

riag Clean 600

Mild alkaline degreasing process

riag Clean 600 is a soak cleaning process with an excellent purification capacity, which is intended to use for copper, zinc, aluminum and their alloys, but also for steel. Nonferrous metals will not be corroded or discolored. Alloys should be tested in practice. **riag Clean 600** removes with a high efficiency polish and is preferably used as an ultrasonic cleaner. The corrosion on aluminum is low and constant.

Properties

- Suitable for iron, steel, brass, copper, magnesium or aluminium
- Alkaline powder
- Emulsifying (in combination with **riag Clean 663/664 Emulsifier** or **riag Clean 667/664 Emulsifier**)

Ingredients

- Phosphates
- Borates

Make up of 100 Litres

	Make up with	
	riag Clean 663 Emulsifier	riag Clean 667 Emulsifier
riag Clean 600 Salt	3 – 5 kg	3 – 5 kg
riag Clean 663 Emulsifier	0,6 – 1,0 L	
riag Clean 667 Emulsifier		0,3 – 0,5 L
riag Clean 664* Emulsifier	0,1 – 0,3 L	0,1 – 0,3 L

* **riag Clean 664 Emulsifier** is an emulsifying booster and is added to the cleaner to treat heavily oily parts

Density (20 °C)

riag Clean 600 Salt	30 g/L	Standard value	1.017 g/cm ³
riag Clean 601 Salt	50 g/L		1.028 g/cm ³

Make up

The tank is filled to $\frac{2}{3}$ with water and heated to approx. 40 °C. Add the calculated amount of **riag Clean 600 Salt** and stir until the salt is dissolved. Adjust the required amount of detergents (**riag Clean 663 Emulsifier** or **riag Clean 667 Emulsifier**) and finally add water up to the working level. Once the cleaner has reached its working temperature, it is ready for use. **riag Clean 664 Emulsifier** may be added if requested.

Operating Parameters

Temperature	60 – 90 °C
Time	2 – 15 min.
Agitation	Recommended (shorter treating time), as it supports the cleaning process
Tanks	Plastic or lined steel, when using ultrasonic high alloy steel
Ultrasonic	Ultrasonic will increase the cleaning efficiency essentially. The removing power of polish on copper-alloys is around 10 W/L.
Heating	Immersion heaters, but thermostatic control is essential.
Fume extraction	Recommended
Water	Tap water may be taken for the makeup, however the use of low calcium or DI water is recommended.

Maintenance

riag Clean 600 is used with different concentrations, due to the various possibilities of application. The concentration has to be checked after each make up by analysis or density to stay in the desired working range.

The replenishment of the soak cleaner is carried out with the following products:

riag Clean 600 Salt, riag Clean 663 Emulsifier or riag Clean 667 Emulsifier and riag Clean 664 Emulsifier.

For each adjustable kg of **riag Clean 600 Salt** add 200 mL **riag Clean 663 Emulsifier** or 100 mL **riag Clean 667 Emulsifier** and (if in use) 40 mL **riag Clean 664 Emulsifier**.

Environmental Considerations

All concentrates, rinse waters and waste solution must be treated and discharged in accordance with local effluent control regulations. Further information can be gleaned from the MSDS. Chemicals may not be stored below 10 °C:

Liability

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Analysis (Analytical methods)

Sample preparation:

The sample must be taken from a well-mixed location and allowed to cool down to 25 °C.

Reagents: Hydrochloric acid 1 mol/L
 Methyl orange solution 0.1 % in water

Procedure: 50 mL **riag Clean 600** are transferred via pipette into a
 250 mL beaker, add
 2 drops Methyl orange solution

Titrate with Hydrochloric acid 1 mol/L from yellow to red

Calculation: **riag Clean 600 Salt** (g/L) = use of HCl in mL x 3.32

Adding 1.8 g/L **riag Clean 600 Salt** will increase the density 0.001 g/cm³.

If the degreasing process doesn't work properly, even though the concentration is within the desired range, a new makeup is necessary.

Attention:

Chemicals not intended to be added to the process may disturb and influence the quality of the processed surfaces.