conjunction with CLEAN 2017.
- For additional product application information, including performance optimisation, please contact your Master Fluid Solutions' Authorised Distributor at <https://www.2trim.us/distributors.php>, your District Sales Manager, or call our Tech Line at +49 211 77 92 85 - 13.

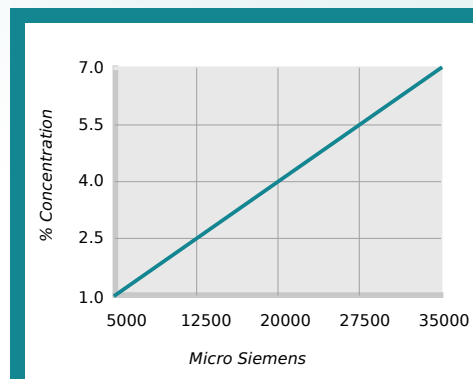
Physical Properties Typical Data

Colour (Concentrate)	Light yellow
Colour (Working Solution)	Light yellow
Odour (Concentrate)	Mild, detergent
Form (Concentrate)	Liquid
Flash Point (Concentrate) (ASTM D92-90)	> 100°C
pH (Concentrate as Range)	13.5 - 14.0
pH (Typical Operating as Range)	12.5 - 13.0
V.O.C. Content (ASTM E1868-10)	0 g/l
Cleaner Conductivity Factor	0.00020
Titration Factor (CL-1 Titration Kit)	0.36
Number of Cleaner Vials (CL-1 Titration Kit)	1
Cleaner Indicator A or B (CL-1 Titration Kit)	A

Recommended Metalworking Concentrations

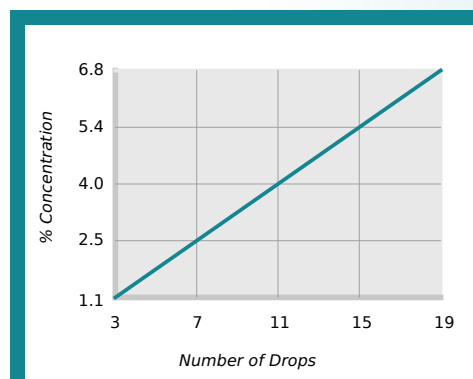
Design Concentration Range	1.0% - 7.0%
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Concentration by Conductivity



$$\% \text{ Concentration} = \text{Conductivity in Micro Siemens} \times \text{Factor}$$
$$\text{Conductivity Factor} = 0.00020$$

Concentration by Titration



$$\% \text{ Concentration} = \text{No. of Drops} \times \text{Titration Factor}$$
$$\text{Titration Factor} = 0.36$$

Health and Safety

For further information, see the most recent SDS which is available directly from Master Fluid Solutions or from your Master Fluid Solutions' Authorised Distributor.

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Mixing Instructions

- Recommended usage concentration in water: 1.0% - 7.0%.
- 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

20-litre pail

204-litre drum


1000-litre IBC


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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:
https://2trim.us/di/?plr=CLEAN2017*en*eu



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