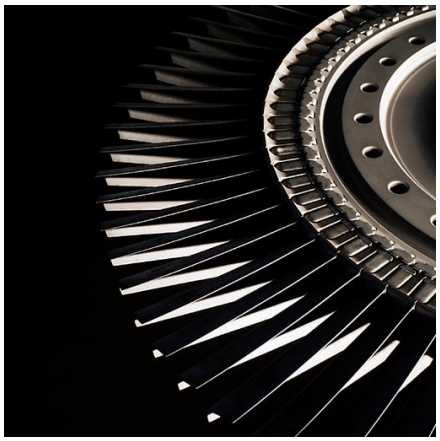
Master STAGES™ CLEAN IP 2019s

Silicated Low-foam Cleaner

Master STAGES™ CLEAN IP 2019s is a very low-foaming, liquid, cleaning concentrate designed to remove straight oils and coolants from steel, cast iron, and most aluminum parts.

Spray



By flooding parts with the chemical cleaner, spray cleaning offers a fast, effective way to remove soil, coolant, and oil residue from a variety of metals, and Master STAGES spray cleaners are specially tailored to do the job quickly, effectively, with less makeup, and no staining of parts. Master STAGES in-process spray cleaners are tough and fast-acting with very low V.O.C. and no SARA 313 reportable ingredients.

There's a Master STAGES spray cleaner specifically designed for cleaning residues ranging from coolant, light to heavy oil, grease, drawing compounds, lubricants, waxy soil, oxidation, or rust from metals ranging from aluminum, steels, cast iron, stainless steels, alloys, brass, bronze, copper, to magnesium.

Offering increased life, good tramp oil rejection, low odor, low foam, and low mist, and additional corrosion protection, highly-concentrated Master STAGES spray cleaners produce clean parts while reducing overall costs.

Choose CLEAN IP 2019s:

- An excellent cleaner and very economical to use
- Compatible with aluminum, cast iron, and steel alloys
- Rejects oil for easy skimming or centrifuging to extend bath life
- Nonfoaming at high-pressure in a spray washer and vibratory deburring machines even at room temperature
- Provides flash corrosion inhibition and up to two weeks of short-term, dry, in-process corrosion inhibition

CLEAN IP 2019s especially for:

Applications — corrosion inhibition, de-burring, spray, and vibratory

Soils — chlorinated oils, coolant residues, oils, and sulfurized oils

Materials — aluminum, aluminum alloys, brass, cast iron, copper, steel alloys, steels, yellow alloys, and zinc

Industries — automotive and medical

CLEAN IP 2019s is free of — phosphate

Master Fluid SOLUTIONS™

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Application Guidelines

- CLEAN IP 2019s is suitable for high-pressure spray washers operating from 70°F (21°C) up to 140°F (60°C).
- Starting concentration is from 2% - 4%, depending on temperature, soil type, and time in the wash zone.
- In most cases, the washing solution should be rinsed off before it dries. This is particularly true at high concentrations.
- 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.

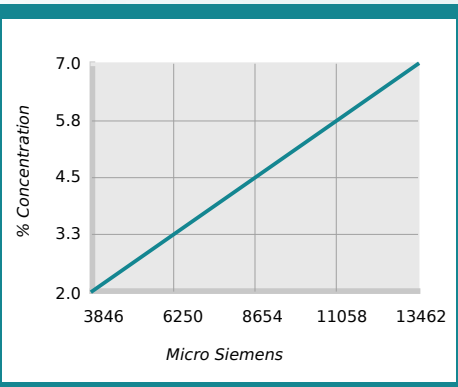
Physical Properties Typical Data

Color (Concentrate)	Light yellow
Odor (Concentrate)	Mild
Form (Concentrate)	Liquid
Flash Point (Concentrate) (ASTM D92-90)	> 100°C
pH (Concentrate as Range)	12.5 - 13.5
pH (Typical Operating as Range)	11.0 - 12.2
Coolant Refractometer Factor	2.6
Cleaner Conductivity Factor	0.00052
Titration Factor (CL-1 Titration Kit)	0.40
Number of Cleaner Vials (CL-1 Titration Kit)	1
Cleaner Indicator A or B (CL-1 Titration Kit)	A

Recommended Metalworking Concentrations

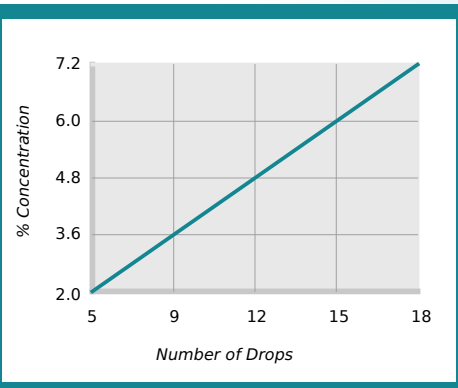
Design Concentration Range	2.0% - 7.0%

Concentration by Conductivity



% Concentration = Conductivity in Micro Siemens x Factor
Conductivity Factor = 0.00052

Concentration by Titration



% Concentration = No. of Drops x Titration Factor
Titration Factor = 0.40

Request SDS

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Mixing Instructions

- Recommended usage concentration in water: 2.0% - 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-liter pail

204-liter drum

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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