

RIAG Act 698

Acidic pickling process

RIAG Act 698 is a liquid, which contains detergents and inhibitors for an acidic derusting or descaling process. It can be used for many different base materials.

Properties

- Activation of nickel-alloys (kovar, NiP) and stainless steel possible
- Liquid, used as additive in high concentrated acids or acid mixtures
- Special detergents for the use in acids
- Further cleaning processes required

Ingredients

- Inhibitors
- Nonionic surfactants

Make up of 100 Litres RIAG Act 698

	Standard value	
Hydrochloric acid, liquid 32 % (e.g.)	50	L
RIAG Act 698 Surfactant	40	L
Water (fill up to final volume)	10	L

Make up

The tank is filled with water as much as possible. While stirring, carefully add the calculated amount of acid. The **RIAG Act 698 Surfactant** is added and topped up with water until the working level is reached. Once the pickling reaches its working temperature, it is ready for use.

Operating parameters

Temperature	20 – 80 °C
Dipping time	1 – 15 min. (optimum: 2 – 3 min.)
Agitation	Recommended (shorter treating time), as it supports the cleaning process
Tanks	Plastic or steel with acid resistant coating
Heating	Immersion heaters, if needed
Fume extraction	Recommended
Activation	Cast iron: 45 – 55 °C Steel: 55 – 70 °C Nickel-alloys: 65 – 80 °C

Depending on the base materials the ideal operating parameters have to be determined in preliminary tests.

Maintenance

Depending on the application **RIAG Act 698** can be prepared in different concentrations. Acid and **RIAG Act 698 Surfactant** should be replenished proportional. Corrections should be done according to the additions of acid and experience.

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 method)

Sample preparation:

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

Reagents: Sodium hydroxide solution 1 mol/L
Methyl orange solution 0.1 % in water

Procedure: 5 mL bath are transferred via pipette into a
250 mL beaker, add
100 mL DI water, add
5 drops methyl orange solution

Titrate with
sodium hydroxide solution 1 mol/L from red to yellow

Calculation: Hydrochloric acid 32 % (mL/L) = consumption of mL NaOH x 19.66
Sulfuric acid 96 % (mL/L) = consumption of mL NaOH x 5.55