

# WASHING AT ONLY 40<sup>0</sup>C

WITH CHEMICALS FROM THE

## METALAS CLEANER FL-SERIES

Industrial degreasing and cleaning of components play an important role in our customers' production processes. **CLEANER FL** aqueous cleaning chemicals will not only improve your degreasing and cleaning results. They offer you more benefits, such as:

- Extremely high cleaning quality  
**CLEANER FL** improves the performance significantly, at low temperature!!
- Energy savings  
Cleaning at temperatures around 40° Celsius will reduce energy consumption.
- Improved production efficiency
  - It takes less time to heat up your machine to working temperature
  - Increased production time thanks to more up time of your equipment
  - Lower maintenance cost
  - A lower temperature of the components can speed up your production
- Non- emulsifying product  
The non-emulsifying quality of **CLEANER FL** brings the oil to the surface where it can be removed by an oil separator. It also results in fewer deposits and less wear in the degreasing machine. This will improve the quality of the fluids which will have a positive result on the service of your machine.
- Water savings  
While the oil is removed from the cleaning fluid the bath life will be extended. This results in less use of precious water.
- Reduced environmental load **and** waste disposal savings.  
Fewer water changes will reduce the volume of effluent considerably and result in savings in the cost of disposal.

The **CLEANER FL**-series chemicals have pH values that vary from neutral to slightly alkaline to alkaline. As a result, there will always be a chemical to answer to your requirements. **CLEANER FL** will clean and degrease surfaces of components of many different types of metal such as steel, stainless steel, iron, cast iron, forged iron, aluminum, magnesium, brass and copper.

***Your partner for Component Cleaning Solutions***

Product	Characteristics	Materials	pH / concentration	Application
CLEANER FL-B	Liquid, alkaline, strongly non-emulsifying, foam free from 35°C  Extreme high cleaning quality	Steel, Stainless Steel Aluminum, Magnesium, Copper, Brass, alkaline resistant plastics, enameled surfaces	11,5 – 12,0  5%	Spray washing at 35 – 80°C  Removal of heavy contaminations, forming oils , heavy grease  Used in remanufacturing workshops
CLEANER FL-C	Liquid, mild alkaline, strongly non-emulsifying, foam free from 38°C  Degreasing and Passivation	Steel	9,8  3 - 5%	Spray washing at 35 – 70°C  Removal of large quantities of oil, like in hardening plants  Pre-cleaning and process cleaning
CLEANER FL-D	Liquid, mild alkaline, strongly non-emulsifying, foam free from 38°C  High pressure cleaning	Steel, Stainless Steel, Grey Cast Iron, Aluminum, Copper, Brass	9,4  1 – 5%	Spray washing at 20 – 90°C  High pressure stable up to 400bar  Used for cleaning machined and Electro Chemical machined parts
CLEANER FL-F	Liquid, neutral  Fast working, non aggressive	Steel	8,0 – 8,6  5 to 10%, max 20%	Dipping or Ultrasonic cleaning at 20 – 70°C  Removal of rust and scaling

#### CLEANER FL benefits in short:

- Water based, no solvents!
- All types of metals can be treated
- Different types of metals in the same bath
- Improvement of quality
- Extends the bath life time
- Reduced water consumption
- Reduced machine maintenance
- Improved working environment
- Reduced environmental load
- Oils do not emulsify
- Fewer deposits in the machine
- Less effluent
- Longer machine service life

#### A few of the other cleaners :

CLEANER FL	Liquid, mild alkaline, strongly non-emulsifying, foam free from 50°C  Extreme high cleaning quality	Steel, Stainless Steel, Aluminum, Magnesium, Copper, Brass, alkaline resistant plastics	10,3  5 – 10%	Spray washing at 50 – 80°C, dipping, Ultrasonic cleaning  Removal of coolants, forming oils, transmission oil, preservative oil Used in remanufacturing workshops
CLEANER S	Powder, alkaline, strongly non-emulsifying, foam free from 50°C  Extreme high cleaning quality	Steel, Stainless Steel, Aluminum, Magnesium, Copper, Brass, alkaline resistant plastics	11,5 – 12,7  0,5 – 3%	Spray washing at 50 – 80°C, dipping, Ultrasonic cleaning  Removal of machining coolants, forming oils , transmission oil, preservative oil, pre-cleaning for painting and phosphating process  Used in remanufacturing workshops

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Metalas Cleaning Systems BV - James Wattweg 28 - 3133KK Vlaardingen - The Netherlands  
(T) +31 (0)10 435 6036 - (F) +31 (0)10 234 0415 - (E) [info@metalas.com](mailto:info@metalas.com) - (I) [www.metalas.com](http://www.metalas.com)