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

22.12.2020

riag Clean 610

Degreasing process for steel

riag Clean 610 is an alkaline cleaning process, which is intended to be used for iron and steel. Nonferrous metal alloys should be tested in practice.

Properties

- Liquid concentrate
- Suitable for iron, steel and copper (limited use for copper alloys)
- Highly alkaline
- Emulsifying (in combination with **riag Clean***)
- Contains no phosphate or silicate

Ingredients

- Sodium hydroxide (addition by user)
- Organic acid salts

Make up of riag Clean 610

Use as	**Soak cleaner**	**Electrolytic cleaner**
Sodium hydroxide 50 % or	30 – 75 g/L	120 – 180 g/L
Sodium hydroxide 50 %	20 – 49 mL/L	79 – 118 mL/L
riag Clean 610 Solution	12 – 30 mL/L	12 – 30 mL/L
riag Clean*	1 – 10 mL/L	0,05 – 2 mL/L
Temperature	40 – 70 °C	20 – 50 °C
Time	1 – 20 min.	as required
Current density		1 – 5 A/dm^2

* different options possible. Application-specific process solutions available on request.

Make up

The tank is filled to $^{2}/_{3}$ with water. Add the calculated amount of Sodium hydroxide 50 % and **riag Clean 610 Solution** and stir. Adjust the required amount of **riag Clean*** 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 610 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 **riag Clean 610 Solution** and **riag Clean*** should be carried out in the same ratio as the make up.

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

This instruction manual was compiled with reference to the state of the art and all current standards, and is based on the long-term knowledge and experience of riag. However, riag cannot monitor compliance with this instruction manual and the methods described herein at the customer/end-user's premises. Work carried out with riag products must be adapted accordingly to meet local conditions. In particular, riag cannot accept liability for damage, loss or cost incurred due to a failure to adhere to this instruction manual, improper application of the methods, unauthorised technical modifications, insufficient maintenance or the absence of maintenance in respect of the requisite technical hardware or equipment, or in the event of use by unqualified personnel. riag is not liable for damage or loss caused by riag or its employees except where intention or gross negligence can be proved.
riag furthermore reserves the right to make changes in relation to products, methods and the instruction manual without prior notice.

Our goods and services are subject to the General Terms and Conditions for Delivery of the Association of Surface Technology Suppliers (VLO), which can be viewed at www.riag.ch (link “terms and conditions", document “General Terms and Conditions for Delivery", version 3/2018), which we gladly send you on request.

This transaction is governed by material Swiss law (Law of Obligations), excluding private international law (conflict of laws) and intergovernmental treaties, specifically the CISG.

riag Oberflächentechnik AG
Murgstrasse 19a
CH-9545 Wängi
T +41 (0)52 369 70 70
F +41 (0)52 369 70 79
riag.ch
info@riag.ch

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 0.1 mol/L Methyl orange solution 0.1 % in water	
Procedure:	1 mL	**riag Clean 610** is transferred via pipette into a
	250 mL	beaker, add
	100 mL	deion. water, add
	5 drops	methyl orange solution
		Titrate with hydrochloric acid 0.1 mol/L from yellow to red
Calculation:	Sodium hydroxide 50 % (g/L) = use of HCl in mL x 7.8 Sodium hydroxide 50 % (mL/L) = use of HCl in mL x 5.1	

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.