

RIAG Clean 682

Electrolytical degreasing process

RIAG Clean 682 is a high alkaline electrolytical degreasing process, which is intended to be used for iron, steel or cast iron. The cleaning performance is excellent, even flash rust is removable.

Scaling or rusty surfaces may be prepared for a further treatment when the degreasing process is used in combination with a pickling, including pickling degreaser (**RIAG Act 695 Surfactant**), based on hydrochloric or sulfuric acid.

The metal removal with a **RIAG Clean 682** treatment is very low. High alloy steel may be attacked with an anodic treatment, the abrasion is uniform and has to be noticed.

Properties

- Suitable for iron, steel
- High alkaline powder
- High conductivity

Ingredients

- Silicates
- Sodium hydroxide

Make up of 100 Litres

RIAG Clean 682 Salt

RIAG Clean 624 Support*

Standard value

10 – 25 kg

2 – 5 kg

* **RIAG Clean 624 Support** increases the cleaning performance and may be added when treating heavily oily parts

Density (20 °C)

RIAG Clean 682 Salt 100 g/L

RIAG Clean 682 Salt 200 g/L

RIAG Clean 682 Salt 250 g/L

Standard value

1.08 g/cm³

1.16 g/cm³

1.20 g/cm³

Make up

The tank is filled to $\frac{2}{3}$ with water. Add the calculated amount of **RIAG Clean 682 Salt** and stir until the salt is dissolved. This will cause a strong heating of the solution. Adjust the required amount of water up to the working level. Once the cleaner has reached its working temperature, it is ready for use.

Operating parameters

Temperature	20 – 60 °C, preferable 40 – 50 °C (if working with high concentrations, the temperature should always be higher than 25 °C due to crystallisation)
Time	1 – 10 min., preferable 1 – 3 min.
Agitation	Recommended (shorter treating time), as it supports the cleaning process
Cathodic current density	Rack: 10 – 15 A/dm ² Barrel: 1 – 2 A/dm ²
Reverse polarity	When degreasing the part is connected anodically. To remove rust, it is possible to change the polarity cathodic/anodic. The cycles are 20 – 30 seconds, start cathodic and end anodic.
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 682 is used in 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 682 Salt** and **RIAG Clean 624 Support** should be carried out in the same ratio as the make up. This ratio is usually 5 : 1.

Adding 1.2 g/L **RIAG Clean 682 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.

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.

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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
 Phenolphthalein 0.1 % in ethanol

Procedure: 5 mL **RIAG Clean 682** are transferred via pipette into a
 250 mL beaker, add
 100 mL deion. water, add
 5 drops phenolphthalein solution
 Titrate with hydrochloric acid 1 mol/L from red to
 colourless

Calculation: **RIAG Clean 682 Salt** (g/L) = use of HCl in mL x 10.2