# Master STAGES™ CLEAN 2115AL

## *Low-foam Spray Washing Compound*

Master STAGES™ CLEAN 2115AL is an aluminum compatible, high-performance, low-foam synthetic washing compound for use in very high-pressure spray washers, de-burring, and water jet cutting. Advanced surfactant technology provides excellent foam control and tramp oil rejection.

### *Master STAGES™ CLEAN 2115AL Reduces Cleaning Fluid Costs by 50% for Auto Manufacturer*



*The customer is one of the largest auto brands and manufacturers in the world, with a diverse product line ranging from consumer cars to motorcycles to aircraft. Established in the 1960s, the customer has remained one of the most trusted manufacturers of motorcycles in Thailand, holding a top rank in sales volume for over 30 years.*

*In 2021, the company expanded further into the APAC marketplace by adding distribution to its offerings.*

## *Aerospace Approvals*

| Company | Specification |
|---|---|
| GE Aerospace | for stainless steel |
| Raytheon Technologies/Collins Aerospace/Pratt & Whitney | PMC 1243 |

## Choose CLEAN 2115AL:

- Compatible with a wide range of materials including aluminum, cast iron, steels, zinc, plastics, and composites
- Resists foaming even when contaminated with large quantities of soils or coolant. This makes CLEAN 2115AL an excellent choice where rapid buildup of coolant carryover creates a foam problem
- Many CLEAN 2115AL applications are in the range of 3,000 to 10,000 PSI (20684 to 68947 kPa)
- Provides short-term corrosion inhibition on cast iron and ferrous alloys
- Excellent biostability
- Extremely low carryoff keeps operating costs down
- Low foam and mist
- Very low initial odor level
- Exceptional sump life and great tramp oil rejection

## CLEAN 2115AL especially for:

**Applications** — corrosion inhibition, de-burring, high-pressure spray washing, parts washing, polishing, VHP spray (very high pressure), vibratory, and water-jet cutting

**Soils** — coolant residues

**Metals** — aluminum, aluminum alloys, brass, bronze, cast iron, composites, copper, copper alloys, ferrous metals, plastics, steel alloys, steels, zinc, and zirconium

**Industries** — automotive

**CLEAN 2115AL is free of —** nitrites and silicates

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## Application Guidelines

- In very high-pressure spray washers (over 1,000 PSI, 6894.76 kPa), de-burrers or water jet cutters, typical concentrations are 3% to 5%, and operating temperatures are ambient up to 140°F (60°C).
- Foam may increase if the temperature is below 80°F (27°C) at the point of agitation.
- For best corrosion resistance on ferrous parts, concentration should be kept between 5% and 10%.
- CLEAN 2115AL has excellent aluminum compatibility. However, it is wise to pre-check tolerance for high temperatures (over 120°F, 50°C) or long exposure times (over 5 minutes) when washing 2000, 5000, or 7000 series wrought, or 300 series cast alloy.
- For additional product application information, including performance optimization, please contact your Master Fluid Solutions' Authorized Distributor at https://www.masterfluids.com/ap/en-ap/distributors/index.php, your District Sales Manager, or email us at apac-info@masterfluids.com.

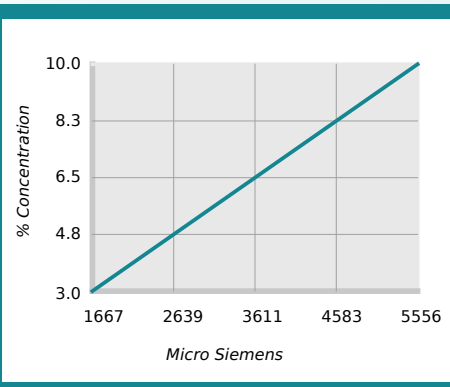
## Physical Properties Typical Data

| | |
|---|---|
| Color (Concentrate) | Yellow |
| Odor (Concentrate) | Mild, pleasant |
| Form (Concentrate) | Liquid |
| Flash Point (Concentrate) (ASTM D92-90) | > 100°C |
| pH (Concentrate as Range) | 8.5 - 9.5 |
| pH (Typical Operating as Range) | 8.0 - 9.0 |
| Coolant Refractometer Factor | 2.6 |
| Cleaner Conductivity Factor | 0.00180 |
| Titration Factor (CL-1 Titration Kit) | 0.28 |
| Number of Cleaner Vials (CL-1 Titration Kit) | 2 |
| Cleaner Indicator A or B (CL-1 Titration Kit) | B |

## Recommended Metalworking Concentrations

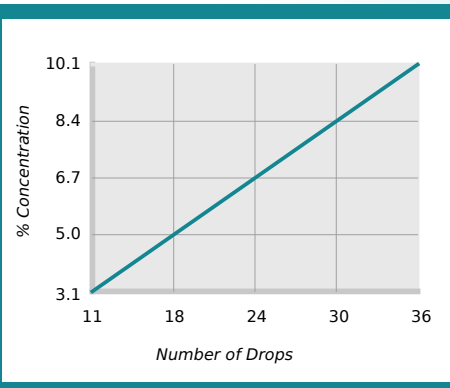
| | |
|---|---|
| Design Concentration Range | 3.0% - 10.0% |

## Concentration by Conductivity




% Concentration = Conductivity in Micro Siemens x Factor
Conductivity Factor = 0.00180

## Concentration by Titration




% Concentration = No. of Drops x Titration Factor
Titration Factor = 0.28

## Health and Safety

Request SDS

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## Mixing Instructions

- Recommended usage concentration in water: 3.0% - 10.0%.
- 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

1000-liter tote



## 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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