riag Oberflächentechnik AG · Postfach 169 · CH-9545 Wängi TG

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riag Clean 603

High alkaline degreasing process

riag Clean 603 is a soak cleaning process with an excellent purification capacity, which is intended to be used for iron and steel. With an addition of potassium hydroxide it is usable for the electrolytic degreasing.

Properties

- Suitable for iron, steel and copper (not usable for brass or copper alloys)
- High alkaline powder
- Emulsifying (in combination with **riag Clean 669 Emulsifier**)

Ingredients

- Silicates
- Carbonates
- Sodium hydroxide
- Phosphates
- Organic acid sodium salt

Make up of 100 Litres

	soak	electrolytic degreasing
riag Clean 603 Salt	3 – 5 kg	1 – 3 kg
riag Clean 669 Emulsifier	0.6 – 1.0 L	0.2 – 0.6 L
Potassium hydroxide (KOH)	0	10 – 20 kg
Temperature	60 – 80 °C	20 – 50 °C
Time	5 – 10 min.	1 – 2 min.
Current density		min. 5 A/dm^2

Density (20 °C)		Standard value
riag Clean 603 Salt	30 g/L	1.025 g/cm^3
riag Clean 603 Salt	50 g/L	1.044 g/cm^3

Make up

The tank is filled to $^{2}/_{3}$ with water and heated to approx. 40 °C. Add the calculated amount of **riag Clean 603 Salt** and stir until the salt is dissolved. Adjust the required amount of **riag Clean 669 Emulsifier** and finally add water up to the working level. Once the cleaner has reached its working temperature, it is ready for use.

Operating parameters

Agitation	Recommended (shorter treating time), as it supports the cleaning process
Tanks	Plastic or lined steel, when using ultrasonic high alloy steel
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 603 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 **riag Clean 603 Salt** and **riag Clean 669 Emulsifier** should be carried out in the same ratio as the make up. This ratio is usually 5 : 1.

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.

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:	25 mL	**riag Clean 603** are transferred via pipette into a
	250 mL	beaker, add
	100 mL	deion. water, add
	5 drops	methyl orange solution
		Titrate with hydrochloric acid 1 mol/L from yellow to red
Calculation:	**riag Clean 603 Salt** (g/L) = use of HCl in mL x 2.03	

Adding 1.0 g/L **riag Clean 603 Salt** will increase the density 0.001 g/cm^3.

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.